

## THE PRACTICAL USE OF IS EVALUATION APPROACHES

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### Introduction

The purpose of this paper is to summarize empirical work on how organizations evaluate investments in information systems (IS) prior to the implementation stage. 12 relevant studies with acceptable sample sizes of at least 15 interviews or 50 questionnaires were identified. This overview supplements the article: *Walter, S.G.; Spitta, T. (2003): Approaches to the Ex-ante Evaluation of Investments into Information Systems. In: WIRTSCHAFTSINFORMATIK 46(2004) 3.*

### Studies

Source	Year	Subject	Data Collection	Industry	Region	Key Findings
[BIBr88]	1988	Evaluation practices	45 semi-structured interviews (opinion leaders)	Various	UK	<ul style="list-style-type: none"> <li>- Justification of proposed IS projects was primarily based on cost-effectiveness aspects</li> <li>- In cases where “value added”, rather than financially appraisable effects were at stake, “political tactics” and “acts of faith” were present</li> <li>- Results were not utilized to aid long-term organizational objectives</li> <li>- Bulk of evaluation was carried out by non-specialist management that tended to base their judgments on financial criteria</li> </ul>
[FLTa92]	1989 - 1991	Evaluation approaches	16 interviews (project managers), documentation analysis	Various	UK	<ul style="list-style-type: none"> <li>- Evaluation techniques used (4 projects)</li> <li>- Qualitative justification (5 projects)</li> <li>- No evaluation conducted/ “act of faith” (7 projects)</li> </ul>
[WiLe91]	1991	Evaluation approaches/criteria	50 questionnaires with 32 follow-up interviews (managers)	Various	UK	<ul style="list-style-type: none"> <li>- Traditional cost-benefit analysis and a limited number of criteria at the core of the evaluation process were used</li> <li>- Risk and “soft” hidden costs were often not fully assessed</li> <li>- Stakeholders, including end-users, trade unions and other interested parties were seldom involved in the evaluation process</li> </ul>
[Baco92]	1992	Evaluation criteria	80 questionnaires (managers)	Various	Various	<ul style="list-style-type: none"> <li>- Criteria such as the support of explicit business objectives and response to competitive systems were becoming more important</li> </ul>

[Tam92]	1992	Evaluation approaches	134 questionnaires (IS executives)	Various	US	<ul style="list-style-type: none"> <li>- Budgeting techniques were applied in IS development but had little impact on the evaluation, termination and post-audit of projects</li> <li>- Problems with estimating costs and returns were identified</li> </ul>
[WKK192]	1992	Evaluation approaches/criteria	100 questionnaires (stakeholders)	Various	US	<ul style="list-style-type: none"> <li>- Predominant use of discounted cash flow techniques to justify capital investments</li> <li>- Numerous non-financial factors were also included in the analysis process</li> </ul>
[BaSt98]	1994	Evaluation approaches	97 questionnaires (managers)	Various	UK	<ul style="list-style-type: none"> <li>- 87% of the respondents appraised most recent projects</li> <li>- Most frequently used techniques include cost-benefit analysis (72%), payback method (60%) and ROI calculations (43%) which were ranked by the respondents according to their importance in the same order</li> <li>- Information requirements were named as main problems including the quantification of benefits (81%), the identification of benefits (65%) and to a lesser degree the identification and quantification of costs</li> <li>- Lack of time (37%), lack of data (18%), lack of interest (15%) and interpretation difficulties of results (17%) were minor problems stated by the respondents</li> </ul>
[CADF97]	1997	IT performance, human and organizational factors	45 structured interviews (consultants and researchers)	Various	UK	<ul style="list-style-type: none"> <li>- Formalizing evaluation would create large bureaucratic infrastructures and would foster a "tick-box mentality"</li> <li>- Evaluation techniques would neglect particularly human and organizational factors and would help to promote a technocentric orientation</li> <li>- Managers were criticized for their susceptibility to fads and fashions, as well as their lack of an integrated perspective of technical and social factors during project planning</li> <li>- Tendency of managers to primarily see cost reduction opportunities through IS investments more than other benefits</li> </ul>
[EIRa98]	1998	Evaluation approaches, perception of "value"	18 structured interviews (managers)	Manufacturing	UK	<ul style="list-style-type: none"> <li>- Perception of "value" varied significantly between respondents and seemed to be dependent on intuition, as well as implicit expectations towards the IS implemented</li> <li>- 15 companies justified IS projects prior to the implementation stage by</li> </ul>

						means of formal financial assessment techniques
[FoWa99]	1999	Perception of success	18 structured interviews (stakeholders of one IS project)	Various	UK	<ul style="list-style-type: none"> <li>- Interviewees had divergent perceptions of success</li> <li>- Political factors exerted a certain influence on the outcomes of the project</li> <li>- Initial overselling of the project, while aiming at overcoming resistance to change, raised unrealistic expectations that were finally disappointed</li> <li>- Many other problems were found to be rooted in communication deficiencies</li> </ul>
[RyHa00]	1999	Evaluation criteria	50 semi-structured interviews (managers)	Various	US	<ul style="list-style-type: none"> <li>- The most popular social criteria for benefit assessment were productivity increases (69%), quality of work (25%) and improved decision-making ability (15%) which were quantified during the evaluation process only to a small extent</li> <li>- The gathering of information for evaluation took place by means of discussions with functional managers (46%), reference site visits (31%) and informal conversation with end-users (23%)</li> <li>- Training costs (59%) were the most relevant social cost types</li> <li>- Second order, longer term effects such as job dissatisfaction or employees' feeling of loss of power or control were neglected</li> </ul>
[DoKi01]	2001	Evaluation criteria	593 questionnaires (senior IT executives)	Various	UK	<ul style="list-style-type: none"> <li>- In the majority of cases a wide range of human and organizational aspects such as process re-engineering, job redesign and users' IT skills were considered, extending beyond the pure economic contribution of a system</li> <li>- The treatment of such issues took place at various points in time prior to system implementation</li> </ul>

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