

Why Benefits Realization from ERP in SMEs Doesn't Seem to Matter?

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Abstract

It is often argued that IT investments require active management practices for benefits realization. This applies also to enterprise resource planning (ERP) systems. As well, benefits realization efforts are assumed to create more value than they cost. Hence, the maturity of organizations should be increased and their cultures cultivated towards more rational benefits realization practices. Our study on ERP implementations in Egyptian medium-sized organizations, however, provides aberrant results that challenge the fundamental arguments for formal benefits realization practices. While investments in ERP are regarded as significant, and the projects challenging, formal benefits realization and investment evaluation practices are considered largely irrelevant. The reasons include the "self-evident" nature of ERP benefits, perceived difficulty and costliness of method use and suspicions on rationality of methods. A government policy to support ERP investments may also decrease incentives for further benefits optimization. Cost coordination of the implementation efforts, however, continues to be an issue.

1. Introduction

Enterprise resource planning systems continue to be a topic of interest in the field of information systems [1]. Since the 1990s, the academic literature on ERP has focused mainly on large corporations. The literature has highlighted management control of ERP development and implementation, instead of regarding it only as a technological challenge [2]. ERP can bring up profound business implications or even undermine the strategic capabilities of the implementing organizations [2]. On the other hand, in the beginning of the first decade of this millennium, a majority of Australian ERP projects in large organizations reported

mainly operational (73%) and IT infrastructure (83%) benefits, while 55-56% reported some managerial and strategic benefits [3]. Only 14% reported to have gained organizational benefits from their ERP investments [3]. Later on, Carr [4, 5] even predicted "the end of corporate computing", arguing that IT, including ERP, will become a ubiquitous commodity without greater strategic importance.

Aside the main focus of ERP research on large organizations, ERP implementations, however, have become more common also in small- and medium-sized enterprises (SMEs) towards the end of the decade [6, 7]. The literature on ERP benefits in SMEs has remained largely inconclusive. An early study on Finnish SMEs suggested, in contrast to vendors' contemporary main focus on competitive advantage, that SMEs want ERP as a tool to manage day-to-day operations, and that it is important to have local and continuing support for the tools used [8]. In Austria, SMEs perceive their ERP projects more often successful than large companies and report to gain more benefits out from them [9]. Perceived benefits of ERP systems in Taiwanese SMEs have a significant impact on their adoption decisions [7]. (On the other hand, such issues as CEO's ERP knowledge, cost of ERP implementation, or sophistication of the software do not have significant impacts on the adoption decisions [6].) However, among the U.S. construction SMEs ca. 50% of companies have difficulties or refuse to use ERP systems in the first place [10].

In parallel with the development of the ERP field, an increasing number of IS scholars have argued for better management processes to govern, evaluate performance [11], and realize benefits from IT investments in general [12-17], including ERP. Benefits realization (BR) is regarded to go beyond traditional ex ante justification and ex post evaluation of IT investments by denoting the need for management also during the project from the viewpoint

of the expected and emergently recognized benefits [16]. In addition to the focus on strategic and managerial IT investments, benefits realization has been suggested as a relevant approach also with regard to many types of applications and infrastructural IT investments [16].

However, while both ERP implementations in SMEs and the academic literature on benefits realization have increased during the last decade, expected versus realized ERP benefits are seldom checked in SMEs [9, 18] as well as in ERP implementations in general [19]. In other application areas, the proponents of the benefits realization approach have highlighted how e.g. more than 50% of Taiwanese SMEs with focus on electronic commerce have started to use formal benefits realization practices [20]. Cases published in practitioner journals also illustrate success stories, for example, how a customer relationship management system in a middle-sized financial service retailer required the company to move from the problem-based IT investment mindset towards innovation-based benefits realization [21].

While literatures on both ERP implementation benefits in SMEs and related benefits realization practices remain inconclusive, our focus resides in the question of whether and why SMEs would adopt benefits realization practices in connection to their ERP investments. Our data originates in 22 interviews involving four Egyptian medium-sized companies who have implemented ERP, vendor representatives, and independent ERP consultants with experience altogether from hundreds of implementations. As presented later in this paper, the informants almost uniformly and deliberately expressed their neglect of formal benefits realization or evaluation practices on their (often rather comprehensive) ERP investments. Although the benefits realization literature has mostly focused on the adopters of benefits realization practices, we believe that research on those professionals representing a counterpoint would make a valuable addition to the body of knowledge, in this case with regard to ERP investments in SMEs. The aim of this study is to explain why usefulness of benefits realization practices concerning ERP investments in Egyptian SMEs is challenged.

The rest of the paper is organized as follows. Section 2 summarizes the existing literature on benefits realization and IT investment evaluation practices and issues of ERP implementation projects in SMEs. Section 3 clarifies the research process and introduces the four target organizations in more detail. Section 4 presents the main results of the study after which section 5 discusses about their contribution to the previous literature. Section 6 concludes with suggestions for future research.

2. Literature review

The fundamental principles of *benefits realization* postulate that [14]:

- IT has no inherent value in itself;
- the value from IT is realized through people doing their work differently;
- benefits arise through business managers and users through expected and emerging ways how they benefit from new technology;
- also potential negative outcomes from IT need to be recognized and mitigated by management, and
- thus, benefits realization needs a set of dedicated management practices to optimize the possible benefits. [14]

Whereas evaluation of the expected and realized benefits is important, the benefits realization approach denotes the need for management actions also during and aside the IT project to capture emerging benefits and to mitigate the unwanted emergent impacts [16]. In general, our research is grounded upon the observations by Thomas et al. [22] and Ashurst et al. [12]. A few paradoxes and shortcomings in the current IT investment evaluation and benefits realization literature have been recognized [22]:

- Contemporary formal IT investment evaluation and benefits realization practices are inadequate and better methods would be needed;
- However, a large number of suggested methods and practices already exists,
- of which few have been actually utilized in practice. [22]

Ashurst et al. [12], while arguing that benefits realization should become an organization-wide capability, simultaneously address a lack of empirical studies on actual benefits realization practices.

Our research aims to shed more light on these inconclusive fundamentals of the normative IT investment evaluation and benefits realization literature by exploring explicated reasons why our target organizations neglect IT investment evaluation and benefits realization practices in the first place. We reviewed the benefits realization literature identifying the given reasons both for and against of adopting benefits realization and evaluation practices in organizations. We included general-level literature on benefits realization as well as the scarce literature on benefits realization from ERP investments. In the following, we discuss the literature and the reasons given divided into four broad categories of such issues:

maturity, nature of IT benefits, perceived value versus cost from benefits realization, and organization culture and structure.

Maturity of management [23] and IT functions [24] is suggested to have impact on adoption of the benefits realization practice in a couple of ways. Firstly, it is stated that management may lack understanding of and competence on the IT investment [22] and change management [25] processes in general. Consequently, benefits realization or investment evaluation techniques are neither supported by management [22] nor adopted [23]. The immature organizations are characterized by their informal implementation processes, low confidence on actual outcomes from IT projects, low integration level of systems, and problems encountered in IT projects [24]. Based on these observations, Lin et al. [24] recommend that hitherto immature organizations should pursue higher organizational and IT maturity by adopting more formal benefits realization and investment evaluation practices. The role and maturity of IT in the company's business domain may have something to say, as Lin et al. [20] report high usage rate of investment evaluation and benefits realization techniques among Taiwanese business-to-business electronic commerce companies.

Several issues related to the **nature of expected benefits** have impact on the perceived usefulness of implementing formal benefits realization and investment evaluation practices. If an IT project goes according to what was planned, it may be assumed that it also produces the desired benefits [26]. Moreover, organizations may focus on tangible benefits which are self-evident to observe, ignoring deeper analyses of potential intangible issues [26]. A few organizations, e.g. many SMEs implementing ERP for mundane everyday operations, may have focus on short-term tactical and operational benefits, which do not require deeper analysis [8, 27]. As well, if the main benefit from the IS implementation is perceived the technological function of the system itself, it may decrease interest in adoption of benefits realization processes from the viewpoint of the organization [28]. However, the benefits realization literature highlights that benefits realization would also be needed for infrastructural technology investments [17]. One of the fundamental assumptions of the benefits realization proponents is that IT would have no value in itself, without making people to work differently, which would indicate a motor for adopting explicit benefits realization management [14]. In fact, the idea that functionality from IS/IT in itself could be a benefit is regarded as a "mindset" which hinders benefits realization [26, 28].

Benefits realization literature suggests fundamentally that **value gained from benefits**

realization activities is greater than the costs from these tasks [16]. Ward & Daniel [16] suggest that the "benefits of benefits management" include clearer planning for the investment, improved relationships between IT and business staff, wiser investments and increase in the realized benefits. However, not all organizations may recognize such value from using time for evaluation or increased management efforts for benefits realization. For example, IT investment evaluation and benefits realization may be seen as a complex and difficult undertaking, which does not warrant the effort [22, 25, 26]. Evaluation may also be seen as too costly [22, 26], the stakeholders of the benefits may lack time to do the tasks [22], or the scope of an IT project may be too narrow to warrant the effort. However, few research studying actual practices or benefits from the benefits realization efforts itself have been reported [12] beyond single case studies of individual projects (e.g. [21]).

The fourth category relates to **organizational structure and cultural issues**, which are suggested to have impact on the adoption of formal benefits realization practices. Firstly, organization culture may not support the idea of being both the "watchdog" and implementer of benefits delivery simultaneously [26]. On the other hand, organizational structures may not be optimal for practicing benefits realization as such [22]. Thomas et al. [22] suggest that adoption of formal practices may appear useful only after an effective decision-making culture is introduced in the organization, which includes such foci as accountability, leadership, relationships, strategy, measurement and action. Another culture-related issue is mistrust on benefits realization and evaluation practices due to the tendency to use them with a bias for promoting particular political agendas instead of pursuing rational decisions [22].

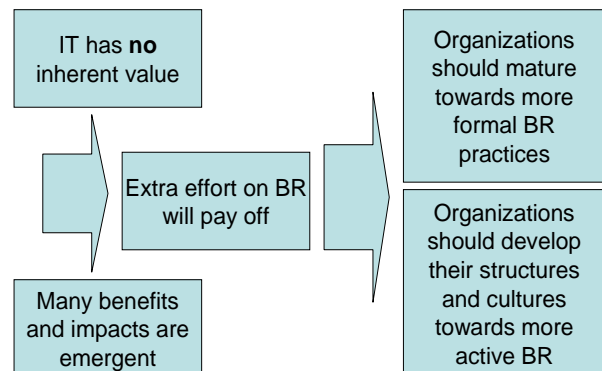


Figure 1 Reasoning for increased benefits management and realization practices in the literature

To summarize, the benefits realization and IT investment evaluation literature identifies that organizational maturity, structure, and culture are key issues, which hinder the organizations from implementing better benefits realization practices. The literature also argues that IT investments have no inherent value and many benefits and impacts are emergent – and a failure to see that would be another reason hindering the organization from implementing benefits realization. As well, the literature assumes that an extra effort on benefits realization and IT investment evaluation will pay off, although some organizations may not see that. However, the literature has lately argued that the failure to adopt benefits realization and investment evaluation practices is largely due to low maturity and issues of organizational culture and structure, which explains why the organizations would not see the fundamental drivers to implement those practices. (Figure 1).

3. Research methodology and cases

The first author conducted twenty-two qualitative face-to-face interviews in Egypt. The interviews were conducted in eight Egyptian companies and discussed about the whole ERP lifecycle, from the pre-selection phase until the post-implementation phase. The participants included a mixture of stakeholders who have been involved in ERP system implementations, four SMEs (12 interviews) which had implemented ERP, major ERP vendors (2 companies), major ERP implementation consultants and vendor partners (2 companies), and senior independent ERP and finance consultants in Egypt (2 interviews).

Egyptian government reports [29-31] give no standardized classification or definition of SMEs in Egypt. Especially, the current classification by the number of employees and fixed assets is not adequate across industrial sectors [30, 31]. Thus, the interviewees were asked to classify their organizations according to their annual turnover, number of employees, number of ERP users, and their perceived size in their industry market in comparison to their same industry competitors. Three were classified as medium-sized, and one as a small enterprise.

Altogether twelve interviews gathered information from the four SMEs including two manufacturing companies, one in the importing and distribution business, and one retail company. Five interviews focused on vendor representatives, five on implementation consultants, and the other two involved an independent senior ERP consultant and a senior freelance finance and corporate development consultant. The vendors and implementation consultants were chosen according to their popularity

and number of projects within the Egyptian SMEs. The informants had experience on various ERP systems:

- Al Motakamel;
- Focus;
- Infinity (a.k.a Al-Motammem);
- JD Edwards;
- Oracle E-Business Suite;
- SAP;
- and several in-house developed Integrated Enterprise Applications.

The experience of the consultant interviewees varied from junior consultants, among whom the least experienced had participated in three implementations, to senior consultants, of whom the most experienced had participated in more than 150 implementations. The main context and focus of the interviews were on Egyptian SMEs.

The interviews were semi-structured and face-to-face. The predefined themes relevant for this study covered:

- adoption drivers;
- ERP selection processes;
- feasibility and cost/benefit analysis
- benefits and investments justification;
- benefits realization;
- ex-post benefits and investment evaluation.

Moreover, all interviews were tape recorded, and carried out with diverse employee positions within the organizations in accordance to the ‘triangulation of subjects’ strategy [32]. In the following, the four target companies, “Nefertiti”, “Horus”, “Cleopatra”, and “Khufu”, who had implemented ERP systems, are introduced in more detail. The company names are fictitious to preserve anonymity (table 1).

Nefertiti had an in-house developed system before moving to an international ERP system. The company was mainly facing technical problems with the existing legacy system that were affecting its operations. Moreover, they had other challenges with the system that “*were due to the employee turnover, absence of sufficient system documentation, and support.*” (IT manager). Thus, the company decided to migrate to a standard ERP package, which would be “*more stable and easier to handle,*” (IT manager).

The company used no external ERP consultants, as they see themselves competent enough to identify needed requirements, select, and manage the ERP system. “*We are mature enough to decide [...], we are from the first IS adopters in the industry, we had three systems before this ERP system, but they were not standard packages, they were in-house developed systems,*” (IT manager).

Table 1. Overview of the four target cases

Company (size)	Informants	Ownership	Industry
Nefertiti (Medium)	Project leader, IT Manager, Business Solutions Manager	Private stocks	Automotive parts distributor
Horus (Medium)	ERP project steering committee member IS Manager, IS Deputy Manager/Business Intelligence Manager, Application Unit Manager.	Family owned	Retail
Cleopatra (Small)	IT Manager, IT Consultant, ERP project steering committee member	Family owned	Printing & packaging
Khufu (Medium)	IT Manager ERP project steering committee member	Family owned	Dairy products

The project team was composed of internal employees and the implementation partners. The system went live in January 1, 2008.

The ERP modules implemented were Finance and Controlling (FC), Sales and Distribution (SD), Material Management (MM), Customer Service, Human Resources Management (HRM), Customer Relationship Management (CRM).

Horus deals with a diverse number of commodities that are sold directly to customers through one outlet. The commodities vary from fresh food, fast moving goods, non-food commodities, textiles, and furniture.

Prior to the ERP acquisition, they had a local Egyptian ERP system that was a complete retail bundle. It consisted of an ERP as a back office, and a point of sale (POS) application as a front office. This system had many technical problems including poor performance, slow transactions, and inexact report calculations. Although it was both a front-end and back-end solution, still it had many integration problems with the POS, which dramatically affected the day-to-day operations. *“The point-of-sale network used to go down without any obvious reasons, and that is a nightmare for a retail business.”* (IS deputy manager). Therefore, Horus decided to move to an ERP package that can be integrated with a POS solution and application. In this case, it was clear that the adoption drivers were technical. *“If the ERP we had was working well, we wouldn’t think of buying a*

new one, but in our case the existing ERP was problematic, so, that was the major driver for buying a new ERP.” (Application unit manager).

The company had an IT consultant involved in the whole project, and he conducted a SMART analysis during the selection process.

The project budget was circa *“3 to 5% of the yearly sales revenues,”* a steering committee member mentioned. The implemented modules were FC, Capital Asset Management, Logistics, Procurement, and SD. The system went live in August 2007.

Cleopatra mainly produces paper and cartoon supplies for fast food restaurants in Egypt. The company’s produces several products, like hot and cold paper cups, ice-cream packages, sandwiches wrappings, and boxes.

The company had several scattered applications before acquiring an international ERP system. Most of the processes were not integrated within the applications used, and were manually done. The applications were mainly built on Microsoft Excel.

The company suffered many business and technical problems due to the lack of integration between the applications. *“The existing scattered applications did not meet the business requirements and they were not integrated, for example we had problems processing orders, sales’ planning was not integrated with production planning,”* a steering committee member mentioned. Moreover, it was challenging to generate reports and control the business cycle. As the problems were *“mainly reporting and loss of manual data, and controlling.”* (IT manager).

The ERP was implemented in 2007, and the modules were FC, order management, purchasing, warehousing, plus an external customized payroll system. The company has an IT consultant, which was engaged in all the ERP adoption phases at that time.

As we will discuss later, in this case adoption drivers were not only technical. There was an urgent need for IT infrastructure improvements for strategic decisions.

Prior to the ERP adoption, **Khufu** had several scattered applications, which lacked integration and scalability. *“We had scattered systems, so we needed integration [...], the systems we had were working with an Access database, which could not handle the business transactions anymore.”* (IT manager).

Not only this, the company suffered a database failure and loss of data. *“The system could not handle the number of invoices, then we faced failure in the database, and we lost some data, so we decided to buy a new system.”* (IT manager).

The company did not have a consultant during the selection process. They hired one later on during the implementation. The ERP modules implemented in

Khufu were FC, warehousing, purchasing, fixed assets, order management. The company now is thinking of extending the system to include the HR and Manufacturing modules.

4. Results

In general, none of our four target organizations had followed formal practices for IT investment evaluation or benefits realization. Moreover, according to the consultants, benefits management from IT investments is very rare in the context of Egyptian ERP implementations in general. However, the informants still claimed that ERP requires significant financial resources. Moreover, the consultants and most of the informants from the target organizations reported that the ERP projects had often significantly exceeded their initial budgets; some even doubled the initial budget. Anyhow, ERP was seen as a necessary and important part of doing the business.

“... [about evaluating ERP investments] in very rare cases, but it was not a formal evaluation, they just sense what has improved and so on.” (Independent financial consultant)

“Not formally, we just get some feedback from employees involved in some process cycles, which say that they sense improvements. But this doesn't happen as a formal evaluation.” (Implementation partner)

“We never evaluated the benefits resulted from the system, although there is a positive impact on the business, but never been measured.” (Steering committee member, Cleopatra)

“There are many benefits from the ERP system, like more control, improved processes [...] and it has a huge impact on our inventory and stock levels. We had a very big stock buffer, and now we realized that we don't need it.” (Steering committee member, Khufu)

We thus continued the case study by gathering data on why benefits realization and IT investment evaluation practices were ignored. In the following, the results are organized under five categories of observations:

1. Maturity;
2. Nature of expected benefits;
3. Perceived value from benefits realization or investment evaluation activities;
4. Organizational, professional, and national culture;
5. National policy in Egypt to support ERP investments in SMEs.

Unlike in the literature review, recognition of the role of **maturity** with regard to the organization's IT and change management was nearly absent in our data. One independent financial consultant touched the issue, implying that if one would like to conduct even a

cost-benefit analysis, it would require more competent and educated persons to do it:

“Cost/Benefit is doable, companies do not do it because they do not know-how, because it is calculated based on parameters that they cannot touch [...]. Cost/Benefit when done properly will take the investment decision in a technology platform 50% of the way.”

An independent ERP consultant noted that if benefits realization would be based only on financial measures, as the culture might become in the current situation where owners of SMEs lack formal education on the topic, it would risk investments in IT:

“When company owners or decision makers are not well IT educated, or if they don't have a consultant, they will care about how much money they will pay and how much would they gain from a system. However, when they understand, they will start to realize that technology is not easily financially justified; it would fail, if your approach is only financial, you will fail, and you will never ever be able to convince anybody to invest. Thus the business value should be clear.”

However, the main proportion of the other interviews suggested mainly other reasons than competence or maturity for the lack of benefits realization. Simultaneously, those interviews indicated that the issue had been pondered; contradicting to the idea that lack of formal benefits realization would result in plain lack of maturity or ignorance of the organizational stakeholders. In addition, one of the companies explicitly perceives itself as a mature organization; still it does not carry out benefits measurement or realization related processes.

A prevailing explanation for lack of investment evaluation and benefits realization practices was the **self-evident nature of expected benefits** from ERP. ERP systems were regarded as a “commodity” and the technological functionality was expected as such to lead towards rather operational and infrastructural benefits. Imitation of the peers also has a big role in implementation decisions.

“I always tell the companies that I consult, that IT has become a commodity. It already crossed over the financial evaluation stage, so it is like that I will tell someone, come on, lets assess why we should buy computers, why we should apply for a telephone line, electricity or water. They are all commodities, and IT is a commodity as well.” (Independent consultant)

“Yes, costs and time, and mistakes. These are immediate costs reductions. Like HR costs, cash management, and inventory costs. However, companies always focus on daily operations, that's their mentality; they don't focus on long term planning and the overview of the business. It does not matter

how much information they have on the systems that can help them to make strategic decision, they just care about day-to-day operations, based on their claims that the market is very dynamic and changing.” (Implementation-partner manager)

“One of the most important selection decision drivers is our references. When a company asks another company, which is in the same field of business about how successful is our ERP there, and they get a positive feedback, they approach us with a buying decision already. That is the fastest sales process,” (Implementation partner consultant)

In general, the informants widely shared a view that benefits from ERP investments (beyond the self-evident ones) are difficult to evaluate formally and thus the **evaluation and benefits realization process in itself is too costly or resource-consuming to warrant the effort**. That is, formal evaluation and benefits realization efforts would not pay off. Whereas monetary benefits were expected from ERP investments, they were regarded as impractical to relate to the technology directly through formal analysis.

“... it is very difficult to do a post implementation evaluation, or benefits quantification while running and supporting the system, and coping with changing requirements. This requires a lot of time and effort that we can not afford.” (Business support manager, Nefertiti)

“It is difficult to put numbers to intangible benefits, which everyone actually know or sense that they are actual [...] It is even difficult to evaluate the generally agreed-on intangible benefits, in a way that can be scientifically correct, and practically understandable and applicable.” (Independent financial consultant)

“Establishing a causal relationship between IT investments, sales, costs, and revenues is very hard to achieve, as the change could be due to other internal or external factors.” (Independent ERP consultant)

Moreover, one of our target organizations (Horus) had tried to conduct more formal evaluations, but abandoned the practice later on focusing mostly on implementing the technical performance and benchmarking their ERP through such measures.

“We tried to do it but it is not an easy job.” (IS manager, Horus)

“The realized benefits of IT investments are very hard to measure in terms of a financial or monetary value [...] for example, customer satisfaction, how much is this worth? It is hard to calculate it.” (Steering committee member, Horus)

A side-story of the perceived difficulty and uselessness of formal evaluation and benefits realization practices, was the **mistrust on rational decision-making if based on formal evaluation**

practices. Formal evaluation methods and practices were regarded as potential political tools rather than rational decision-making aids.

“We didn’t convert the benefits into money, because everyone can calculate them as he wants, I can show you that our ROI is 200% or 300% if I want, we calculate in another way, like we have a finance function that had problems with our legacy system, but now its performance has been improved, now we can report quarterly financial statements within three working days, and that’s an example of what we call ROI, still I can not tell you that it used to take us one month, and now it takes three days and this worth one million, because if you ask someone he could tell you 500 thousands, someone else would say two million, we just see that the ROI is that we do it in three days maximum instead of one month.” (ERP project leader, Nefertiti)

The data indicated also **cultural issues related to particular organizations, the profession of IT and management, and the regional culture** in Egypt. In the case organizations, the owners and managers of Egyptian family businesses had mostly built long-term trust-based relationships to consultants and adoption of ERP as such was based on those relationships and consultant recommendations. Due to the trust culture, no further evaluations were considered necessary.

“No we did not have any kind of feasibility study, and I would like you tell you something about the Egyptian owner, because you are doing a study about Egypt. The Egyptian owner has some people that he blindly trusts, and if they recommend a certain system, the owner will go for it, and that is what happened in our case.” (IT manager, Khufu)

In a couple of cases, the evaluation methods development for the conditions in Europe and the US were mentioned to be inadequate for Egyptian conditions.

“Even if we agree to choose one method to calculate costs and benefits, we will disagree on the parameters... Moreover, even if we agree on everything... still there is a financial challenge that the projects internal rate of return should exceed the company’s weighed average cost of capital (WACC), and regionally we have the challenge that the WACC is relatively very high, which is not the case in most of Europe, for example.” (Independent financial consultant)

“I suggest a cost/benefit analysis that is tailored for the region in terms of weight of parameters included.” (Independent financial consultant)

Finally, we found **national politics interfering to ERP investments in SMEs** as a likely issue having impact on lack of benefits realization practices. In Egypt, the Industrial Modernization Center (IMC) [33]

was mentioned to have a big impact on ERP investments in SMEs. IMC has directly financed ERP investments in SMEs, without requiring reporting of the benefits. During the year 2008/2009 alone, the IMC has funded 2,477 SMEs. This external financing was mentioned to decrease motivation for further management efforts to optimize the benefits, as the initiatives were funded anyhow. Two of our target organizations had been supported by the IMC money. On the other hand, Nefertiti's IT manager mentioned, that their company did not apply for the fund, as the IMC would have some control over the project, and they wanted to be in full control of their own project.

"Some companies did not have even an IT department; they just bought the ERP because of the IMC fund." (Implementation partner)

"Usually the ERP adoption decisions that I have seen were driven by one of two things, that they got funds from the IMC in order to follow the ISO standards for example, or that they have technical problems that they want to solve." (Implementation partner).

"The IMC recommends us to customers." (An implementation-partner team leader)

"Honestly, in Egypt, besides the need for control and integration, the IMC is one of the main motivators for companies to buy an ERP, as it provides them with a free fund, so companies who want to develop themselves will do it, why not? The money is coming for free." (Implementation-partner project manager)

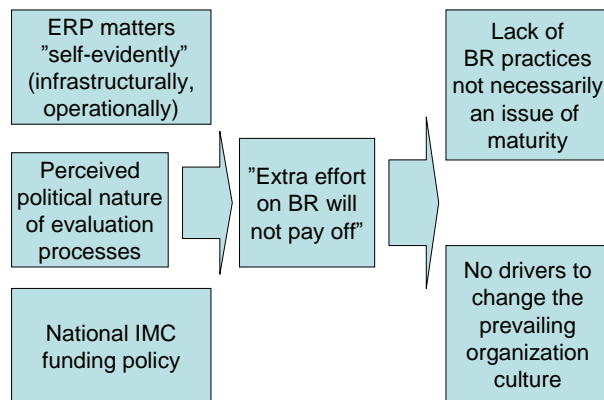


Figure 2 Summary of results

5. Discussion

Figure 2 summarizes our results. All in all, we regard the results as aberrant in light of the mainstream normative suggestions in the literature to adopt management practices for benefits realization [13-17]. Especially, our results challenge the suggestion that lack of "maturity" as such would be the root reason for

non-adoption of the benefits realization or investment evaluation practices [23, 24] in our domain of interest. The results also contradict to the assumption in the BR literature, according to which benefits from IT would be regarded as fuzzy from start, emerging during the implementation projects, and therefore some additional management actions to realize them would be needed (e.g., [14, 16]). The four organizations had several years of experience from utilizing IT, including earlier versions of ERP and legacy systems. The target organizations were also confident concerning the usefulness of ERP implementation outcomes, while they admittedly recognized to have cost coordination problems in their projects. As well, the consultant informants had experience from tens, some more than hundred, of ERP implementation cases each, while they did not regard benefits realization as a significant issue. Rather, the problems encountered by the target organizations related to the cost control side than uncertainty on benefits. This observation suggests the need for developing cost-controlling instruments for ERP implementations in SMEs rather than promoting more efforts on formal benefits realization processes.

In addition to the perceived "self-evident" benefits from ERP in SMEs, which idea contradicts to one of the most fundamental assumptions stated by the benefits realization literature, our results suggest also two other reasons which decrease the perceived usefulness to put extra effort on benefits realization. Many informants had opinions concerning potential weaknesses of formal evaluations – especially their mistrust on whether the evaluation methods would be used for rational decision-making rather than promoting personal political agendas. Moreover, the national IMC funding practice surely had decreased motivation for extra management effort to realize benefits from ERP – as those initiatives were funded anyhow by external means.

In general, our study responds to the lack of empirical research on benefits realization practices (e.g., [12]) – in our case, an in-depth study on lack of such practices in Egyptian SMEs with regard to their ERP implementations. However, our results should by no means be taken as a basis to refute the focus on benefits realization and IT investment literature in general. Our study should neither regarded as an example of a case in which "ERP would not matter" at all from the viewpoint of management (cf., [4, 5]). ERP systems are regarded to bring significant benefits and significant costs thus representing significant area of investments also in the future.

Rather, the results highlight that the widely-documented academic assumptions of the less self-evident nature of IT benefits and lack of maturity that would hinder adoption of benefits realization practices

are just perhaps less universal than suggested in the recent literature. Although our in-depth case study has been limited to four organizations, the interviews with consultants with wide experience from the Egyptian SME field in general suggest our results to be rather generalizable within the Egyptian context. However, studies in other countries and cultures are needed to confirm, whether this would be a culture-related phenomenon or not. In addition to the limitation of our data to the Egyptian context, the study has focused solely on ERP investments. Hence, our results should not be regarded to refute meaningfulness of benefits realization practices in connection to other types of information systems.

In our case organizations, the normative idea about usefulness of benefits realization practices is not shared. While the results support the previous observations that SMEs are often confident to benefit from their ERP investments [9], they simply seem not to regard formal evaluation and benefits realization practices as useful means for reaching those goals. Whereas our data implies that the national funding policy may decrease interest in adoption of benefits realization practices in the Egyptian context, it does not explain the whole phenomenon even among our target organizations; two target companies received no funding from the national program at all. Rather, two more prevailing reasons for lack of benefits realization might still be the clear-cut nature of benefits from ERP and the mistrust on human rationality with regard to the justification, evaluation and benefits realization techniques. These factors could be studied further with regard their generalizability beyond the Egyptian context.

In addition, our results indicate that better cost coordination practices might have been useful in many of the cases, in which the costs to reach the desired benefits exceeded the initial budgets. Whereas ERP systems were regarded by some consultants as “commodities” [4, 5], our data shows that the implementation costs remained often unpredictable despite of the shared idea of the self-evident benefits.

6. Conclusion and future research avenues

Our study has focused on reasons and explanations given for non-adoption of benefits realization and IT investment evaluation methods concerning ERP implementations in Egyptian SMEs. Unlike the normative literature promoting benefits realization practices, management processes, and evaluation methods, our findings highlight that benefits from ERP investments in SMEs may be too obvious to warrant efforts required for their use. Simultaneously the national investment policies had implied no incentives

for optimizing the benefits beyond the plain implementation focus of ERP systems. Added with general-level distrust on rational use of analysis methods, these issues explain non-adoption of formal benefits realization and investment evaluation practices. While maturity of IT management and management, together with organizational and regional cultures, might also explain some lack of adoption, our interpretation of the data does not necessarily suggest these to be the root causes for the non-adoption. Rather, our interpretation suggests that because benefits from ERP in SMEs *are* perceived as “self-evident” and further analysis is perceived as non-economical with regard to its expected fruits, the target organizations have no real incentives to increase their “maturity” towards more formal practices or to change the organizational cultures.

Our study implies at least two suggestions for future research. Firstly, proponents of more formal benefits realization and IT investment evaluation practices may find it useful to study the preconditions for using benefits realization concerning particular types of IT investments. Not all IT investments, despite being expensive and mission-critical, may necessarily require in-depth benefits realization or investment evaluation practices. In the Egyptian SME context, expected and realized benefits from ERP systems could have been too self-evident to warrant deeper benefits realization practices. Furthermore, adherence to some lightly adopted practices in itself may be regarded as harmful if conducted without larger understanding of the context (leading to political games or misunderstandings of the actual nature of desired benefits). These two propositions deserve further research with regard to different types of information system investments and in other contexts.

Secondly, despite that the benefits realization in our case organizations or the national context of Egyptian ERP investments in SMEs was regarded less useful, it does not mean that such investments are problem-free. While the benefits in this case seem to be self-evident even without in-depth evaluation or realization practices, the main problem in our target domain of interest seems to be the coordination and management of costs, which continue to exceed the budgets, sometimes alarmingly. Effective and efficient cost control practices for ERP projects seem still to be needed, even when the benefits are regarded as obvious.

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