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Enterprise resource planning systems' impact on accounting processes

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Abstract *The advent of the IT-led era and the increased competition have forced companies to react to the new changes in order to remain competitive. Enterprise resource planning (ERP) systems offer distinct advantages in this new business environment as they lower operating costs, reduce cycle times and (arguably) increase customer satisfaction. This study examines, via an exploratory survey of 26 companies, the underlying reasons why companies choose to convert from conventional information systems (IS) to ERP systems and the changes brought in, particularly in the accounting process. The aim is not only to understand the changes and the benefits involved in adopting ERP systems compared with conventional IS, but also to establish the best way forward in future ERP applications. The empirical evidence confirms a number of changes in the accounting process introduced with the adoption of ERP systems.*

1. Introduction

Recent changes in the business environment, namely, deregulation, privatisation, globalisation, and consequently increased competition, transformed large organizations into giant multinational corporations (MNCs). This changing business environment has also signified the need for companies to search for new ways to survive and succeed. Arguably, IT offers the necessary tools for companies to respond effectively and efficiently to these changes. On the other hand, in this highly automated, IT-led business environment, companies are forced to keep up to date with the new technologies to remain competitive (Al-Mashari, 2001; Palaniswamy and Frank, 2000; Siriginidi, 2000a). An example of such technologies is an enterprise resource planning (ERP) system (Nicolaou, 1999). An ERP system is a generic term for an integrated enterprise-wide computing system. It encompasses a set of business applications (modules) used to carry common business functions such as accounting, stock control, logistics etc. (Kavanagh, 2001). The essence of a complete ERP system is to automate business processes, share common data across the organization but most importantly, to produce real-time data.

Although conventional information systems (IS) offer managers transaction processing, reporting and information for decision making, this appears insufficient in this new business environment, where automation, effectiveness and efficiency in

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operations and real-time data are important factors for business success. ERP systems offer distinct advantages to companies adopting them, improving the decision-making process via the provision of appropriate and timely information. Further, improved planning and control of operations are also derived from ERP applications. These, in turn, result in higher effectiveness and efficiency in operations and consequently improved customer satisfaction (Duff and Jain, 1998; Gupta, 2000). The purpose of this study is to provide evidence via a questionnaire on the impact of ERP systems for companies adopting them, with particular emphasis on their accounting processes, as part of business processes. The focus of this study is to determine the extent to which ERP systems have helped companies in achieving that, focusing attention on changes in accounting practices. The aim is to understand the underlying reasons for ERP systems' success or otherwise, the benefits accrued and thence, establish the best way forward in fully exploiting ERP systems' potential in this highly competitive business environment.

Section 2 provides a review of the relevant literature. Section 3 discusses the research questions and the methodology adopted is discussed in Section 4. The research findings are presented in Section 5. Section 6 discusses the conclusions drawn from this research and offers implications for future research.

2. Previous research

ERP systems evolved from advanced manufacturing technologies (AMT) aimed at increasing quality, lowering inventory levels, improving customer service and manufacturing flexibility (Drury, 1996; Huang and Palvia, 2001; Palaniswamy and Frank, 2000; Siriginidi, 2000b; Slack, 1991). In particular, MRPII appears as a critical component of a "complete" ERP system (Gupta, 2000). Further, the year 2000 problem, currency consolidation (Euro), integration of all business functions and processes, and Internet interface constitute additional motives for companies adopting ERP systems (Gupta, 2000; Scott and Kaindl, 2000). Transactions under ERP systems are treated as part of the inter-linked processes that constitute the business in its entirety (Gupta, 2000). Such systems allow companies adopting them to automate and integrate business processes, share data across departments and produce and access information in real-time environment (Nah *et al.*, 2001; Themistocleous *et al.*, 2001). For example, entering a client order to the system would be sufficient to update all its relevant parts, such as stock levels, general ledger and logistics. In essence, a "complete" ERP system would incorporate a number of modules relating to not only the traditional accounting information system, but also stock control, MRP and logistics. Additional dimensions of an ERP system might involve EDI systems, and e-commerce (Duff and Jain, 1998; Hardy and Reeve, 1999). This all-inclusive IS is capable of generating tremendous benefits to organizations via increased effectiveness and efficiency in operations, business processes and strategic decision making (Duff and Jain, 1998; Hayes *et al.*, 2001; Shang and Seddon, 2000). Specifically, Shang and Seddon (2000) classify those as operational, managerial, strategic, IT infrastructure and organizational, therefore, permeating all aspects of business enterprises at all levels.

Researchers have examined the prerequisites for successful ERP systems characterised as:

- national/environmental; and
- organizational/internal (Huang and Palvia, 2001).

Others classify ERP prerequisites as “critical success factors” (Akhiles, 1998; Bradford and Roberts, 2001; Krumbholz and Maiden, 2001; Stefanou, 1999). Specifically, Krumbholz and Maiden (2001) report that organizational culture is associated with ERP implementation problems, but national culture is not. They conclude that to improve ERP implementation methods one might have to be aware of the stakeholders involved and their respective norms. Violating the latter appears to cause implementation problems. Further, Stefanou (1999) argues that the trust within the organization and between the organization and associated companies is important in this context. In essence, overcoming behavioural problems and particularly employee resistance to change would require a careful planning of an ERP implementation strategy (Aladwani, 2001; Al-Mashari and Zairi, 1999). The AIS development/acquisition approaches by Greek SME are examined by Stefanou (2002). He found that there are some problematic areas in AIS development. The lack of a development/acquisition methodology in the majority of cases might result in misspecification of requirements and ineffective, inefficient and inflexible AIS. This is further supported by the findings regarding inadequate accountants’ participation in the development/implementation process.

Issues relating to the functionality (Scott and Kaindl, 2000) of ERP systems and their flexibility (Light *et al.*, 2001) have also been discussed. Specifically, the “best of breed” (BoB) approach accommodating both inflexibility and functionality problems encountered by single vendor ERP solutions has also been advanced (Lang *et al.*, 2001; Siriginidi, 2000a).

An additional important problem is the integration of ERP systems with the existing (legacy) systems (Themistocleous *et al.*, 2001). Overall, their core advantage, i.e. the interdependencies involved, may also constitute an important limitation resulting in data errors and business interruptions (Gupta, 2000; Hunton *et al.*, 2001; Themistocleous *et al.*, 2001). Substantial cost and time overruns, organization problems such as employee resistance also appear to be important barriers for their success (Nah *et al.*, 2001; Themistocleous and Irani, 2001; Themistocleous *et al.*, 2001). Furthermore, ERP systems are not a panacea for “false” underlying business structures and processes. Issues such as change of management programs (business process re-engineering – BPR) and culture, top management support, communication and the appropriateness of business and IT legacy systems are often critical success factors in implementing ERP systems (Al-Mashari and Zairi, 2000; Gupta, 2000; Nah *et al.*, 2001).

The core of IS is traditionally thought of as an accounting information system (AIS) integrating transaction processing, reporting and decision support. The primary aim of any AIS is to provide accounting information to a variety of users (internal and external). In order to achieve that, the following objectives are pursued, namely:

- to support the day-to-day operations (transaction processing);
- to support decision making by internal decision makers (information processing); and
- to fulfil obligations relating to stewardship (legal obligations).

The accounting module is the heart of an ERP system, typically incorporating applications such as general ledger, accounts receivable and payable, fixed assets, cash management, cost control and budgeting. However, ERP systems offer companies the ability to improve business processes by integrating all the functional areas within an organization. Both financial and non-financial data can be integrated. To the best of the authors' knowledge, one study has been conducted so far addressing this issue in Australia (Booth *et al.*, 2000). Their evidence suggests that ERP systems have proved to be effective in transaction processing and less effective in reporting and decision support. Further, they suggest that ERP systems provide both the incentives and means for adopting newer accounting practices such as activity based budgeting (ABB), product lifecycle costing (PLC), and balanced scorecards. Therefore, this study further explores the changes in accounting processes brought in with the introduction of ERP systems and the associated benefits.

In conclusion, although ERP systems are appealing in this highly competitive business environment they have a number of limitations. This study examines the views of managers of companies adopting ERP systems, focusing attention on the changes in the accounting processes brought in. Furthermore, the motives for adopting ERP systems and the benefits sought are explored. The aim is to shed more light on the distinct advantages offered by ERP systems compared to the traditional IS, establishing the best way forward.

3. Research questions

The literature review has raised some issues of concern, highlighting those that warrant further consideration. Specifically, this study purports to provide answers to the following questions, gathering evidence from the experiences of companies operating in Greece:

- What is the impact of ERP systems on accounting processes? What changes has the adoption of ERP systems brought in the accounting practice?
- How, and to what extent (if at all), has the application of ERP systems influenced accounting processes?
- Why, companies implementing an ERP system have, or have not, experienced changes in their accounting processes?

4. Methodology

The lack of theories and the limited empirical evidence on these issues have created the need to conduct preliminary research interviews with managers in companies adopting ERP systems. Therefore, exploratory interviews were used to facilitate the research process and the survey design (Sieber, 1973). In essence, the interviews have helped

structuring both the research questions and, consequently, the postal questionnaire was used as the instrument for data collection. Specifically, interviews with two major ERP providers and two companies adopting ERP systems have helped in establishing the relevant issues and determining the direction of this research. The interviews were conducted using open-ended questions covering issues such as reasons for ERP adoption, benefits achieved and changes brought in the accounting process. A list of factors to consider in relation to ERP benefits and possible changes in the accounting processes has been generated from those interviews and the relevant literature (the questionnaire form is in the Appendix). In addition, some elements were drawn from the study of Teo and King (1999). The questionnaire form includes multiple choice questions and one question on a seven-point Likert-type eliciting respondents' attitudes on the extent of the impact of ERP systems on accounting processes (Nachmias and Nachmias, 1996; Oppenheim, 1992; Riley *et al.*, 2000).

After consultation with major ERP providers in Greece, a client list was obtained which formed the sampling frame of this study. Using probability sample design, systematic sampling was applied, drawing a sample of 98 companies. After telephone conversations with contact persons in charge of ERP systems, 26 agreed to participate in the study. The questionnaire forms were sent via post, fax or e-mail. All questionnaires were returned completed (26.5 per cent). The empirical evidence presented in this paper is solely obtained via the questionnaire sent to managers of companies adopting ERP systems in Greece. However, the triangulation of research methods (interviews and postal questionnaire) enhances the reliability, validity and the generalizability of the results (Gildchrist, 1992; Kirk and Miller, 1986; Nachmias and Nachmias, 1996).

Half of the respondents are working in the industry and 31 per cent in commerce whereas the balance are in services and other types of organizations. The majority of the companies (65.4 per cent) are independent, whereas a substantial proportion (19.2 and 11.5 per cent) are parent and associate companies respectively. Further, the companies are both Greek and foreign companies (associate) operating in Greece. As one would expect, the majority of the respondents (96.2 per cent) are male and more than half of them (57.7 per cent) are working in the information department. The average age of the respondents is 35 with total work experience over 11, and 4.5 years at current post. Overall, sample details indicate its representativeness and, therefore, the ability to draw generalizations from the survey findings with one caveat. That is, given the fact that some of these companies have only recently introduced ERP systems (average 18.5 months), one should expect that more benefits will accrue in the future for those companies.

5. Results and discussion

The survey results are presented in three sections. Section 5.1 discusses the motives for the adoption of an ERP system and the benefits achieved, particularly in the accounting processes. Next, the actual changes in the accounting processes brought in with the introduction of ERP systems including their impact are discussed. Section 5.3

(on the empirical results) attempts to provide an explanation of these findings by looking at additional dimensions, in the context of ERP applications.

5.1 Motives for adopting ERP systems and benefits on accounting processes

Managers of companies adopting ERP systems have quoted using a number of modules. However, all of them are operating financial and management accounting modules. In addition, the majority of them are operating a fixed asset register, costing and stock/purchases modules. Further information is summarized in Table I.

Therefore, it is evident that ERP adopters have a primary concern to integrate their accounting processes, which should be demonstrated in changes in their accounting practices. It is rather surprising though that payroll is not at the top of the managers' agenda, despite being an integral part of the accounting system.

Individuals were also directly asked as to why they chose to adopt ERP systems. Respondents have indicated "increased demand for real-time information", "information for decision making" and "integration of applications" as the most popular reasons for adopting ERP systems. Therefore, the pronounced advantages of ERP systems were the driving force for ERP adopters. Further, BPR, which is also a prerequisite for a successful ERP implementation, is quoted from an important proportion of respondents (54 per cent). It is also noteworthy that half of them consider the adoption of ERP systems as the means for cost reduction and 31 per cent as the means for increasing sales. Further information on reasons for adopting ERP systems is provided in Table II.

Clearly, the majority of the respondents are motivated to adopt ERP systems for legitimate reasons considering what the latter purport to achieve. ERP systems are correctly perceived as facilitators of business processes and operations and also supporting management decision making at all levels. Results are also in line with a similar survey conducted by Stefanou (2002). Changes in the processes and particularly accounting practices are expected to exist considering the adoption of accounting-related modules by all companies, and also the underlying rationale for implementing ERP systems. Section 5.2 examines the actual changes in the accounting processes brought in via ERP systems as well as their impact on those processes.

	Number	Per cent
Financial accounting	26	100
Management accounting	26	100
Fixed asset register	24	92
Costing	23	89
Stock-purchases	22	85
Production	12	46
Logistics	12	46
Payroll	9	35
Quality management	2	8
E-commerce	1	4

Table I.
Operating modules in
ERP environment

Table II.
Reasons for ERP
implementation

	Number	Per cent
Increased demand for real-time information	25	96
Information generation for decision making	24	92
Integration of applications	20	77
BPR	14	54
Cost reduction	13	50
Taxation requirements	9	35
Introduction of Euro	8	31
Increase sales	8	31
Application of new business plan	7	27
Development of activities into new areas with business contacts	5	19
Competition	5	19
Internet development	4	15
Integration of IS	2	8
Stock exchange requirements	2	8
Government funding – subsidization	2	8
Year 2000 problem	1	4

5.2 Accounting practice and ERP systems

The evidence presented earlier regarding the operation of accounting modules and the underlying reasons for adopting ERP systems leads us to expect notable changes in the accounting practice in the post ERP period. Rather surprisingly though, the only notable changes in accounting methods and practices resulting from adoption of the ERP systems relate to the increased use of “internal audit function”, “non-financial performance indicators” and “profitability analyses by business segment and by product”. Clearly, these changes evolve from the integration of applications, the production of real-time information and particularly information for decision making. Therefore, considering the motives for adopting ERP systems, the outcome of their application appears to be successful in achieving its purpose. Additional information on the changes brought in the accounting practices after ERP implementation are summarised in Table III.

As shown in Table III, the adoption of ERP systems has enabled a number of companies to introduce financial ratio analysis, the production of budgets (including cash budgets), profit centres, absorption costing and profitability analysis per customer. These changes also stem from the availability of real-time data and the integration of applications, further reinforcing the argument posed earlier. A small, but an important proportion of ERP adopters have introduced a number of more “sophisticated” accounting techniques in their accounting processes including activity based costing (ABC) and “target costing”. On the other hand, Booth *et al.* (2000) report less changes in management practices introduced by ERP systems, including the use of financial/non-financial performance indicators, customer profitability analysis and ABB. Perhaps this is due to the fact that ERP users have been using these practices before and the introduction of ERP systems has not been seen as a means for introducing new practices. In conclusion, the adoption of ERP systems appears to have fulfilled its purpose as demonstrated in the changes in the accounting practices

	Number	Per cent	Enterprise resource planning
Internal audit	18	69	<div>241</div> <div>Table III.</div> <div>Accounting methods and practices used after the application of ERP systems</div>
Non-financial performance indicators	18	69	
Profitability analysis per business activity/segment	17	66	
Profitability analysis per product	15	58	
Financial ratio analysis	14	54	
Cash budgets	13	50	
Master budgets	13	50	
Profit centres	13	50	
Absorption costing	13	50	
Profitability analysis per customer	12	46	
Cost centres	11	42	
Capital expenditure budgets	10	39	
ABC	7	27	
Target costing	5	19	
Marginal costing	5	19	

brought in. However, as discussed later, more changes are expected to follow as the introduction of ERP systems for many companies is still in its infancy.

So far, the motives for adopting ERP systems and the changes brought in the accounting practices have been discussed. However, what is the “real” impact of ERP systems on companies adopting them? That is, to what extent have ERP systems fulfilled their purpose? Individuals were asked to rate the actual benefits achieved via the introduction of ERP systems on a seven-point Likert type scale. The most highly rated perceived benefits achieved via ERP systems relate to “increased flexibility in information generation”, “increased integration of accounts applications” and “improved quality of reports-financial statements”. These findings further reinforce the argument posed earlier regarding ERP systems’ success in achieving their purpose. That is, the integration of applications, the production of real-time information and particularly information for decision making clearly affect business processes and particularly the accounting practices of ERP adopters. Additional benefits achieved though to a lesser extent involve time reductions for accounts closure and preparation of financial statements. Further, “improved decision-making process”, “increased use of financial ratio analysis” and “improved internal audit function” have also been quoted. These are also reinforcing the above argument.

On the other hand, rather unexpectedly, the variables “improved working capital control”, “reduction of personnel of the accounting department” and “reduction of time for issuing payroll” are benefits with the lowest rating. Nonetheless, as discussed later, this may be attributed to the early stage of ERP implementation process. Additional information on the benefits achieved is summarized in Table IV.

Overall, the benefits achieved by ERP adopters strongly influence accounting information and practices and also organizational planning at a strategic level. Nonetheless, there is still room for improvement as individuals’ perceptions are not that strong on the above benefits. Further, Booth *et al.* (2000) report ERP users’ perceptions of the quality of accounting IS in financial and management accounting as

Table IV.
ERP systems' impact on
accounting process

	Mean	Std dev.	Median	Mode
Increased flexibility in information generation	5.73	0.92	6.00	5.00
Increased integration of accounting applications	5.31	1.29	6.00	6.00
Improved quality of reports – statement of accounts	5.27	1.00	5.00	5.00
Improved decisions based on timely and reliable accounting information	4.81	1.20	5.00	5.00
Reduction of time for closure of annual accounts	4.81	1.13	5.00	5.00
Improved decision-making process	4.73	1.51	5.00	6.00
Increased use of financial ratio analysis	4.62	1.36	5.00	5.00
Reduction of time for issuing of reports – statement of accounts	4.62	1.17	5.00	4.00
Improved internal audit function	4.58	1.17	5.00	5.00
Reduction of time for closure of monthly accounts	4.54	1.42	5.00	5.00
Reduction of time for closure of quarterly accounts	4.46	1.39	5.00	5.00
Reduction of time for transaction processing	4.27	1.25	4.00	5.00
Improved working capital control	3.96	1.56	4.00	4.00
Reduction of time for issuing payroll	2.81	1.58	3.00	1.00
Reduction of personnel of accounting department	2.73	1.43	3.00	1.00

Notes: 1 = not at all; 2 = very low degree; 3 = low degree; 4 = average; 5 = high degree; 6 = very high degree; 7 = perfect

“adequate” in terms of reporting and decision support and “good” in terms of transaction reporting. Therefore, results between the two studies are comparable, indicating that there are still benefits accrued for ERP adopters. It is noteworthy that Stefanou (2002) also reports the integration of accounting applications, information exchange and reporting capabilities as notable advantages/strengths of ERP systems.

5.3 Additional issues

The previous sections have provided evidence confirming the ERP systems' success in achieving the primary purpose and their impact on accounting processes. However, the evidence has also shown that there is still room for improvement in terms of both the actual changes in the accounting practice and the extent of their impact on the business as a whole. Although issues such as implementation and functionality problems and integration issues might provide an explanation for these findings, this study is delimited to simple and obvious reasons. Specifically, considering that ERP applications require substantial time and effort to implement, it is imperative to first examine these dimensions before looking at it any further. Therefore, the fact that ERP systems in these companies have only been adopted during the last couple of years (mean value 18.5 months) suggests one potential reason for the above findings. That is, the implementation of ERP systems may not be complete and, therefore, companies have not yet fully exploited their potential. Further, the fact that production and logistics modules are operated by less than half of these companies might provide an explanation for these findings. That is, not all business operations have been integrated yet, suggesting further room for improvement and, particularly, more changes in the accounting processes.

6. Conclusions and recommendations

This study has presented some new evidence from companies adopting ERP systems and their impact on accounting processes in Greece. The survey results suggest that companies adopting ERP systems are driven by the needs of this increasing competitive environment in order to survive and succeed. That is, integration of applications, real-time information, and particularly information for decision making are the underlying motives for ERP adopters. This further confirms that ERP systems are currently becoming a necessary tool for companies to remain competitive in this new business environment rather than constituting a new strategic move. Nonetheless, ERP systems also offer the opportunity for companies to re-engineer their activities and revamp both their IS and practices.

The empirical evidence confirms a number of changes in the accounting processes introduced with the adoption of ERP systems. The most frequently quoted ones involve the introduction of an internal audit function, the use of non-financial performance indicators, and profitability analysis at segmental/product level. It is noteworthy though that these changes stem from the main advantages of ERP systems, which have also been the driving force for managers adopting them. This is further reinforced by respondents' most highly rated perceived benefits for adopting ERP systems. That is, the integration of accounting applications, increased flexibility in information generation, and improved quality of financial reports and decisions based on timely and reliable accounting information. Further, the fact that some changes in the accounting processes have not been so widely applied and the potential benefits from adopting ERP systems have not been highly rated has been attributed to the infancy of these systems. Specifically, as these companies have only introduced ERP systems relatively recently, their impact on accounting practices cannot be fully appreciated at this stage. Furthermore, the complexity of ERP systems requires some time to elapse before users can reap all the benefits. In essence, the benefits from the ERP implementation are accrued in the longer-term (Poston and Grabski, 2001). However, these changes and the benefits associated with them do not constitute innovation *per se*, but rather keeping up with the changes in the business environment. The increased demands in this highly competitive, highly automated, IT-driven business environment forced companies to resort to ERP systems to remain competitive.

Further research may examine the impact of both technical and "softer" factors in bringing radical changes in accounting processes. The latter might involve cultural issues, including employee resistance to change. It is inevitable that ERP implementations require a reorganization of business processes and organizational structure but, most importantly, a change of management style and culture (Wood and Caldas, 2001). Therefore, top management support, collaboration within the organization and between the organization and the ERP provider and employee training/participation appear to be successful ingredients in ERP applications. Furthermore, accountants need to have good IT skills to apply their knowledge in this new IT-led work environment. Therefore, examining their skills and abilities in coping with this new demanding role might also provide an explanation for these findings.

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Further reading

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Questionnaire Form

A. Please fill in or tick:

1. For how long has the ERP been implemented in your enterprise?

2. Which of the following modules do you operate in an ERP environment?

1. ☐ Financial Accounting

2. ☐ Fixed Asset Register

3. ☐ Management Accounting

4. ☐ Costing

5. ☐ Production

6. ☐ Logistics

7. ☐ E-commerce

8. ☐ Stock-Purchases

9. ☐ Payroll

10. ☐ Quality Management
3. Which of the following reasons led to the decision to adopt the ERP system?

1. ☐ Integration of applications

2. ☐ Taxation requirements

3. ☐ Introduction of EURO

4. ☐ Internet development

5. ☐ Business process re-engineering

6. ☐ Competition

7. ☐ Year 2000 problem

8. ☐ Integration of information systems

9. ☐ Increased demand for real-time information

10. ☐ Stock Exchange Requirements

11. ☐ Cost reduction

12. ☐ Increase sales

13. ☐ Information generation for decision-making

14. ☐ Application of new business plan

15. ☐ Government Funding - Subsidization

16. ☐ Development of activities into new areas with business contacts

B. Which of the following accounting methods and practices did you use after the application of the ERP system? (Please check)

	After ERP
1. Absorption costing	<input type="checkbox"/>
2. Target costing	<input type="checkbox"/>
3. Marginal costing	<input type="checkbox"/>
4. Activity Based Costing (ABC)	<input type="checkbox"/>
5. Cost centres	<input type="checkbox"/>
6. Profit centres	<input type="checkbox"/>

(continued)

- | | |
|---|--------------------------|
| 7. Profitability analysis per product | <input type="checkbox"/> |
| 8. Profitability analysis per business activity/segment | <input type="checkbox"/> |
| 9. Profitability analysis per customer | <input type="checkbox"/> |
| 10. Production of master budgets | <input type="checkbox"/> |
| 11. Production of cash budgets | <input type="checkbox"/> |
| 12. Production of capital expenditure budgets | <input type="checkbox"/> |
| 13. Financial ratio analysis | <input type="checkbox"/> |
| 14. Non-financial performance indicators | <input type="checkbox"/> |
| 15. Internal audit | <input type="checkbox"/> |

C. In your opinion, to what extent has the introduction of the ERP helped your company to achieve the following? (Please fill in)

	1 = Not at all 2 = Very low degree 3 = Low degree	4 = Average 5 = High degree 6 = Very High Degree 7 = Perfect
1. Reduction of time for closure of monthly accounts	<input type="checkbox"/>	
2. Reduction of time for closure of quarterly accounts	<input type="checkbox"/>	
3. Reduction of time for closure of annual accounts	<input type="checkbox"/>	
4. Reduction of time for transaction processing	<input type="checkbox"/>	
5. Reduction of time for issuing of reports – statements of accounts	<input type="checkbox"/>	
6. Improved quality of reports- statements of accounts	<input type="checkbox"/>	
7. Improved decision-making process	<input type="checkbox"/>	
8. Improved internal audit function	<input type="checkbox"/>	
9. Improved working capital control	<input type="checkbox"/>	
10. Increased use of financial ratio analysis	<input type="checkbox"/>	
11. Reduction of time for issuing payroll	<input type="checkbox"/>	
12. Reduction of personnel of accounting department	<input type="checkbox"/>	
13. Increased flexibility in information generation	<input type="checkbox"/>	
14. Increased integration of accounting applications	<input type="checkbox"/>	
15. Improved decisions based on timely and reliable information	<input type="checkbox"/>	

D. Company and Personal Information

1. Your company is: 1. ☐ Independent 3. ☐ Subsidiary 5. ☐ Franchise
 2. ☐ Parent 4. ☐ Associate 6. ☐ Other_____

2. Your position in the firm _____

3. Years at current post _____
4. Total work experience _____ (years)
5. Age _____ (years)
6. Gender _____