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## **Interactions enhancing the impact of the interventionist research: Cases on business development**

Teemu Laine, Jouni Lyly-Yrjänäinen, Tuomas Korhonen, Petri Suomala

**Abstract:** Interventionist research (IVR) approach can make a difference at scientific, societal and practical levels, similarly to other approaches. However, by taking advantage of certain distinctive features of the IVR approach, the impact of IVR projects may become remarkably greater and more easily communicated. IVR projects may identify to-the-point research questions and answer them with the help of unique access because these projects involve several actors. This paper focuses on interaction (among the researchers and managerial actors) as a remarkable feature of some IVR projects, underlying their contribution potential. The paper aims to answer the following research questions: What kind of interactions do take place in IVR projects? How do these interactions affect the identification and realization of IVR projects' contribution potential? The paper uses conceptual analysis on the recent IVR literature stream and 20 years of experience of the authors on IVR in management accounting, and reflects upon case studies of two industrial companies on management accounting supporting business development.

The paper understands that IVR projects feature different types of interactions, e.g., i) interviewing managers, ii) observing interactions among managers, iii) facilitating interactions among managers, and iv) intentionally and reflectively using many of these forms of interaction. Based on these interaction types, the paper shows that in the first case study (A), service business development benefited from interactions in IVR in researcher-facilitated workshops that were initiated by the company. In these workshops, interaction took place among managers and researchers as collaborative construction of business impact analyses to support service business development. In the second case study (B), IVR supported new product development and program coordination. The data was collected in researcher-facilitated workshops that were initiated by the researchers. The paper shows how the workshops could focus program-level coordination by engaging managers in interaction by encouraging them to express and discuss their viewpoints about financial and nonfinancial impacts. Furthermore, best practices for governing service business development were reported for the society, and importantly, the theory contribution in the two case studies was scrutinized in an engaged manner to ensure its relevance to the management accounting, service, and project management literature.

**Keywords:** Interventionist Research (IVR), Impact, Actor, Interaction, Management Accounting, Service Business Development

### **1. Introduction**

Interventionist research (IVR) approach can make a difference at scientific, societal and practical levels (Lyly-Yrjänäinen et al. 2017), similarly to many other methodological approaches. However, by taking advantage of certain distinctive features of the approach, the impact of the IVR projects may become rather substantial, and it can be made more easily communicated for the academic community. By entering the "battlefield" of IVR that involves several actors, and by consciously and reflectively examining related practical, scientific and societal questions, the IVR projects may identify to-the-point research questions and answer them with the help of unique access (Suomala et al. 2014).

However, the academic importance and theoretical dimensioning of interventionist research needs to be thoroughly explicated (Scapens 2014). In this paper, this dimensioning means focusing on interaction as unique feature of the IVR projects with multiple actors involved. Interaction underlies these IVR projects' contribution potential. It is not yet adequately understood, however, how interventionist researchers' entanglement in professional interaction underlies theoretical contributions. Especially, despite the studies on the processes of

IVR projects (Lyly-Yrjänäinen et al. 2017, see also Suomala et al. 2014) it remains unstudied, how the interaction among the researchers and other actors involved in the IVR projects actually facilitate, direct or affect the research outcomes of those projects.

The paper aims at answering the following research questions: What kind of interactions do take place in IVR projects? How do these interactions affect the identification and realization of IVR's contribution potential? The paper uses conceptual analysis on the recent IVR literature stream and 20 years of experience of the authors on IVR in management accounting, and reflects upon a case study on management accounting supporting business development in an industrial context. In Lyly-Yrjänäinen et al. 2017 (Chapter 7) and Laine et al. (2016a), the authors got access to and were able to examine the dialogues that took place among the managers. Dialogues were facilitated by the researchers, based on earlier IVR projects. The paper combines and extends the analyses of the earlier studies by focusing on the aspect of how actors' interaction within IVR enable making theoretical and managerial contributions.

## **2. Literature review: interventionist research and interactions of the actors involved**

IVR is a legitimate management research approach with its potential strengths and weaknesses (Jönsson and Lukka 2006, Suomala and Lyly-Yrjänäinen 2012, see also Scapens 2014). Especially, IVR projects feature a battlefield of different actors with multiple motives, agendas and incentives (Suomala et al. 2014). Although it provides remarkable challenges for IVR project planning and execution, the dynamics and interactions within the IVR projects may provide fruitful possibilities for an engaged research endeavor (Van de Ven and Johnson 2006), identifying and responding to the clearly relevant yet scientifically meaningful challenges (Lukka and Suomala 2014). The recent IVR studies on management accounting report, how the balance between the different intellectual virtues, i.e., theoretical, practical and societal levels can be found during the IVR projects (Lukka and Suomala 2014, see also Lyly-Yrjänäinen et al. 2017). At the same time, it remains largely unstudied, how the interaction among the researchers and managerial actors actually contribute to the outcomes of the IVR projects.

The unique access of some IVR projects may enable an access to participate in real-life interactions among the managers and between the interventionist researcher (even as 'one of us') and the managers. The recent research already acknowledges interventionist research as (intentional) actors, both from the perspective of actor-network theory (Lukka and Vinnari 2017) and pragmatic constructivism (Laine et al. 2017b), with a special emphasis on the reality as perceived by the actors jointly and individually (Nørreklit et al. 2010). Thus, it becomes even more interesting to understand, what kinds of interactions do exist within the IVR projects and what are the background, nature and impacts of those interactions.

Regarding the interactions, Wouters and Roijmans (2011) focused their study on knowledge integration in the process of accounting development via prototypes. In their action research study, they got access to the accounting development among the parties involved. Similarly, with the help of their long-term action research and interview study, Englund and Gerdin (2015) examine the dialogue that takes place between the managers, and eventually the researchers make sense of that dialogue. These recent examples thus highlight the importance to understand the interactions both theoretically and as a vehicle for the managerial development work.

More recently, in Laine, Korhonen, Suomala, Rantamaa (2016b), the IVR researchers foster the dialogue through boundary objects and as boundary subjects. The authors show how interventionist researchers can act as 'boundary subjects' that mediate the greetings across functional departments in a company. Thereby, IVR is directly connected to knowledge integration within an organization. Interactions were spoken narratives of functioning and non-functioning practices (the greetings) that the researchers tabulated for making each department knowledgeable of what other departments hoped and expected from them. This form of interaction helped the researchers deepen and broaden their access in the company, and eventually develop purposeful ideas about developing management accounting tools to support the company's managers.

As a tentative analysis framework, based on the prior research, we acknowledge that the IVR projects may feature different kinds of interactions, e.g., i) interviewing the managers, ii) observing the interactions among the managers, iii) facilitating the interactions among the managers, and iv) intentionally and reflectively using many of these forms of interaction. In the cases, analyzed in this paper, on business development, the interaction took place in all the aforementioned forms, based on earlier experience of the interventionist researchers on the business phenomenon and contribution domain.

As a unique feature of this paper, the initiation of the IVR project phase, under particular examination in this paper, was remarkable different between the two cases. Indeed, the dialogue that took place among the managers and between the researchers and managers, was primarily initiated by the managers in one case (Industrial company A) and by the researchers in the other one (Industrial company B). Section 3 will present our findings of these two cases.

### **3. Empirical findings**

#### **3.1 Overview of the research process, data collection and analysis**

The paper builds on two interventionist case studies, conducted by the authors (in 2011-2016). In the Industrial Company A, the case study was initiated by the company, building on the previous collaboration between the researchers and the firm. This case study took place in 2011-2016, but the focus is here in the years 2015-2016 during which the studied workshop interactions, on service business development took place. The case study has been presented in Lyly-Yrjänäinen et al. (2017, Chapter 7), but not analyzed from the viewpoint of interaction as a specific source contribution potential in IVR approach. In the Industrial Company B, the case study was initiated by the researchers, and took place in 2011-2014. The workshops studied were organized in 2013-2014. This case study has earlier been presented in Laine et al. (2016a), but again, not focusing on interaction in IVR *per se*. Building on these previous studies, this paper extends the analyses of Lyly-Yrjänäinen et al. (2017) and Laine et al. (2016a) by focusing on interaction in IVR.

#### **3.2 Findings from the case study, Industrial Company A, initiated by the researchers**

The Industrial Company A provides its customers with comprehensive production systems and related after sales services. The researchers have been engaged with the company in terms of multiple interventionist research projects. The researchers had earlier conducted a project on accounting and control supporting innovation, yielding a new tool for selecting and steering different kinds of R&D projects. Since the beginning of 2015, the research cooperation was focused on identifying, selecting and steering New Service Development (NSD) activities. The focus was on the analyses of the service business profitability and in supporting selected NSD activities with suitable accounting and control tools and techniques.

Before the workshops that are the key aspect in this paper, one of the interventionist researchers was focusing on the process of selecting and steering the innovation projects in the company. The initial research project sought to enhance the overall decision-making process, but more importantly, also yield a tool that would help the managers to assess and evaluate the impacts of different innovation projects of the company, ranging from product refinement activities to projects on radical innovations. The tool designed during the initial research project thus enabled an overall assessment of the innovation projects both quantitatively and qualitatively, featuring economic evaluation of the impacts of the projects at hand.

“[The tool] helps choosing good projects... And afterwards we are able to assess how well we actually chose.” (R&D manager, Industrial company A)

The initial project on innovation projects and the tool development within provided a fruitful background for the new project focusing on service business development and NSD projects. Indeed, the researchers already knew better the peculiarities of the innovation projects of the company. On the other hand, the managers better understood the possibilities embedded to the engaged research efforts with the interventionist researchers. Within the broader project on service business development, the Industrial company A organized a series of workshop to enhance its selected NSD activities, and the interventionist researchers were deeply involved in planning and executing those workshops. These workshops focused on ideas for new services (interventionist researchers' active participation), selecting appealing new services (interventionist researchers' active participation), and the business impact analyses of new services (co-organizing and facilitation of the workshop).

As a unique feature, the research project on service business development and the workshops on NSD projects were largely initiated by the company that wished to get substantial impacts from the engaged research project. Of course, the interventionist researchers identified a clear research gap on better understanding the possibilities of accounting and control activities in actually supporting new service development of machinery manufacturers, and the research project on service business development provided a natural and promising basis for responding to this gap. Methodologically, especially from the perspective of IVR, the interventionist

researchers got access to an authentic development project, authentic workshops as initiated by the company, and could thus observe the discussions as they appear when selecting and steering promising new services.

Several managers of the company were involved in organizing the three workshops (R&D, service operations, NSD, technical support, etc.). Organizing the first workshop on new service ideas, already, mobilized these managers. Besides, there was a cross-disciplinary research team employed in facilitating and supporting the execution of the series of workshops, including management accounting researchers (the interventionist researchers), service & operations management researchers, and psychologists. This is a feature that is in line with the engaged research with the focus on multi-faceted challenges (Van de Ven and Johnson 2006), and could potentially foster extremely interesting interactions and dialogues among the workshop participants. Indeed, the first workshop provided a nice discussion forum on different perspectives, approaches and examples regarding new kinds of service businesses.

In the second workshop, the focus gradually shifted to the initial screening of the most promising ideas. During the second workshop, primarily organized by the company itself, the company representatives identified and tested new ways to manage the process from service ideas to new services. The interventionist researchers were engaged with the process of preliminarily selecting the most promising service ideas. The role of the interventionist researchers was to actively contribute to the discussions during the workshop.

The interventionist researchers (co-)organized the third workshop, focusing on business impact analyses. This third workshop took advantage of the previously designed tool for business impact analyses, but it essentially also featured discussing the business impacts of the new services from multiple perspectives, among the multi-functional group of managers and the multi-disciplinary research team. The workshop on business impact analyses involved also people that had previously worked neither with these matters in general, nor with the business impact analysis tool. However, the use of the tool in the workshop fostered discussions among all the participants and it thus enabled the participation of all the people involved in evaluating the potential new service businesses. In fact, feedback received from one participant, whose work previously did not include financial evaluations of the new service businesses (or other innovations) confirmed this observation:

“The Excel platform [in the third workshop] was surprisingly easy to use and the logic enabled the participation of us who are not used to work with financial numbers...” (Workshop participant, Industrial company A)

Regarding the three NSD projects, evaluated during the third workshop, it was found that the concept that was closest to the existing business performed best, whereas the two other concepts fostered discussions regarding their uncertainties and ambiguities, and the participants took the uncertainties into account as risks embedded to those projects. It seemed to be easier to estimate the number of customers and the expected price of the new concept than various cost issues related to the projects and the potential service businesses.

It is noteworthy that the discussions facilitated and witnessed during the workshop do not only tell the stories about the content of the potential new service businesses. Instead, the workshop structure, in general, provided a forum for cross-functional discussions on the overall objectives regarding the new service businesses and the actual actions to be taken in order to fulfill those objectives. As an important outcome of the workshops was that the ‘identities’ of the new service concepts were now discussed more thoroughly, by different voices. Besides, the workshops, that forced the managers to examine the new service business in a detailed manner, helped the managers to identify certain technical skills and capabilities that would significantly help the development of the new service businesses. Besides, certain uncertainties and ambiguities regarding the new services were identified.

The case study contributes to the literature on management accounting in supporting service business development of the machinery manufacturing companies. Laine et al. (2012a) suggest that the role of accounting should evolve as the overall uncertainties decrease during servitization initiatives. The workshops were a source of inspiration for the service business development, but also the business impact analyses were able to provide required ‘answers’ to the managers about the new services under development (Burchell et al. 1980). Besides, understanding uncertainties and ambiguities at a relatively early phase enables overcoming them during the NSD project execution (Laine et al. 2016a, 2016b).

### **3.3 Findings from the case study, Industrial Company B initiated by the company**

Industrial company B operates in the machinery manufacturing sector. The IVR project took place at the time of massive new product development (NPD) program in which virtually all products in the line were updated and

their technological basis renewed. The IVR researchers proposed that managers could be brought together to discuss financial and nonfinancial impacts they were meant to make, to possibly avoid sub-optimization that such a massive program could generate among departments or single projects within the program.

The workshops were planned with the company B representatives, based on longitudinal research cooperation between the company and the researchers. Formal interviews as one type of interaction were used as a point of reflection to set agenda but the workshops based more on informal interaction and the years of cooperation. The researchers' role was to organize the workshops. Smaller thematic groups were brought in to meeting groups at the company premises, to discuss the impacts of the NPD program. The thematic groups discussions were analyzed using qualitative data analysis software (Atlas.ti). Discussions on impacts in financial and non-financial terms were among:

- Expressions of certainty (Giving a real-life example, Reality check, Strong fact),
- Expressions of uncertainty (Guessing, Hesitation, Humour, Own opinion, Taboo, Wondering)
- Expressions of consensus building, Compromising, Conclusion, Consensus building, Strengthening others' opinions)
- Expressions of consensus destruction (Competitive sensemaking, Disagreement).

The first excerpt below exemplifies how engineers start collectively make sense about how new product features and respective cost implications are acknowledged in the company. They express their own opinions, make guesses and reality checks, use humor and finally conclude the discussion. They also use competitive sensemaking to make a point in the interactive event arranged by the reviewers. In all, the findings of the workshops enabled the researchers to contribute to academic literature: first, by showing that both financial and non-financial impacts are actually co-constructed and co focused via managers' interactive discussions (Laine et al. 2016a). In this excerpt, two engineer discuss cost target setting in the workshop:

Engineer 1: I think I think there is two aspects here. One is to understand the costs and how to deal with that. But then it's also how to put the target costs in the correct level. [...] Is the target price set in a way which is eh... eh... let's say, has it been mm-m accurate enough or does it reflect reality to put it that way? [...]

Engineer 2: Maybe it reflects the market price. [Humorously]

Engineer 1: Market the price is reflected but [how about] the target.

Engineer 2: Yeah, yeah, you can't have everything.

Engineer 1: Yeah, you can't have everything so... That is what I'm saying, that if you are [adding] features and features and how this is done is that [...] 'we want all the features in and then we forget'. That is basically how it goes.

Interactions took place also among the researchers and the workshop participants. In the second excerpt the researchers are facilitating the workshop as co-sensemakers. The focused issue here is that it is difficult to actually calculate the financial impact of product modularity. Whereas prior research acknowledges that modularity easily increases costs and can also serve as a source of innovation (Korhonen et al., 2016), these workshop participants were discussing the guidelines of making engineering decisions. The participants bring in their own opinions to competitive sensemaking. They interact together and try to get to the bottom of the issue. In the end, another participant points out that together with guidelines, discipline is also needed.

Interventionist researcher 1: How you would think that you would do your work in a very cost-conscious manner? What would you need? What would be your actions for you to consider 'ok now I am more cost conscious than I was before'?

Interventionist researcher 2: You can also hypothesize: if we had this and that then I could be..

R&D manager: Well I would say [...] an engineer [...] if he knows what his guidelines are he is let's say protecting those guidelines also then. But he doesn't know which [option] is actually better. Then it's all the same.. He is doing that what somebody is telling him to do, basically.

Interventionist researcher 1: So guidelines...

R&D manager: Yes the guidelines... If we know that the modular system is better, then we stick to that and to whatever let's say the end result is from a particular product point of view [...]

Interventionist researcher 1: So there is a problem with ambiguity, eh... not knowing exactly what to do. [...] So you need some cost-consciousness in order to make the guidelines more cost-conscious.

Engineer 3: Mm-m. And then you have to keep those guidelines... You can't change them.

Theoretically, the case study could contribute to academic research by showing what topics (impacts) are discussed in NPD program coordination and by whom. What is remarkable is that this contribution was strengthened by showing how managers interact. The workshops showed that difficult (even unsolvable or fundamentally contradictory) issues can be discussed in a productive manner: the talk itself focuses operations by making people more aware about each other's worries and viewpoints, and possibly informing upcoming decisions concerning the whole NPD program.

## **4. Discussion and conclusion**

### **4.1 Discussion on the findings, unveiling the impact of different kinds of interactions**

The two cases remarkably reported different kinds of interactions among the managers and between the interventionist researchers and the managers. Table 1 summarizes the observed features of those interactions and allows cross-case comparison of the observations. Indeed, as conveyed in Table 1, both the cases feature the facilitation of interactions among the managers, as real-life interactions as a source of theoretical implications and contributions. Still, the initiation of the workshop differed from one case to another. Because the workshops in Industrial company A were initiated and directed by the company, the interaction focused on the nature and content of the new businesses under development, whereas in the company B, the discussion took place at a more abstract level, although with direct connections and implications to the new businesses.

In all, both of the industrial companies took advantage of the IVR setting by organizing events where interaction took place among managers and researchers in a jointly facilitated manner, building on the previous interactions among the parties involved. (In a broader sense, both cases feature interactions initiated by the managers and the researchers, as part of the wider research cooperation.) As studied in this paper, the nature of interactions at hand enabled yielding valuable theoretical and managerial impacts. The industrial company A was able to support its service business development through business impact analyses produced in cooperation, best practices for governing service business development were reported for the society, and importantly, the theory contribution was scrutinized in an engaged manner to ensure its relevance to the management accounting and service literature. The industrial company B was able to get their employees discuss about a very ambiguous issue and thereby make them collectively make sense of potentially beneficial action within the NPD program.

Table 1. Cross-case analysis of the interactions in Industrial company A and Industrial company B.

<i>Type of interaction</i>	<i>Industrial company A: NSD</i>	<i>Industrial company B: NPD</i>
i) interviewing managers	Interviewing managers laid ground for more in-depth cooperative development that set the agenda for workshops.	Interviews served as a basis for setting the workshop agenda. However, interviews were not as important as the various forms of informal communication between the researchers and the company.
ii) observing interactions among managers	Interactions among managers took place as cooperatively calculating business impacts rather than only talking about them. The managers filled ex ante calculations based on the business impact analysis template in smaller groups.  The made business impact calculations were then discussed among the whole workshop group.	Interactions among managers took place as talking about business impacts rather than cooperatively calculating them.  Managers' interactions were observed in vivo and later analyzed using a qualitative data analysis software. Interactions were interpreted as expressions of certainty and uncertainty, or consensus building or destruction. Observations laid the ground from a theoretical contribution in (reported in Laine et al. 2016a).
iii) facilitating interactions among managers	New Excel tools and the workshop agenda were introduced to spark discussion about topics that had not been discussed in such early project phase before.	The interventionist researchers initiated, and organized the workshops and analyzed the data collected.
iv) intentionally and reflectively using many of these forms of interaction	The interaction among managers was the source of a theoretical contribution.  However, the role of interaction in IVR was not studied in Lyly-Yrjänäinen et al. (2017).	The interaction among managers was the source of a theoretical contribution.  However, the role of interaction in IVR was not studied in Laine et al. (2016a).
Summary	The interaction between researchers and managers yielded contribution potential particularly in the area of <i>management accounting supporting servitization</i> .	The interaction between researchers and managers yielded contribution potential particularly in the area of <i>how business impacts are discussed in a program coordination setting</i> .

As an implication of the findings, we suggest that the interactions within the IVR projects require further examination. Not only should the IVR be recognized as a legitimate research approach (see e.g., Scapens 2014), but also the unique 'real-life' interactions enabled by the IVR approach should become a subject of a more thorough examination. The cases suggest that different kinds of interactions, with different kinds of initiations may yield both theoretically and managerially interesting contributions. Establishing, directing and taking advantage of such interactions provides ample scope of further studies. Such studies, importantly, should acknowledge (and take advantage of) the notion of researcher as an intentional actor (Lukka and Vinnari 2017, Laine et al 2016b) – similarly to the managers and other actors within the 'battlefield' (Suomala et al. 2014).

## 4.2 Concluding remarks

The paper focuses particularly on interventionist research (IVR) as a central theme of the ECRM 2018 conference. The authors use their 20 years of experience on publishing IVR contributions in management

accounting and business research. In this particular paper, new empirical evidence is provided on the multi-level impacts of IVR through different kinds of interactions. Indeed, IVR projects may identify to-the-point research questions and answer them with the help of unique access because these projects involve several actors. However, to do so, IVR research needs to consciously and reflectively examine related practical, scientific and societal questions. Examining the interaction between the researchers and other actors in the IVR projects provides a vehicle for understanding the answers and implications of those questions.

Finally, interactions enable building a shared understanding among the actors, at multiple levels within and across the organizations. Thus, acknowledging the nature and implications of the interactions yields rather unlimited research opportunities for researchers within management accounting, business development and managerial studies.

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