

Bulgarian ERP market survey results – the accounting perspective

Илиан Димитров¹

¹ University of Economics – Varna
iliyan.di.dimitrov@gmail.com

Abstract. This article presents the results from our survey investigating peculiarities of financial accounting and management accounting within ERP (Enterprise Resource Planning) systems. Two questionnaires are designed – for two target groups: ERP vendors and ERP users. The purpose of this article is the exploration of some strong and weak accounting sides of ERP systems, ERP capabilities to support financial accounting and management accounting within enterprises. The purpose is reached by comparing opinions of ERP vendors and ERP users from our survey. The results from the survey reveal that ERP users don't reach some of the frequently advertised strong sides of ERP systems even after more than five years of usage. ERP vendors and ERP users have different position about the degree of facilitation and support (potential and really achieved) from ERP systems to financial accounting. ERP users don't apply a broad variety of management accounting tools by ERP systems.

Key words: Enterprise Resource Planning, ERP, financial accounting, management accounting, survey

1. Introduction

Management accounting and financial accounting problems may be examined to some extent of accuracy with survey on ERP users' opinions. ERP users can give their assessment for strong and weak ERP sides, ease of use / difficulty of use, satisfaction degree for information needs, achieved implementation advantages, operation and financial accountability assistance. Exploration of only ERP users' opinion might give non-reliable results and hence wrong conclusions. It's possible the users not to have knowledge about the full functionality and capacity of implemented ERP systems. ERP vendors have a different view. They know well their own ERP system. They are aware with ERP market: problems, current state, opportunity to evolve. We designed and composed two questionnaires: one for ERP users (enterprises implementing ERP systems) and one for ERP vendors (ERP developers and distributors). The purpose of this article is the exploration of strong and weak accounting sides of ERP systems, ERP capabilities to support financial and management accounting within enterprises. The purpose is reached by comparing opinions of ERP vendors and ERP users from our survey.

We discussed in advance both questionnaires with an auditor, an IT specialist, a financial controller, an ERP consultant and a market analyst. Before starting the survey, questionnaires were filled in by pilot respondents: one Microsoft Dynamics Navision consultant and one Microsoft Dynamics Axapta user. The survey is conducted within four months (from July to October 2018) by personal meetings with respondents and web platform Google Forms after telephone prenotification. The aggregation of data is conducted using well-known techniques for analyzing data from online surveys (Vasilev and Stoyanova, 2017; Kuyumdzhiev, 2014). Graphical presentation of aggregated data from respondents is the preferred techniques. Other similar articles (Stoyanova and Vasilev, 2017) mainly use tabular presentation of results.

2. Methodology, representation of survey and result analysis

The survey investigates 30 ERP systems, dominating the Bulgarian ERP market in the last years (CIO.bg, 2014a; CIO.bg, 2014b; TechNews.bg, 2015; CIO.bg, 2015; CIO.bg, 2016; CIO.bg, 2017). The researched ERP systems are 14 Bulgarian and 16 non-Bulgarian ERP systems presented by 45 ERP vendors. Respondents are contacted by telephone. All 45 ERP vendors are asked to fill in the questionnaire. The telephone contact is repeated several times if the answer was delayed. 31 ERP vendors (66%) got participation in the survey (**Figure 1**). 16 respondents did not fill in the questionnaire. The most frequent reason declared is the lack of will to participate (6 respondents) and next comes the lack of time (4 respondents).

We suppose the respondents who did not participate in the survey have different motives: they are worried from potential non-objectivity in results analyzing; results publicity; questions concerning strong and

weak side of their software. Two of ERP vendors didn't pick up the phone. Two others discontinued distribution of ERP systems included in the original list. The developer of one of Bulgarian ERP systems didn't participate because its software doesn't have a financial module. One respondent stated that its distributed ERP system is in restructuring process (change of ERP name, new functionalities and capabilities).

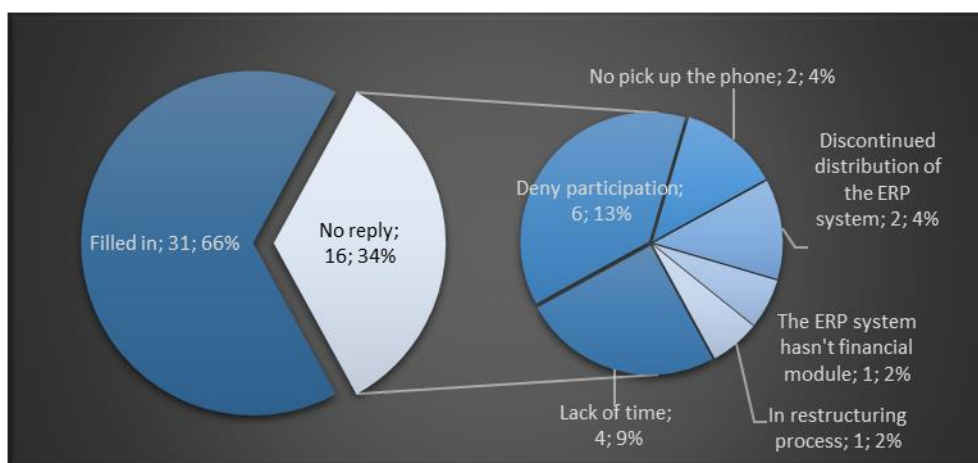


Figure 1. Response rate of ERP vendors questionnaire (left chart pie). Rate of "No reply" reasons (right pie chart)
 Source: Own survey

ERP vendors questionnaire is filled in by 31 respondents (26 ERP vendors) for functionalities of 25 ERP systems with constant dominant presence at Bulgarian ERP market:

- 12 Bulgarian ERP systems: Antipodes.Cubes, Atlas ERP, BORA Business Suite, EnterpriseOne, ERP EXPERT M, N.E.X.T., S-Office ERP, TECHNOCLASS, WorkFlow ERP, Zeron, Ajur L ERP, TONEGAN ERP;

- 13 non-Bulgarian ERP systems: 1C: Enterprise, abas Software, Deltek Maconomy, Epicor iScala, Infor ERP LN, Infor Syteline ERP (Infor CloudSuite Industrial), Mago.Net, Microsoft Dynamics 356 for Finance and Operations (old name: Microsoft Dynamics Axapta), Microsoft Dynamics Navision, Oracle E-Business Suite, Oracle NetSuite, Pantheon, SAP.

It was planned to find five users' opinion concerning every one of these 25 ERP systems. We sought information with our personal contacts, from ERP vendors' web sites and other public information in internet. Public information about enterprises-users of four ERP systems is not found: Bulgarians BORA Business Suite and S-Office, American Oracle NetSuite и Slovenian Pantheon.

Telephone calls with 134 enterprises are done. 33 of them stated that they don't use financial module of implemented ERP systems and use another software or accounting is outsourced to external organization. 101 companies are requested to fill in ERP users questionnaire. Answers are received from 72 enterprises (79 respondents). Reasons for not replying are: lack of will to participate (21 respondents, 16%) and lack of time (8 respondents, 6%). Results are summarized in **Figure 2**.

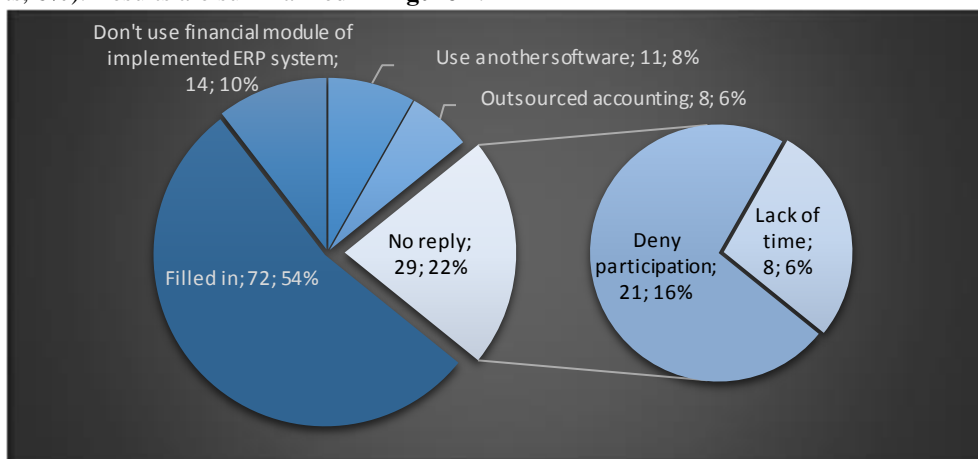


Figure 2. Response rate of ERP users questionnaire (left chart pie). Rate of "No reply" reasons (right pie chart)
 Source: Own survey

Aggregated data of explored enterprises is as follows:

- Sum of assets of all surveyed enterprises for the year ended December 31, 2017: over 3,6 billion BGN;
- Sum of revenue of all surveyed enterprises for the year ended December 31, 2017: over 3,9 billion BGN;
- Personnel of all surveyed enterprises for the year ended December 31, 2017: 15 577 people;
- Applying accounting standards: 39 of enterprises apply IFRS and 32 apply National Accounting Standards in Bulgaria;
- Activity of enterprises: Manufacturing – 39; Trade – 18; Services – 10, Construction – 3; Agriculture – 2;
- Years of ERP usage: 50 of enterprises (70%) use ERP systems more than five years (in this percentage 33% – over ten years usage), 13 of enterprises (18%) use ERP systems between three and five years and 9 enterprises: under three years.

The first survey question (Q1) is about strong sides of ERP systems at Bulgarian ERP market. Respondents are given eight frequently advertised strong sides (and the additional options “Other strong sides” and “None of the above”). In all strong sides there are major differences in rating given by ERP vendors and ERP users. Results reveal that ERP users take advantages in high degree from ERP implementation in four directions: synchronization and collaboration between main activities, improving accounting (operating and financial), real time work for most of the business process, providing the capability to make personalize user reports. Some respondents (ERP users) think ERP systems do not contribute enough to ease business scaling, enhancing client service quality and increase personnel efficiency. Results are summarized in

Figure 3. In these three directions opinions of two target groups (vendors and users of ERP) differ in high degree. Top three strong sides of ERP systems according to ERP vendors are: real time work for most of the business process, improving accounting (operating and financial), providing the capability to make personalize user reports.

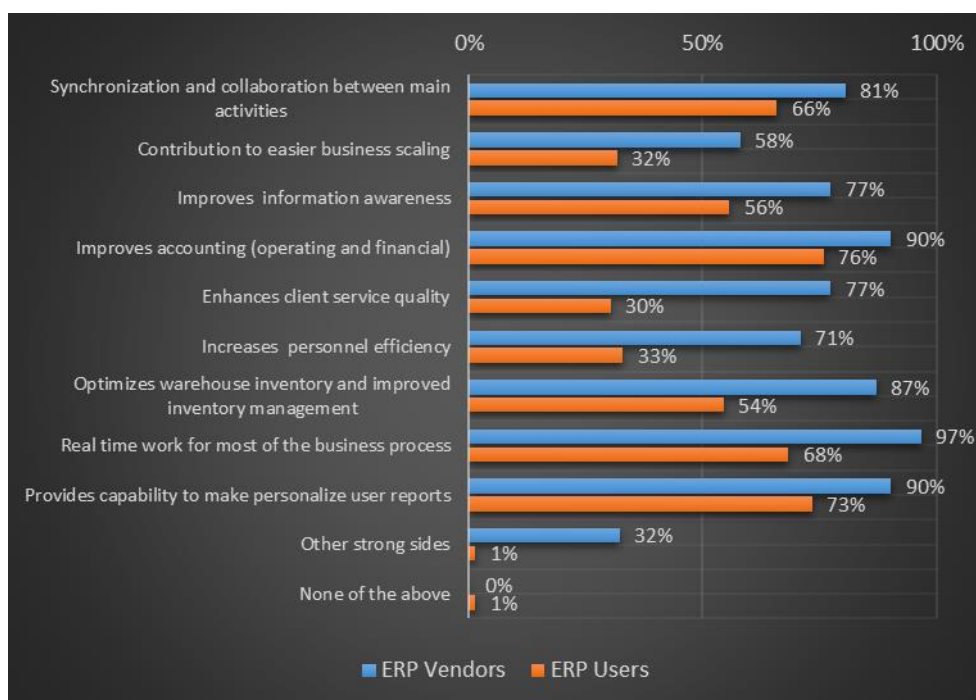


Figure 3. Comparing strong sides of ERP systems (Q1)
 Source: Own survey

Both target groups choose smaller number of weak sides than strong sides of ERP systems (Figure 4). 18% of ERP users respondents have chosen four options from “Strong sides” question while 32% of ERP users respondents have chosen three options from “Weak sides” question. ERP vendors often choose the option “None of the above” (42%). They also admit sometimes implementation costs are high (over 50-100% of the sales value of ERP systems). That costs and the high sales value of ERP systems make them very expensive for Bulgarian market.

According to ERP users, who participated in the survey, ERP systems are sometimes an expensive investment and there is a necessity of regular maintenance, different than short consultation. Other weak sides are: high implementation costs (over 50%-100% of sales value of ERP system), high indirect costs (new

hardware, IT personnel, etc.) and difficulty to percept and work for most of the ERP users in enterprises. The last weakness is confirmed by the lack of high positive percentage for the option “Increases personnel efficiency” from the strong sides part of the questionnaire for ERP users. Personnel’s efficiency always will be poor, if personnel don’t understand business process and logical linkages within the ERP system (Figure 4).

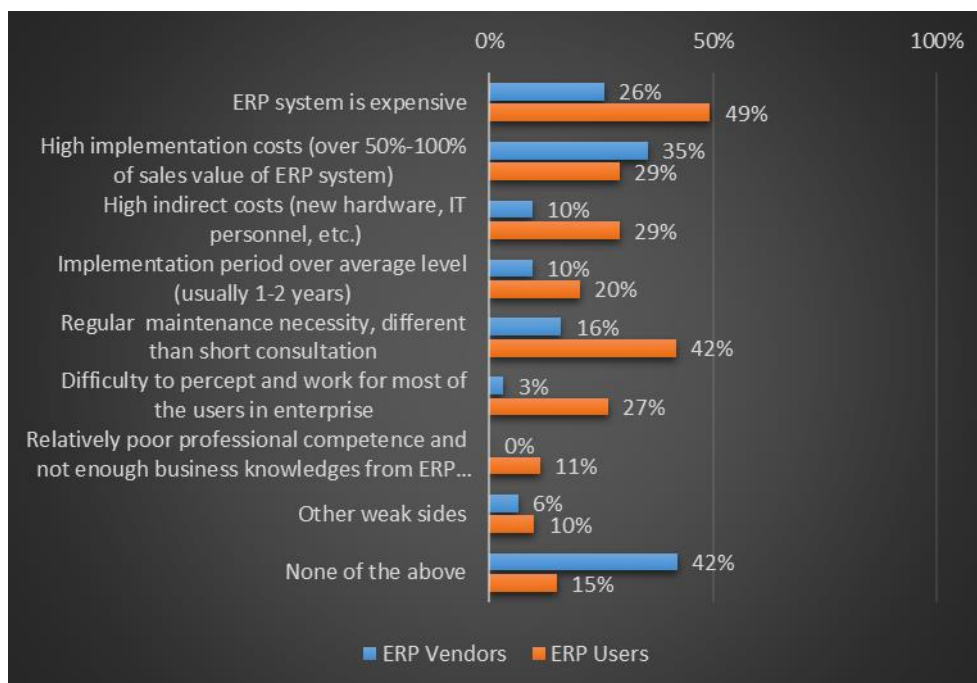


Figure 4. Comparing weak sides of ERP systems (Q2)
 Source: Own survey

There are some differences between ERP vendors rating and ERP users rating on the question concerning ERP systems implementation in financial accounting. We are interested to what degree ERP systems support financial accounting in enterprises (“1” is lowest degree, and “5” is highest degree, for the option “I can’t decide” is given value “0”). All sub questions answers reveal the contrast in opinions of ERP vendors and ERP users on that topic (and **Error! Reference source not found.**). Differences in assessment of ERP vendors and ERP users are biggest in four sub questions: IFRS application; National Accounting Standards in Bulgaria application; Financial analysis opportunities; Facilitating the consolidated reporting process in a holding structure. Users think that their work is supported in low degree from implemented ERP systems in IFRS reporting, NAS reporting, Statistical reporting and financial analysis. According to ERP vendors ERP systems strongly facilitate these accounting activities. Why there is a mismatch between opinions? Indeed, such ERP functions are difficult to achieve. For international ERP systems it is a hard task to address requirements of national accounting standards and national statistic in many countries. May be this is also not profitable for ERP to fit local requirements. ERP users have the freedom to give real assessment because the survey is anonymous. ERP vendors endeavor to present their ERP systems in better light.

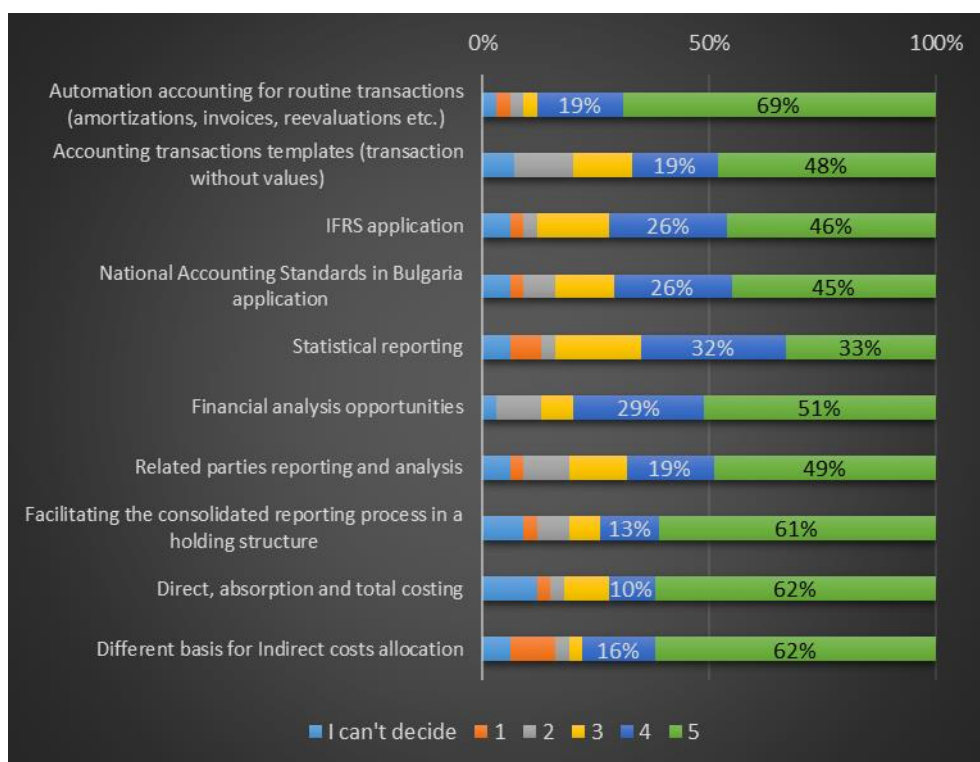


Figure 5. Degree of facilitating in financial accounting with ERP systems usage according to ERP vendors (Q3)
 Source: Own survey

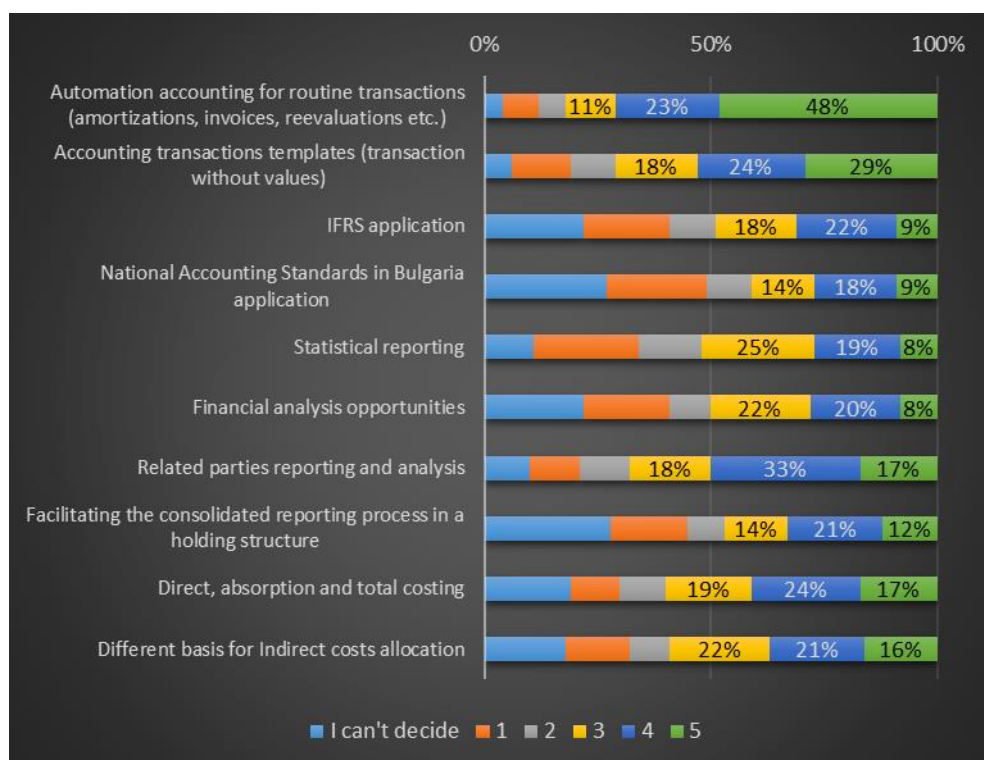


Figure 6. Degree of facilitating in financial accounting with ERP systems usage according to ERP users (Q3)
 Source: Own survey

Respondents are requested to answer whether ERP systems may be used as a tool of management accounting. The set of tools is selected as per our opinion based on objective capability for including these tools as a standard ERP functionality and review of some famous ERP systems which include similar tools. Results from ERP vendors rating are higher than our expectations. The main reasons might be two. First, ERP vendors wish to present their ERP systems in better light. Second, ERP vendors might give their answers in the context of potential ERP capabilities. ERP developers may program new functions to fit ERP systems according to the needs of management accounting.

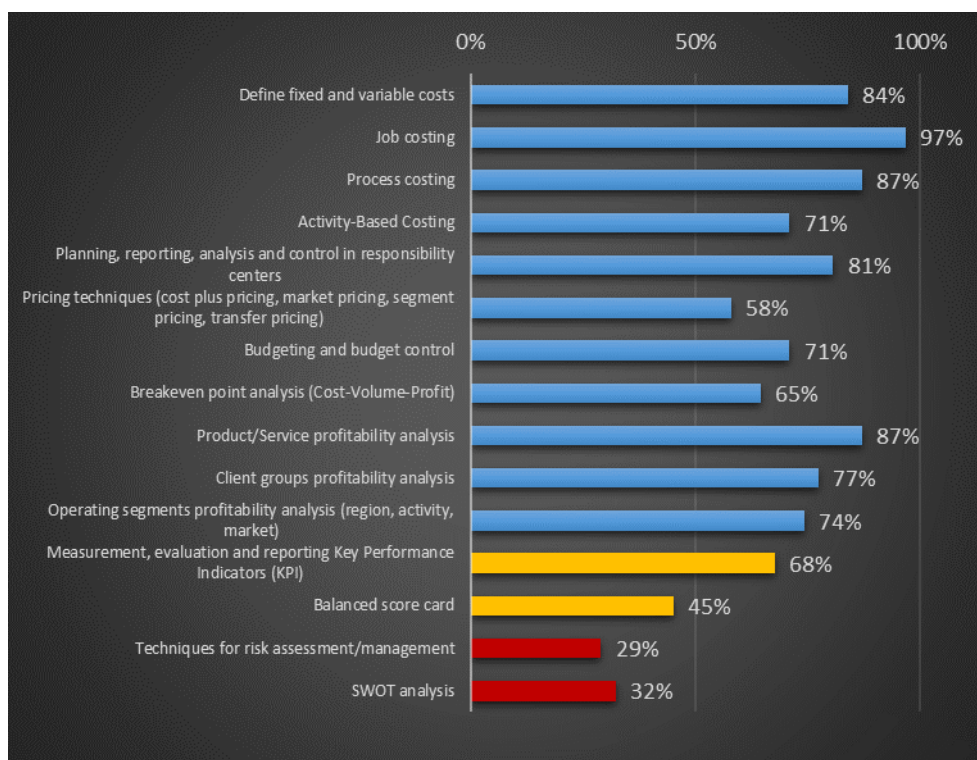


Figure 7. ERP vendors rating about possibility of ERP systems to be a management accounting tool (Q4)
 Source: Own survey

In Figure distinguishable management accounting tools are colored as following: operating tools in blue, tactical in yellow and strategic in red. Operational management accounting tools with high usage among the users within ERP systems are job costing, process costing, client groups profitability analysis, product/service profitability analysis (Figure). Taking in mind the proposed diversity of management accounting tools the high evaluated four tools are a small number. The least applicable management accounting tools within ERP systems are: activity-based costing, balanced scored card, techniques for risk assessment/management and SWOT analysis. Most of these management accounting tools are difficult to be programmed as a standard ERP function, because they are much specific and impose restructurings in the whole accounting process. Tools like these usually are part of specialized management software or are being made with hands-on methods. We suppose that the results of our research are a consequence of low knowledge about management accounting in Bulgaria (Atanassova, 2015), (Atanassova, 2017). That means ERP systems application do not influence on management accounting tools usage.

Results from ERP users' opinion make us doubt about the frankness of ERP vendors' answers. ERP users consider that tactical and strategic management accounting tools within the ERP systems are used to a low extend. ERP vendors consider these tools are highly used in ERP systems (Figure). We believe ERP users know these ERP functions, because 70% of ERP respondents use their ERP systems over five years and 33% of all respondents – over ten years. Obviously, the low usage of these tools is not caused by the lack of information, but of some other reason (difficulty to adapt, specified software, high costs of customization). Most of respondents don't apply tactical and strategical management accounting tools at all. Approximately one third of respondents apply such tools in enterprise and outside of ERP systems (another confirmation about low level of

management accounting knowledge). If the usage of specific management accounting techniques was a broad business practice, ERP vendors would respond to these management needs.

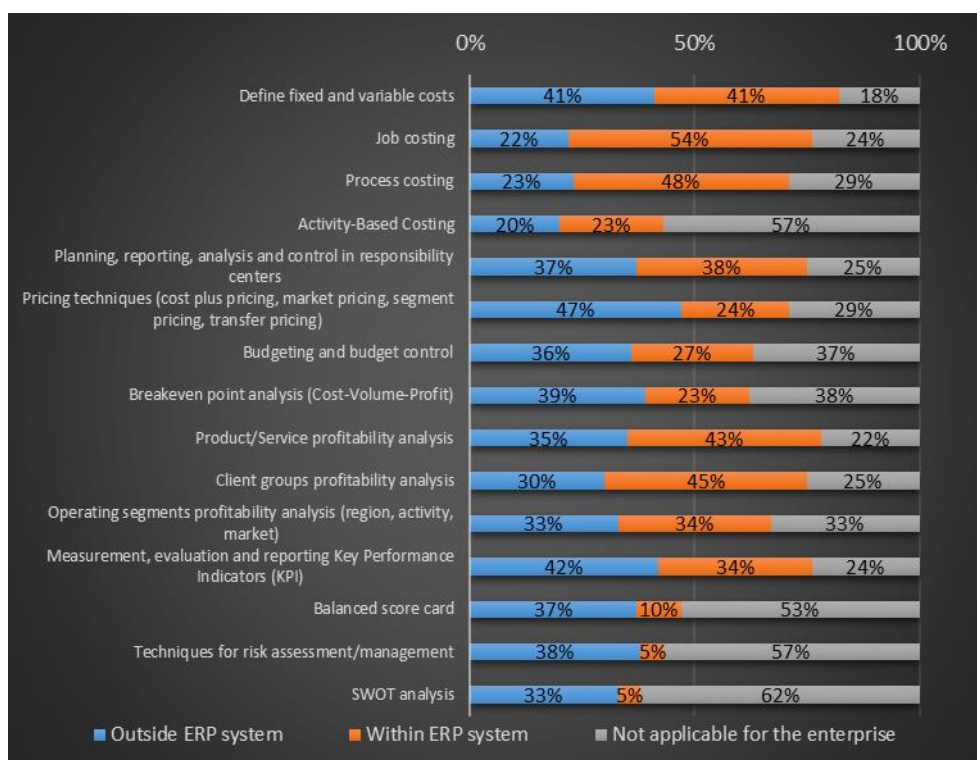


Figure 8. Support degree from ERP systems to management accounting according to ERP users (Q5)
 Source: Own survey

3. Conclusion

In this article the results from our survey are presented. Answers from ERP vendors and ERP users for their usage in financial and management accounting are analyzed. Results from the survey reveal that ERP users usually don't reach some of the frequently advertised strong sides of ERP systems even after more than five years of usage. ERP users think ERP implementation costs are not easily accessible as being advertised and there is a regular maintenance necessity that increases the costs. There are differences between the degree of potential facilitation and support from ERP systems to financial accounting (ERP vendors rating) and really achieved facilitation (ERP users rating). Application of management accounting tools in ERP systems follows the Bulgarian trend for poor knowledge and implementation of managerial accounting tools at all.

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