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Information Needs Assessment of Managers to the Activity-Based Costing (ABC) Systems across Iranian Industries

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ABSTRACT

Nowadays, companies confront many ups and downs due to optimal or destructive decisions made by corporate executives based on industry trends information. Complexities and environmental uncertainties have made companies more dependent on information. But increasing and accumulation of information may reduce the quality of managerial decisions as well as waste the time. This involves assessment of management information needs as a prerequisite to design any information system, either a management system or even an activity-based one. This study takes a descriptive-survey approach to examine information needs for the managers of listed industries in Tehran Stock Exchange (TSE) in the field of cost accounting with an emphasis on activity-based costing. Following series of interviews with executives, a theoretical framework was developed based on it and two questionnaires for financial and non-financial managers were extracted and distributed among study samples. The questionnaires were analyzed using statistical t-tests as well as exploratory and confirmatory factor analysis to determine the information needs to ABC. The empirical findings on the information needs gaps show that information needs of the TSE publicly-traded industries' directors would be lied in financial reporting, planning (budgeting), performance appraisal and control purposes and some suggestions were provided, accordingly.

Keywords:

Needs assessment, ABC, Financial Reporting, Planning Performance evaluation, Control.

1. Introduction

Decision making is one of the most important management functions in today's challenging environment. Managers need information in all stages of decision-making, which eventually leads to choosing an option among available alternatives. This applies to all models of decision making. Managers are increasingly dependent on information because of the dire need for managers to make informed decisions and simultaneously with the changes in the dominant paradigms affecting management (information technology, etc.). This has led organizations to focus on information as their strategic asset (Almeida & Cunha, 2017). Information is one of the most important resources under the manager's controls, so it should be managed as well as any other sources (Nicholas, 2003). Assessing the information needs is the first step in the management of information resources (Rutten, et. al., 2005). In this case, managers will be able to emphasize only on the relevant information they need disregarding the mass of available information which may require to be reviewed for a long time. Organizations use different systems to provide managers with the information they need, depending on their performance. One of the most important of these systems in the field of managerial accounting is the ABC system. ABC emphasizes on the continuous improvement of process (Koehler, et al., 2018). In this way, identifying value-added activities on the one hand and non-value-added ones on the other hand is encouraged. Applying a costing system based on activities can reduce costs through eliminating worth-less activities and finding new and economical paths to carry out activities. In this research, we try to takes steps before designing an ABC to provide managers with appropriate information for decision-making in the area of planning, reporting, performance appraisal and control purposes by identifying their information needs.

Assessment of information needs for the users of information systems, such as ABC, ensures the success of the system designed to meet the information needs of managers. The needs assessments of administrators and users makes it possible for designers to avoid overwork and create a foreplay to apply in the future (Rezaeian, 2006). When the organizational decisions must be made with the minimum waste of capital resources and high levels of responsibility to achieve the desired goals, the importance of obtaining information will be more highlighted (Gosselin, 2006). The ABC is a revolution in costing systems, and can be used as a powerful tool for solving various management problems (Rahnamay Roodposhti, 2009). However, benefiting from these advantage may not be possible regardless of behavioral considerations (Bahram, et. al, 2008). The most important effective behavioral structures in ABC is the culture of managers, the method of evaluating managers and staff and how to create control mechanisms that should be considered in designing these systems (Namazi,1998). Considering the practical applications of ABC in industrial or even services units, and across different countries as well as the movement of TSE listed industries towards the establishment of the management accounting and ABC system, prior to any action, the assessment of the information needs is necessary; otherwise, a system that is perfectly designed will not be able to help executives of TSE listed companies to optimally capture the resources when they need. As far as the researchers are concerned, a study has not independently reviewed the information needs of managers to the ABC due to the lack of familiarity and knowledge of the ABC systems, its advantages and abilities, lack of training and skills in this field and so on (Bahram Far, et. al, 2008).

2. Literature Review

Today's turbulent environment has put executives in a position to rely more on information for decision-making. The need for information is created when an individual or organization feels in the gap between the current knowledge and information and seeks to solve it (Levinson, 2002). This gap consists of information that individuals or managers need to have to better handle their functions so that can solve the organization's problems, satisfactorily. But what attracts attention is the information that managers face in their business and industry environments. This information crunch has led organizations to provide various information systems to help them manage the information they need and make the right decisions to achieve their goals (Rezaeian, 2006). One of the newly well-known systems for helping managers to make optimal decisions is ABC. The system is capable of providing relevant, reliable, and timely information to managers and helps them make decisions. Each manager or information society uses information in a

variety of ways that their final products are different, and therefore the use of information will be different. Simon (1977) believes that the manager has no work but decision making. It should be noted that the basis of decision making is information that managers need. It is not possible to make a desirable decision without relevant information. In each stage of the decision-making process, information is needed (Garoon, et.al. 2018). Information may be used as raw material, assets, as well as value added, strategic and/or tactical sources. If the organization has an information system that provides timely information in various areas, managers in each part of the organization can quickly use the information from the system to identify the located problem and take corrective actions (Jing & Songqing, 2011). Information that are used or produced for the production of goods or services considered as an asset. There is also various other information that managers need to carry out their functions and obtain them through research (such as market information, competitors, customers, production facilities, etc.), all of which are accounted as the organization's assets. Information can be called oxygen as an integral part of the organization's survival (Bamber, et.al. 2008). The correct flow of information between the production and sales departments can improve the predictions and timing of production, and reduce the delivery time. The existence of high-quality information for managing the organization can lead to better decisions for allocating resources and more efficiency, reduce related costs, increase final profits and possibly reduce the cost of products. Strategic planning is always associated with risk and uncertainty. But if management can get the right information about the situation and developments in the external environment, it can pacify uncertainty and mitigate risks. Also, there are techniques and software that can quickly assess the impact of potential and expected incidents, or simulate the business situation and future events in the market to help make strategic and decisions (Sarrafizadeh, 2009). One of the performance criteria that is necessary is the precise determination of goals and programs that can be used as important parameters to measure the desired performance (such as profit, budget, standard costs) (Kaiser, 2018). Regardless of the method used to determine the status of the operation, the information received is used to determine whether the performance is in accordance with the planned objectives or deviated (Kaplan & Norton, 2001). The extent of the deviation affects both the degree of urgency that is felt as well as the extent of the corrective action that must be taken to control the operation (Carton & Hofer, 2006). The control process is after the performance monitoring stage and requires action to prevent deviations from scheduled performance as well as to eliminate deviations that have occurred. Controlling involves factors that play a role in decision making and include factors that are present in planning (Kaplan, 1998).

2.1. Activity-Based Costing System

It is believed that the ABC system, as one of the main methods in costing, provides information that affects managers' decisions and plans. Figure 1 shows the lens metaphor to show how the ABC system helps managers make optimized decisions. Not only does the lens pay more attention to account fees in a more flexible and effective way, it also provides sensitive information. The data derived from the ABC system can be considered as a very effective warning tracker to show whether the amount of resources consumed is in line with the goals or strategies of the organization or not? For quality managers, the system determines all quality costs. The system reveals to managers what quality costs are in place and which products and outputs they spend on. The figure 1 explains that the costing is not based on replacement work for the offices of the traditional accounting system but an interpreter located between the cost accounting database at the general office and the end users such as managers and analysts who use cost data in the decision making process. An ABC system expresses costs in a language that different managers can understand. This system translates costs into elements of the cost of each activity, so that managers understand what resources and processes have been used for each process or activity (Cokins, 1996).

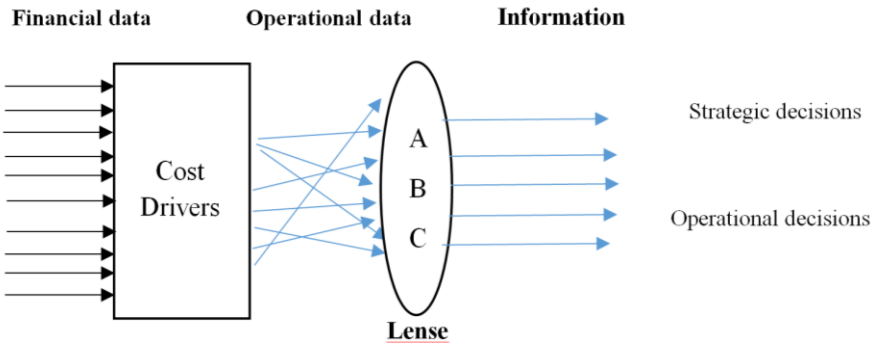

Figure 1: ABC functions to assist organizational decisions (Cokins, 1996)

The reason why the ABC system is growing is that the accounting and financial statements of the corporations are structurally inefficient to provide the necessary information for decision makers and supporting. These accounts are a good mechanism for collecting and aggregating costs, but it's not a good way to turn this information into useful administrative information. Simply put, these accounts act like a checkbook. One can read the dollar spent, but he does not really know why (Fakharian, 1999). In the ACB, the cost of the activities is attributed to the final cost objects and redefines the costs of the business process activities.

This new and processed cost data derived from an ABC can be used to identify operational relationships that are effectively used in decisions on production, distribution channels, and markets. This information can be important in managing processes and any quality-driven issue. In all cases, the ABC converts accounting data into a variety of cost data that is more effective in supporting decision making (Caplan, 1996; Blocher, 2010).

Management decisions can be categorized into three related areas: planning, leading evaluation and control (Garrison, et.al. 2010). Correct implementation of each of these activities creates value for the organizations. On the other hand, failure in planning, leadership or control is a way to fail an organization. ABC system has three basic functions. First, the system attributes production costs to each output, so that costs are divided between the cost of goods sold and inventories. This function is called financial reporting. Second, these costing systems can provide employees and users with "economic feedbacks". Finally, costing information is used to estimate the cost of activities, services, products, and customers (planning) (Kaplan, 1998). Financial reporting relies on information needs of external stakeholders such as investors, creditors and tax authorities. The procedures for conducting this financial reporting are controlled by the laws and regulations determined by the government and tax authorities, accounting communities, and so on. Two other functions derive from the information needs of the internal managers of the organization to provide timely and accurate cost information for strategic decisions and operational improvements that increase profitability (Kim, et.al., 2015).

Kaplan (1987) implemented ABC in American banks. He showed that the ABC system has led to a better pricing of current services, as well as the ability to evaluate new products and services. Ganaskaran (2002) examined the role of management accounting techniques in Japanese banking sector. The results showed that management accounting techniques, such as ABC, played an important role in evaluating the performance of Japanese banks. Nachtman & Naidet (2003) investigated the cost-effectiveness of activities in a pharmaceutical company and concluded that the use of ABC system would produce more valuable and accurate information in the case of uncertainty.

Uspekis (2008) presents a new Activity-Based Budgeting model and argues that the most important benefit of ABB is the ability to calculate the cost of the capacity of the resources provided for the upcoming period in order to plan. Yerly (2009) has shown that ABC can help executives in cost analysis and decision-making on budgeting and strategic planning. Eduardo and Wallard (2014) indicated that the use of ABC systems allows supervisors and IT managers to make

critical decisions about controlling costs. Use of ABC systems is more appropriate than traditional costing systems for manufacturing companies whose capacity is measured based on time. (Pong & Whaiy,2016; Oker &Adigzel,2016).Garoon, et.al., (2018) applied ABC approach to the operational screening pathway to determine the cost of screening and showed that the cost savings yielded by the ABC screening program compared with conventional screening are substantial. Kaiser (2018) used ABC along with decomposition method to estimate operating costs of offshore petroleum industry. Almeida, & Cunha (2017) applied ABC in a Portuguese coffee production company indicating that the system fits with the organization's reality and reflecting the way how it operates on a day-to-day basis.

In Iran, there has also been a widespread study on the ABC system. Bahramfar, et.al., (2008) argued that managers' lack of knowledge about their information needs from the ABC system are one of the most important barriers to developing ABC in Iran. Kalani & Soltani (2011) showed that the use of ABC model in industrial companies pacifies the over-allocations and adjustments as well as realizes the cost of products and services. This model also helps managers to evaluate the performance of departments through measuring unused capacity and costs. Although ABC system provides more useful information for planning and evaluating performance (Azimi,2012); but Ebrahimi Kordlar & Moghaddaspour (2013) argued that use of flexible budgeting, preparation of budget scenarios (conditional analysis: if ... then ...), budgeting based on strategic plans, using appropriate indicators for evaluation of organization performance as well as use of inventory costing methods are strange and intolerable for Iranian industries. Sarabi & Ejdari (2014) applied ABC model and modified the excess overheads allocation and reported the cost of objects, correctly. At the best of our knowledge and to the extent that the literature shows, research has not independently assessed the information needs of managers to ABC system. The conceptual framework of research is inspired by the evolutionary stages of ABC to identify the information needs of managers. Norton and Kaplan (2001) have described these stages in four levels of financial reporting, performance appraisal, economic feedback, and control. In this regard, the ABC system have been perceived to help managers through four functions: financial reporting, planning, performance evaluation and control. The questionnaire used in this research is also based on this framework (Figure 2).

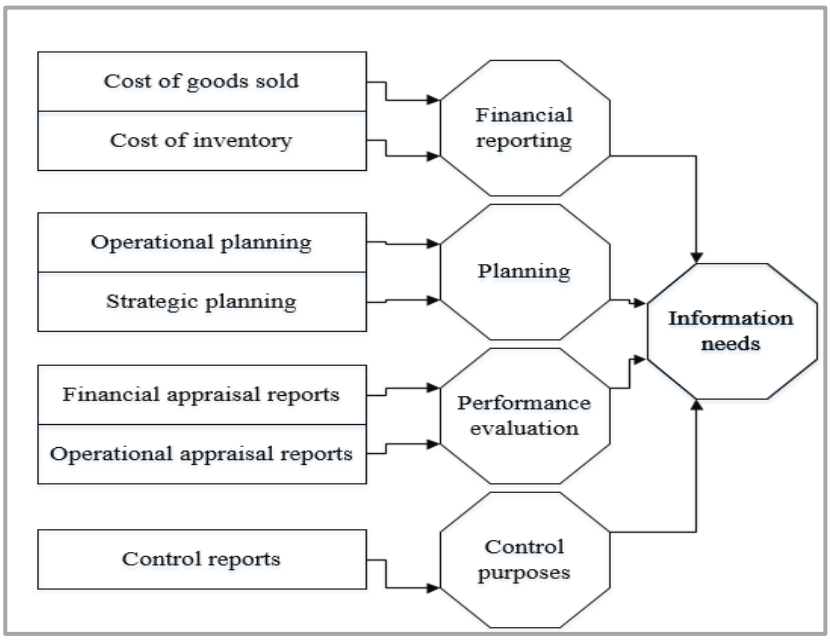

Figure 2: conceptual framework of research

3. Methodology

The design of this research is applied and descriptive-exploratory in terms of purpose and methodology, respectively. The reasoning used in this research is inductive approach and the researcher does not deal with theory; rather, we intend to look at the final conclusions by examining different cases. The nature of this research is descriptive taking a surveying strategy. The authors used interviews and questionnaires to examine the opinions, thoughts, attitudes, interests and views of the directors of the firms on the ABC system and then identify information needs. The methodology has been selected through mixed method[1] as a combination of quantitative and qualitative ones. The statistical population is limited to the managers of TSE listed industries. The final sample required was selected according to the difference in industries, geographic dispersion and access to managers (target sampling). We selected companies for the sake of ease of access with the head office located in Tehran province. In order to make the cost item more tangible (perceivable), as well as because of the lack of development of service costing, manufacturing companies were selected to construct the sample (neither service nor merchandise), in which tangible goods are produced. By applying the above filters, 43 of active trading symbol in the TSE were selected as the final sample by the first semiannual of 2017. Regarding the research limitations, only 49 interviews in field of costing system were conducted with top executives of TSE listed companies and results were examined using content analysis method (qualitatively). The ultimate goal of this interview was to extract initial criteria and indicators on the information needs of managers. Next, the questionnaire was used to identify the potential needs, customize, and finally complete the identified needs raised from the interview phase. A specialized financial questionnaire was sent to 43 financial managers of sample companies. A general questionnaire was also distributed to 86 members (for two non-financial managers of each sample). Questions were more specialized for financial managers and include the collection of data related to ABC in the organization. But questions about the non-financial managers' questionnaire are general, and they focus more on their information needs and the environment surrounding the organization. The rationale behind the design of the financial managers' questionnaire is more familiarity with the ABC system than other managers. Of course, these two questionnaires will have a lot to communities, as they differ in the provision of specialized ABC questions for financial managers, only. We attempted to first examine the adequacy (weaknesses and strengths) of the current system in providing information needed by managers to make decisions in four mentioned functions, and then the information needs in designing a new system such as ABC. The interview outputs were mined using content analysis and results were used to formulate the conceptual framework as well as to prepare a questionnaire. In the analysis of the questionnaire, pairwise t-tests were used. Ultimately, in order to provide the final list of identified information needs for an ABC system, exploratory and confirmatory factor analysis were applied. The level of analysis of is made up of individuals. The results of financial and non-financial questionnaire were analyzed using inferential tests in SPSS and LISREL software.

4. Results

As stated above, because of the tangibility of cost objects, the research sample has been targeted to manufacturing industries. The results of the interviews are summarized in Table 1. After conducting the interview, the key words emphasized by the managers were extracted from the text of the interview and the frequency of emphasis on these words is presented as a percentage among managers. Also, of the 43 questionnaires sent to financial managers and 86 questionnaires sent to non-financial executives, 39 and 73 cases were completed and sent back to the researcher, with a favorable response rate of 90.6% and 84.8% respectively. Factor analysis was used to determine the variable factoring based on the data extracted from the questionnaires. Finally, the model was accepted. In this section, the data related to the 24 variables are reviewed and evaluated. Table 2 shows the title of the variables and summarizes the model's characteristics. Accordingly, it can be seen that all of variables and components are significant.

Table1: interview results

Items emphasized by managers	Petrochemical & pharmaceutical inds.	Automobile and parts & ceramic and tile inds.	Food products & rubber and plastics & cement, lime and plaster inds.	Sugar & wooden artifacts inds.
Performance evaluation indicators	83%	100%	80%	60%
Monthly financial reports	50%	71%	60%	40%
Delay reports and economical effects	83%	86%	100%	80%
Combined performance indicators	63%	71%	80%	80%
Integrated costing system	67%	57%	60%	100%
Monthly reports of activities costs	83%	100%	100%	100%
Monthly reports of processes costs	83%	100%	100%	100%
Taking budgeting reports from systems	50%	71%	60%	65%
Providing data and information for estimates	86%	71%	60%	100%
Superfluous activities reporting and corresponding cost effects	100%	100%	60%	100%

The outputs of the KMO and Bartlett tests indicate that the research data are appropriate for exploratory factor analysis. On the other hand, the communities' coefficients imply the relevance of the questions in this area in the process of factor analysis. Also, the total variance explained is more than 67%, which, given that it should be at least 60%, confirms the validity of test results.

Table 2: information needs variables used in factor analysis

Rows	Criteria	Types of reports	acronyms	t-St.
1	Financial reporting	Structural analysis of Cost of Goods / Services (Materials, Wages and Overhead)	f1	5.9
2		Report on the cost of producing products / services for different customers	f2	3.8
3		Cost report related to activities in each of the departments / units	f3	8.12
4		Cost report for each project	f4	9.21
5		Report the cost of each process, broken down by activity	f5	3.14
6		Report on the cost of domestic services	f6	8.51
7		Report on the cost of domestic short-term projects	f7	7.00
8		Contractors' report on the provision of a specific service	f8	7.78
9		The report of the cost of the main and by-products	f9	4.20
10		Report on how to allocate overhead costs	f10	3.8
11	Performance evaluation	Report on the evaluation of the financial performance of each of the deputies	Perf 1	6.91
12		Report on the share of activities of each deputy / department from total general and administrative costs	Perf 2	3.42
13		Report on the evaluation of the overall financial performance of the organization	Perf 3	4.08
14		The financial performance report of each department (s)	Perf 4	12.61
15		Non-financial performance evaluation report (operational indicators) of each deputy	Perf 5	4.38
16		Non-financial performance evaluation report (operational indicators) of whole organization	Perf 6	3.1
17		Non-financial performance evaluation report (operational indicators) of each department (s)	Perf 7	3.97
18	Planning	A report on the profitability of different products / services	Plan 1	3.30
19		Profitability analysis of customers in different geographic areas	Plan 2	3.25
20		Activity-Based Budgeting (ABB)	Plan 3	11.64

Rows	Criteria	Types of reports	acronyms	t-St.
21		Report pricing of future products and services	Plan 4	3.86
22		A report on the processes or sectors to be outsourced	Plan 5	3.99
23	Control	Report on the unused capacity of each unit	Ctrl 1	5.81
24		Report the investigation of the consequences of eliminating redundant activities	Ctrl 2	5.44

After explaining the variance, five variables (financial reporting, performance, planning, control and information needs) were grouped using the rotated matrix, and the final model was plotted in ae well as in Figure 3.

The most important question in the questionnaire is about the reports that the ABC system is able to provide to executives to make optimal decisions. Managers may require part or all of the reported statements according to the information they require. In order to further review the reports presented, the views of managers on the importance of reports are presented in Table 3. In order to increase the accuracy of these surveys, the "moderate" options are not considered.

As shown in the Table 3, customer and pricing reports are less important for managers. In addition to the above analysis, one has to examine whether there is a relationship between the four dimensions expressed? It should also examine the impact of these dimensions on information needs. In all analyzes, it is concluded that the quadruple dimensions of the proposed model are related to the information needs, and each of the dimensions is influential in this regard. In short, all of the above reports can be effective in determining the information needs of managers. The following is an overview of whether the current system provides the executives with the reports that they need. A paired-sample test examined the desirable and current status of reporting to decision makers. In this test, the report00 variable represents the status quo and the report0011 variable represents the desirable status. As you can see in Table 4, the difference between these two (desirable-existing) ques is negative (t = -15). Therefore, lack of these reports is felt in the organizations.

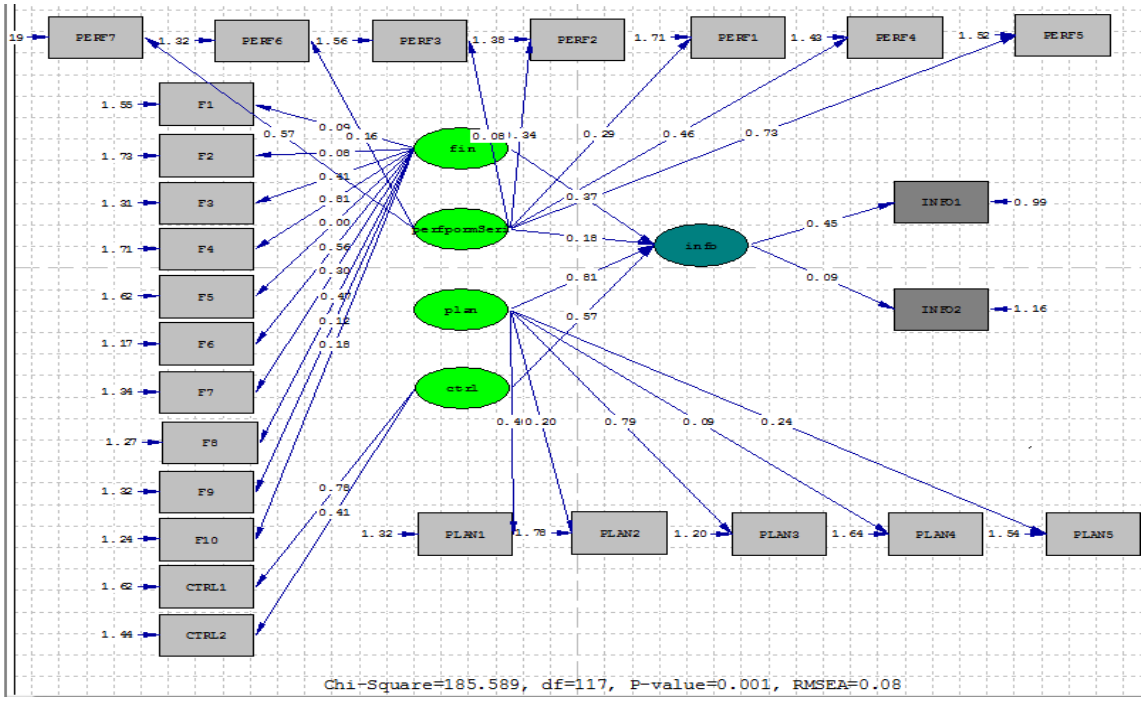

Figure 3: Approved Model for Management Information Needs

Table 3: the results of the reports needed by managers

Types of reports	Above average	Below average
Structural analysis of Cost of Goods / Services (Materials, Wages and Overhead)	45%	28%
Report on the cost of producing products / services for different customers	45%	25%
Cost report related to activities in each of the departments / units	62%	14%
Cost report for each project	75%	18%
Report the cost of each process, broken down by activity	54%	18%
Report on the cost of domestic services	48%	10%
Report on the cost of domestic short-term projects	50%	24%
Contractors' report on the provision of a specific service	67%	14%
The report of the cost of the main and by-products	46%	30%
Report on how to allocate overhead costs	54%	21%
Report on the evaluation of the financial performance of each of the deputies	59%	15%
Share of activities of each deputy / department from general and administrative costs	57%	17%
Report on the evaluation of the overall financial performance of the organization	60%	17%
The financial performance report of each department (s)	62%	18%
Non-financial performance evaluation report (operational indicators) of each deputy	55%	18%
Non-financial performance evaluation report for the whole organization	58%	18%
Non-financial performance evaluation report (operational indicators) of each department	62%	10%
A report on the profitability of different products / services	59%	22%
Profitability analysis of customers in different geographic areas	22%	47%
Activity-Based Budgeting (ABB)	66%	15%
Report pricing of future products and services	23%	53%
A report on the processes or sectors to be outsourced	59%	24%
Report on the unused capacity of each unit	54%	22%
Report the investigation of the consequences of eliminating redundant activities	59%	23%

Table 4: paired sample test results

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	99% Confidence Interval of the Difference Lower	Upper			
Pair 1	reports00 - report0011	-.66958	.26184	.04364	-.78845	-.55072	-15.343	35	.000

In another section of the questionnaire, managers were asked to specify the basis for receiving reports. In fact, this question addresses the preferences of managers about the type of reports (cost objects). Table 5 presents the results of this review.

As you can see, managers mostly want reports relating to project, functions, and process roles. In another section, the questionnaire was asked about the types of decisions that managers face in their environment. In order to evaluate the opinions of managers, their degree of encounter with different decisions was presented in a range. Since the Medium option is neutral, above and low responses are presented. Table 6 shows the results of the managers' comments.

As shown in Table 6, managers are less likely to make decisions about remuneration / incentive payments, decision-making on empowerments and pricing of products.

Table 5: the results of costs groups review

rows	Cost objects (groups)	Yes	No
1	Based on functions/deputy/departments	82%	18%
2	Based on business units	9%	91%
3	Based on products/services/production line	41%	59%
4	Based on geographical zones	42%	58%
5	Based on projects	96%	4%
6	Based on cost centers	43%	57%
7	Based on process/activities	77%	23%
8	Based on end users/costumers	14%	86%

Table 6: results for types of decisions

rows	Cost objects (groups)	Above average	Below average
1	Costs control	54%	12%
2	Performance evaluation	71%	5%
3	Compensation and payments	29%	45%
4	Operational planning	55%	18%
5	Deciding on empowerments	25%	47%
6	Operational improvements	70%	14%
7	Products pricing	24%	57%

Furthermore, the study of the success factors of the organizations surveyed is important because of the fact that the success factor is determined by the importance and role of the ABC system for that organization. In order to find out the success factor of the organizations studied, several factors were extracted from the subject literature and interviews with experts. Table 7 reports the summary results.

As outlined in the Table 7, for the managers in the supply chain, three factors have been identified as having a lower significance including: pricing of products, increasing product / service diversity and increasing competitiveness.

In one of the specialized questions of financial managers, they were asked to state whether they have ever experienced any changes in the accounting or financial systems, or not. In case of a positive answer, the rate of success in this change was also asked. Table 8 summarizes these question results.

As it is seen, the investigated organizations have experienced fewer changes in the areas of the management accounting, performance evaluation system, and production technology. The success rate of these changes was, in overall, less than favorable levels. In Table 9, information is provided from the organizations surveyed which indicates which of accounting and management techniques related to mentioned systems are used.

It can be concluded that accounting and management techniques are used very little in organizations other than annual budgeting. One of the most important information needed to examine whether an ABC system can be useful for organizations is why there are reasons to use it. Table 10 presents the results of this review. As you can see, factors such as the diversity of products / services and increased competition in this field have lower effects.

Table 7: key success factor analysis

rows	Key success factors	Above average	Below average
1	Reputation and credibility of the organization, internationally	68%	14%
2	Product pricing	32%	61%
3	Quality improvements	82%	11%
4	Cost management	81%	19%
5	Diversification of products	29%	46%
6	Timely delivery	89%	7%
7	Increasing competitiveness	34%	39%
9	Capital intensity (focus on capital assets)	73%	15%
10	Knowledge-based orientations	93%	2%
11	Increasing flexibility in the production processes	51%	15%
12	Engaged in corporate actions	65%	18%
13	Complexities in the production processes	51%	18%

Table 8: the results of changes in systems and/or practices

Systems and practices	Changed	Unchanged	Desirability (positive effects)
Managerial accounting system	38%	62%	80%
Quality control practices	46%	54%	6%
Long-term financial planning practices	54%	46%	57%
Financing practices	69%	31%	58%
Contractors selection practices (tenders)	69%	31%	33%
Performance evaluation system	31%	69%	25%
Financial accounting system	92%	8%	75%
Properties, plant and equipment system	54%	46%	86%
Production technology	23%	77%	33%
Organizational chart	85%	15%	45%

Table 9: results for the use of management and accounting techniques

Management and accounting techniques	Are used	Are not used
Standard costing	23%	77%
Job costing	8%	92%
Process costing	15%	85%
Annual budgeting	92%	8%
ABC	31%	69%
Activity-Based Management (ABM)	23%	77%
Return on investment for capital budgeting	23%	77%
Internal rate of return for capital budgeting	15%	85%
Net present value for capital budgeting	8%	92%
Cost-Volume-Profit analysis	23%	77%
Quality costing and analysis	15%	85%
Balanced Score Card for performance appraisal	00%	100%

Table 10: analysis of reasons for application of ABC

Underlying causes	Above average	Below average
High levels of overhead costs	100%	00%
Product diversifications	31%	38%
Increase in competition	31%	54%
The weakness of conventional systems in providing cost details for each activity to make operational and strategic decisions.	85%	8%
Precise control of costs in line with its management	100%	00%
Understanding the profitability of a plan/project against others	69%	15%
Making comparisons between contractors cost to reduce their proposed prices	69%	15%
Achieve budget goals and accurately evaluate performance	92%	8%
Legal and Regulatory Requirements	85%	00%

5. Discussion and Conclusions

The study aimed to assess the information needs of managers to the ABC system over TSE sample listed companies. The results show that managers of sample companies are seeking for financial reporting, planning (budgeting), performance assessment and control information that a substantial parts of such information are not provided by current accounting and management systems. We discovered a significant information gaps between managements needs and underlying systems that would be bridged by ABC. Because some of these companies act as a project and outsource many of their activities, it is important to have information about outsourced projects. Following the grouping of outsourced projects, managers demanded awareness of costs based on their functions, empowerments, and departments. Managers of different departments have called for awareness of the contribution of each organizational unit in corporate income and expense, so that they can better compare their organizational units against others. It also increases the motivation for further efforts. In the groupings presented, the grouping of costs based on the processes and activities is ranked third. In many managers' opinion, they want the cost of selected sections of a process or activity. If all organizational processes can be drawn up in a single sheet, managers are requesting information on the cost of the selected sections of the sheet. For many managers, access to cost information such as activities can be useful in the productivity of business activities. Achieving information on the level of business units and the consumer level has earned the lowest score among the clusters. Given the nature of some manufacturing companies, it is not surprising that managers will not benefit from the availability of end-user cost information because they are not primarily directly exposed to end customers, and information cannot be obtained at this level. According to the empirical findings, managers are in dire need of information derived from the ABC system for decision-making purposes in the areas of performance evaluation, planning, control and improvements.

Considering that the accepted approach in this research is the ABC system and this system can provide diverse reports for managers in order to make optimal decisions, it can be perceived from the success factors that whether the organizations have the potential and the required field to use this system or not. If cost management is one of the key factors of the organization, it can be inferred that the ABC system can be useful for such an organization and help administrators manage their costs. About 24 types of reports provided by the ABC system are that managers have only scaled down two types. In the case of 22 other reports, the majority of respondents agreed upon usefulness, stating that these reports could have a huge impact on their decisions as they provide the information and materials needed to make decisions. High scores for changes in systems such as management accounting, long-term financial planning, financing practices, contractor selection, financial accounting, and asset management systems indicate that cost reduction and management are the main concerns of managers; but unfortunately, the success rate in achieving these goals was not substantial. Lack of modernization, and integration of current management accounting systems in have been one of the reasons for the slowdowns. Therefore, due to the need for information for financial reporting, planning,

performance evaluation and control, these systems need to be updated toward ABC. Regarding the high overhead costs (100% of managers), precise control of costs in line with its management, achievement of budget goals and accurate evaluation of performance, regulatory requirements, the weakness of conventional systems, etc. as the causes accelerating the increased need for ABC information as well as respecting the ABC position in the context of financial reporting, performance appraisal, planning and control, it is suggested to executive directors, financial managers and accountants of TSE listed industries to develop informational, financial, technological and personnel infrastructures along with providing the required resources to establish an activity-based costing system.

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Note

[1] . Mono methods plus multi methods.