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BENEFITS MANAGEMENT – A LITERATURE REVIEW AND ELEMENTS OF A RESEARCH AGENDA

Jessica Braun, Frederik Ahlemann, Gerold Riempp¹

Abstract

Benefits Management (BM) deals with the systematic planning, realization and controlling of the intended benefits of IS/IT projects, beyond the traditional success measures of staying within project time frame and budget limits. The article describes the results of a BM literature review that seeks to describe the state-of-science as well as to identify fields of promising further research. Our main findings are that, although the pioneering work of Ward et al. on BM have structured the discipline early on and have been adopted as a basis by other researchers, the research on the BM process itself is still scarce and many opportunities for future research remain open.

1. Introduction

The success of IS/IT projects (ISTPs) is often measured according to time frame, budget and quality. Independently of success or failure in these three dimensions, many projects fail to deliver the desired benefits [28] and therefore organizations lose large amounts of money [11]. It is unsurprising that there are difficulties in realizing the intended benefits when one takes into account the number, investment volumes and complexity of today's ISTPs. We argue, however, that ISTP benefits can be achieved with appropriate management [42]. This is especially important, as ISTPs are often means to implement corporate strategies and thus support organizational change and progress. Some researchers even refer to the IT department as an “agent of change in the organization” [4].

In this context, several approaches for achieving and maximizing the anticipated benefits from ISTPs have evolved under the term *Benefits Management (BM)*. One of the first and still the most widely used and cited was the Cranfield Benefits Management Model by Ward, Taylor and Bond, who define BM as “the process of organizing and managing such that potential benefits arising from the use of IT are actually realized”. They identified the following five phases of BM: (1) Identifying and structuring benefits, (2) Planning benefits realization, (3) Executing the benefits realization plan, (4) Evaluating and reviewing results, and (5) Discovering potentials for further benefits [53].

As a first step in our BM research program, we started with an extended literature review. According to Webster and Watson [54] as well as Hart [16], a researcher can, by means of a literature review, distinguish what has already been done from what still needs to be done. Therefore, this research paper has two objectives: First, to give an overview of existing research

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that addresses both, BM in general and each of its five phases; and second, to develop a research agenda for future research activities in this area.

The following section presents the methodology of our literature review as well as a brief descriptive overview of the results. In section 3, we discuss the relevant literature and suggest further research. We conclude with a summary, limitations and an outlook to upcoming research activities.

2. Methodology of the Literature Review and Descriptive Results

A literature review [14] is a stand-alone research methodology with the objective to “critique, analyze, and extend existing literature [...] in an attempt to build new groundwork” [38]. Various review methods exist, ranging from purely qualitative (e.g. narrative review) to purely quantitative (e.g. meta-analysis) [23]. The methodology for our literature review is based on the concept-centric approach by Webster and Watson [54] and can be classified as a qualitative review. Thereby, concepts instead of authors determine the organizing framework. We selected articles that either deal with BM in general [53] or with one of the above described 5 phases – from a theoretical as well as from an empirical perspective. Phase 4 and phase 5 of the BM process model are thereby considered as one concept.

The identification of relevant articles followed a four-stage literature selection process: First, we selected the sources to be considered in the review (Stage 1). Secondly, the time frame of the research papers to be considered was narrowed down (Stage 2), which was followed by a manual search within such sources and such time frame (Stage 3). Finally, and in order to be complete, papers were selected, which are cited in the research papers identified in Stage 3 but are not published in the source and/or time frame selection (Stage 4) [54].

The source selection was accomplished based on three widely respected rankings that consider a broad range of different IS journals: (1) Wissenschaftliche Kommission Wirtschaftsinformatik (WKWI), (2) Association for Information Systems (AIS), (3) VHB-Jourqual. We then selected the top 15 rated journals from each of these three rankings, which led to a total of 45 journals, removed 19 duplicates and excluded 12 journals that focus mainly on technological research issues. Thirdly, one additional journal was included as a source for our review that was not ranked in the top 15 but which had recently published papers specifically dealing with BM. Additionally, we added the proceedings of 7 important IS conferences to the sources in order to allow for very recent research to be considered. The following table gives an overview of the sources which were finally chosen for the literature review.

Table 1: Selected Journals and Conferences

Journals	Conferences
CACM, Decision Sciences, EJIS, HBR, I&M, IS, ISJ, ISR, JMIS, JACM, JAIS, Management Science, MISQ, Project Management Journal, Wirtschaftsinformatik	AMCIS, AuCIS, ECIS, HICSS, ICIS, PACIS, Int. Tagung Wirtschaftsinformatik

We considered scientific publications from 1990 to 2007. Relevant research published before 1990 is likely cited in more recent articles and was therefore identified in Stage 4 of the literature selection process. The search for relevant papers was then performed manually by scanning the tables of content to make sure that all relevant literature was found. By contrast, a stand-alone keyword search tends to produce a lot more literature to screen, and many of these publications are not relevant for our research. Finally, in the “go backward” stage suggested by Webster and Watson [54], we browsed the bibliographies of key articles that we classified as highly relevant to spot articles that were not yet included in the selection. We then read and analyzed the selected

articles, the results of which shall be described in the following chapter. In total, we identified 74 articles as highly relevant – 60 journal articles and 14 conference papers. As indicated in Table 2, the proportion of articles dealing with BM is smaller than the proportion of articles dealing with the first three phases of BM.

Table 2: Number of Identified Research Papers According to the Cranfield Benefits Management Model

	Identifying and structuring benefits	Planning benefits realization	Executing the benefits realization plan	Evaluating and reviewing results & Identifying potential for further benefits	Entire Benefits Management process	TOTAL
Conferences	4	3	0	2	5	14
Journals	9	26	17	4	4	60
TOTAL	13	29	17	6	9	74

Considering the time frame of the published articles, it was obvious that BM as a research discipline is increasingly attracting interest, especially in recent conferences. For instance, three papers were published at the HICSS in 2007 [37, 49, 52], and it can be predicted that more research will be forthcoming year-on-year [15]. The preferred methodology for research on the entire BM process is the survey instrument, which is used within five out of the 9 identified publications.

3. Findings on the State of the Art of Benefits Management

The pioneering work of Ward et al. on BM started in the mid 1990s with an empirical study on BM industry practises in the UK [53] and in a recently published textbook, Ward and Daniels [51] give in-depth insights into the main ideas and concepts of BM that have subsequently evolved. Several other researchers have sought to expand the knowledge regarding benefits from ISTPs. In the following sections, we will give an overview of the main concepts that have emerged in academic literature regarding each of the five phases of BM as well as regarding the overall BM process. We will also suggest opportunities for further research. The main references are cited and interested readers may research the appropriate reference articles for further information.

3.1. Identifying and Structuring Benefits

Overview of Existing Research: Regarding the first phase of BM, we focus on frameworks and classification schemes that have evolved over the years in an effort to structure the various benefits that IS/IT investments are credited with. Our literature review reveals that many researchers considered benefits to be components of the same underlying topic and, therefore, clusters emerged [44]. The activities of an organization, as suggested in 1965 by Anthony, are used as a basis by many authors. Anthony hereby differentiates between strategic planning, management control, operational control, information handling and financial accounting as the main segments [3]. Especially the three first mentioned segments appear in a number of frameworks classifying IS/IT benefits [19, 34, 45, 46, 55]. Some researchers have proceeded on this knowledge base and have investigated the importance of the benefits. For example, a 1995 study revealed that business redesign, improved information and strategic advantage are most important to the respective respondents. By contrast, the same study reveals benefits like reduced workforce costs, adherence to government regulations and business redesign as most prominent when measured by project budget [26].

There is also support in literature for the simple classification of benefits as tangible or intangible [18]. Tangible benefits can be measured according to an objective quantitative and thus often financial measure. By contrast, intangible benefits can only be judged on a subjective basis; therefore, qualitative measures are used [2, 12, 35]. Regarding any classification activity, very little

theoretical work has been done into the process of benefits identification itself compared to the amount of work on benefits classifications schemes. So far, we could only identify one study [8] that analyzes, in detail, how organizations identify the expected benefits. We assume that this process has not been well defined or even established in most organizations yet. Therefore, in the absence of empirical data it seems difficult to conduct well-founded research even if the process of benefits identification might have been of interest to the research community.

Future Research Opportunities: In summary, two major findings emerge from the above overview.

Table 3: Key Findings - Identifying and Structuring Benefits

1.	IS researchers have a broad list of benefit classifications schemes to choose from. However, there is no consensus on benefit classification.
2.	The choice of a benefits classification scheme is dependent on the characteristics of the ISTP to be implemented.

The in-depth exploration of activities that are most and least effective and efficient in facilitating benefits identification as well as an exploration of the skills needed for such activities could therefore form the basis of further research. Another interesting avenue for future research involves methods how to identify the “right” benefits classification from the available ones and the moderating factors. However, in summary, we conclude that the first phase of BM is a rather mature research field.

3.2. Planning Benefits Realization

Overview of Existing Research: For the literature review on the second phase of BM, we focused on publications that investigate evaluation methods for IS/IT investments. Several IS/IT evaluation practices evolved over time [19]. Some authors even refer to IS evaluation as “one of the most researched and written about topics in IS research” [6]. One of the most significant distinctions is analytical evaluation versus interpretive evaluation [47]. Regardless of the existence of interpretive evaluation approaches, much of the research available focuses on testing and refining quantitative and therefore analytical methods. One reason for this is the common practice by organizations of merely quantifying the benefits most important for them [26].

However, companies are no longer able to justify IS/IT investments exclusively on the basis of analytical evaluation methods such as return of investment, which can only be considered adequate when dealing solely with cost-avoidance issues [35]. When seeking effectiveness and strategic goals, benefits are often too complex to be captured by financial measures alone [17]. As a result, interpretive methods are enjoying increased interest as they capture benefits in greater variety than the definite language of numbers. Interpretive methods include critical success factors and other subjective, multi-objective, multi-criteria methods [24] as well as balanced scorecard methods [21, 32]. Finally, interpretive approaches also support the postulation that the evaluation of information systems is highly dependent on the process of organizational change that accompanies the introduction of new IS/IT systems [48].

Future Research Opportunities: Two major findings may be drawn from the above discussion of literature regarding the second phase of BM.

Table 4: Key Findings - Planning Benefits Realization

1.	Evaluation approaches are polarized between analytical (low variety, high language precision) and interpretive (high variety, low language precision) approaches.
2.	Interpretive evaluation is enjoying increased interest among practitioners.

Suggestions for further research in literature range from the development of a selection framework for evaluation approaches [50] to the identification and definition of key organizational roles needed for evaluation [43]. In order to overcome current deficiencies in this field, we suggest further research on how to combine already existing analytical and interpretive evaluation methods, depending on the characteristics of the ISTP to be implemented. Further research on industry-based and customization-oriented evaluation methods might also be promising.

3.3. Executing the Benefits Realization Plan

Overview of Existing Research: Our literature review regarding the third phase of BM mainly focuses on change management issues and the ability of an organization to successfully realize the anticipated benefits. It is apparent that the successful closure of ISTPs remains an enormous challenge [22], and the quality of the implementation process itself has been identified as a critical success factor for such [30, 56]. The term “paradox of IT productivity” evolved in literature in order to describe this dilemma: Even though organizations invest in IS/IT, their inability to change the organization accordingly delays the return on these investments [7]. Organizations and their managers need to understand that even though IS/IT may have been the key enabler within successful projects, the business benefits are ultimately derived from “understanding the business and committing it to change” [13]. In this context, some researchers refer to “value conversion contingencies” [10] and “conversion effectiveness” [55], used for the organization’s ability to transform IS resources to actual benefits.

Questions about change and how to manage it have occupied practitioners and researchers in many disciplines for many years: Some IS researches argue strongly to incorporate lessons learned from other fields into ISTP management practices [27], while some researchers seriously investigate the relationship between IS/IT and organizational change [31]. Given the fact that change management is becoming more important, ISTP managers will need to demonstrate and apply change management skills [4, 30, 40]. The development of IS/IT management from a “relatively unimportant service function” to an “important instrument of organizational change” was already revealed over 25 years ago [20]. Despite the growing recognition of the importance of change management, a 2004 study revealed insufficient knowledge on the part of IT professionals, especially within the following areas of change management: individual reaction and response to change, general nature of change, planning of change and the evaluation of change [40]. The reason might be the still common belief within many organizations that technology itself, and not the people, can cause change [30].

Future Research Opportunities: We conclude with two major points from the above depicted review of literature on phase 3 of the BM process.

Table 5: Key Findings – Executing the Benefits Realization Plan

1.	It is essential to understand and manage change processes more effectively.
2.	Many IS/IT specialists and project managers lack change management skills.

From our point of view much work remains to uncover which change management skills and methods are most beneficial to which type of ISTP. Using as a basis the roles IS specialists adopt according to Markus and Benjamin's change agency model [30], further research could therefore address the suitability of these roles for particular types of ISTPs. This would improve our understanding of change management types as a critical success factor for benefits realization.

3.4. Evaluating and Reviewing Results & Discovering Potentials for Further Benefits

Overview of Existing Research: The literature on reviewing and evaluating results as well as discovering potentials for further benefits comprises research on post-project evaluation and research on organizational learning. A post-project evaluation thereby determines the degree of accomplishment of an ISTP and reveals potential for further improvement that will most likely affect the planning of future IS/IT investments in terms of new project proposals or change requests. Also, post-project evaluation enables management to better understand why potential benefits may not have been realized and what actions may therefore prove useful in future projects [10]. Surprisingly, the objectives to carry out a post project review from a practitioner's point of view seem to differ from the described academic belief: Even though 79 % of organizations surveyed in a 1990 study are performing post-implementation reviews of some kind, their objective of doing so is merely the formalization of the end of the project and not a long-term improvement based on prior experiences [25]. In academic literature, post-project evaluation has also been linked empirically to learning aspects, the second research stream prevalent during our literature review on phase 4 and phase 5 of the BM model. For instance, a 2003 study has identified the commitment to learning as well as open-mindedness as important predictors of post-project evaluations [36]. In order to establish learning based project management, organizations first need to realize that each project needs to produce two outputs: (1) The product/service itself, and (2) an assessment of what was learned during the project [9]. The latter also includes an assessment of qualitative lessons learned. The four types of knowledge important to the success of ISTPs are: (1) process, (2) domain, (3) institutional, and (4) cultural [41]. Also, frameworks exist that integrate knowledge-based risks in ISTPs [41].

Future Research Opportunities: Two major points emerge from the literature review.

Table 6: Key Findings – Evaluating and Reviewing Results & Discovering Potentials for Further Benefits

1.	Literature on evaluating and reviewing ISTPs subsequent to project completion and on discovering potentials for further benefits is limited.
2.	Although post-project review is recognized as important in practice, it is seldom carried out or carried out properly.

Therefore, we suggest for further research to shed light on the question how to establish continuous learning and overall improvement on benefits realization based on post-project reviews. Developing industry-based and customization-oriented measurement systems thereby forms a challenge. These measures should go beyond budget adherence and be consistent with the measures used for the ex-ante project evaluation. Also, research on how to establish the active use of well-known documentation methods in such a way that is unbureaucratic yet serves as advantageous input for further ISTPs is considered promising.

3.5. Entire Benefits Management Process

Overview of Existing Research: Comparably little literature exists on the overall topic of BM beyond the works of Ward, Taylor and Bond, who discovered that “very few organizations have a complete or comprehensive management process to ensure the proposed benefits from IS/IT

investments are actually realized” [53]. In 2007, the result of further research extending the 1996 study was presented, and although the adoption of benefits management had increased from 12% to 25% among participating organizations, most organizations still have a need for further improvement [52]. When differentiating between organizations that are more successful in terms of benefits delivery and those that are less successful, Ward, De Hertogh and Viaene identified five primary differentiating practices: (1) Transfer of lessons learned, (2) Evaluation and review of organizational change, (3) Development of benefit delivery plans, (4) Evaluation and review of benefit delivery plans, and (5) development of organizational change plans [52].

Academics have already noticed the practical problem of organizations’ inability to manage benefits; an increase in academic BM literature is proof for this [1, 33, 37, 49]. Thus far, the available BM literature has examined the following topics: critical issues in order to facilitate the adoption of BM practices in municipalities [37], the relationship between BM and strategic alignment on the success of IT outsourcing [49], the process of BM itself [5], the BM practices in the construction industry [29], and factors that will ensure the realization of benefits from IS/IT [11]. Also, additional approaches for BM were published, e.g. the active benefits realization (ABR) that complements an organization’s project management methods and focuses exclusively on benefits realization [42].

Future Research Opportunities: We summarize two key findings from the above discussion.

Table 7: Key Findings – Entire Benefits Management Process

1.	Although academic publications on BM already emerged in the mid 1990s, the research field can still be considered rather immature.
2.	One BM model – the Cranfield process model – has found wide acceptance and forms the basis of most existing literature.

In line with some authors we argue in favor of more research, for example “investigating of how the [BM] process can be extended or refined, in combination with project portfolio approaches” [52]. From our point of view, it is equally important to consider the identification of critical success factors for effective benefits management. This would include research on maturity models for BM as well as the assessment of such.

Consequently, we see several different directions for further BM research: We expect that the extent of interdisciplinary research will increase as social, technological and process issues merge within the research field of BM. We also know very little about how industry characteristics, organizational characteristics, and project portfolio characteristics moderate BM’s success. We therefore suggest further exploratory research on how BM is carried out in practice, e.g. using case study methodology, which is particularly useful when a research topic is broad and complex [39] as it is the case with BM.

4. Summary, Limitations and Outlook to Forthcoming Research

The purpose of this paper has been to provide an overview of existing, available literature that forms the foundational knowledge of BM. We started our paper by describing the research methodology and presented brief descriptive results. Subsequently we analyzed different streams of research dealing with BM in general or with one of its five phases according to the BM process model by Ward, Taylor and Bond [53]. The following figure gives a concluding overview of specific future research opportunities within each phase of BM and also illustrates an overall future research opportunity. Generally, we suggest a focus on research that contributes to a deeper understanding of the benefits management practices.

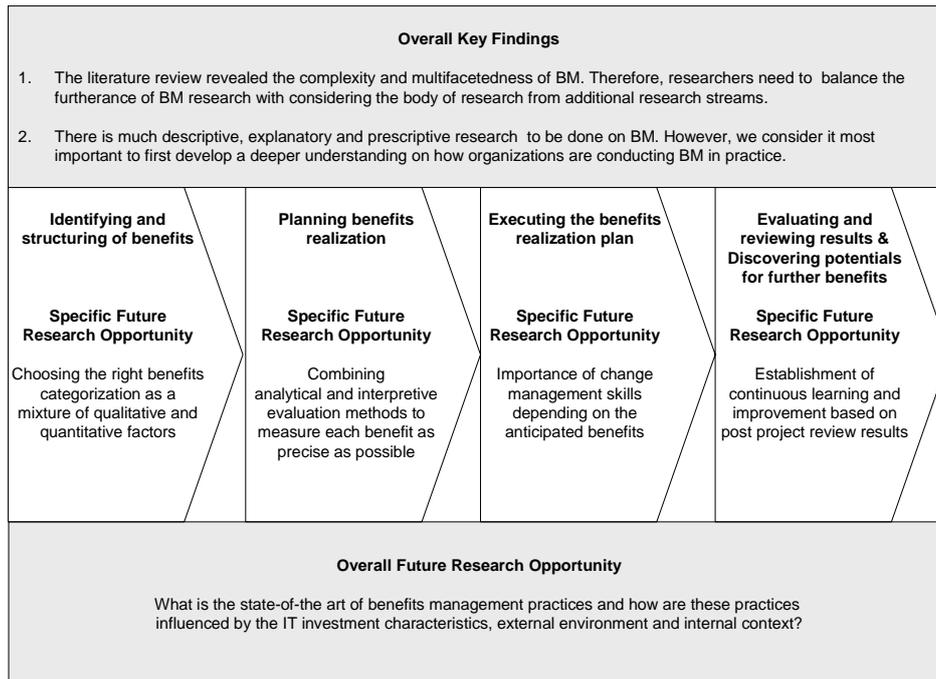


Figure 1: Overview of Future Research Opportunities regarding BM

Limitations of our research are the objectivity of the selection process and completeness of the obtained articles. However, we limited such risks by following a proven course of action of how to conduct such kind of literature review [54].

Based on the findings of this literature review, the next step within our BM research program is to conduct an empirical study based on interviews with IS/IT executives and project managers. The objective thereby is to identify common as well as best practises and to improve the understanding of BM and its contextual factors. On this basis, we are then able to proceed with explanatory as well as prescriptive research on BM.

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