



Where's the competitive advantage in strategic information systems research? Making the case for boundary-spanning research based on the German business and information systems engineering tradition

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ABSTRACT

During the last decades, strategic information systems (SIS) research has become an influential stream within the information systems discipline. The success story of the *Journal of Strategic Information Systems* provides strong evidence. Yet, we believe that there is still a lot of untapped potential in the interaction of SIS research and industry. Put bluntly, it is impossible that results of SIS research are publicly available, reconstructable by subject matter experts, and valid beyond the single or very few cases and at the same time constitute the foundation of competitive advantage. We argue that SIS researchers need to become boundary spanners who actively engage in industry collaboration to help create competitive advantage and who disseminate their insights later on to advance the scientific knowledge base. We outline challenges of boundary-spanning SIS research and provide some ideas and recommendations. Wherever sensible, we draw on our experiences from the traditionally strong industry collaboration of the business and information systems engineering community from the German-speaking countries.

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1. A critical view on strategic information systems research

Over the last decades, strategic information systems (SIS) research has evolved into an influential stream within the information systems (IS) discipline. The success story of its primary publication outlet, the *Journal of Strategic Information Systems* (*JSIS*), provides strong evidence. *JSIS* regularly receives a “burgeoning number of papers” from an international community of authors (Galliers and Jarvenpaa, 2011). The facts that the journal belongs to the AIS Senior Scholars’ “basket” and features an impact factor of 2.900 are indicative of the standing of *JSIS* and SIS research within academia. They also indicate that the theoretical advancement of SIS research has increased considerably over recent years. All this suggests that the SIS research community has done very well in advancing the scientific knowledge base of IS for strategic decision making, strategic use of IS, and strategies for IS issues (Cavaye and Cragg, 1993; Gable, 2010; Wilkes, 1991). So the advent of *JSIS*’ 20th anniversary may be a good time to sit back, enjoy, and continue in the direction that made SIS research successful. But wait! Should the achievement of high theoretical impact and the prospect of further increase really satisfy the SIS research

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community? Should not we also ask whether results of SIS research actually enable those in industry who have the authority to shape strategy and organizations to create and sustain IS-supported competitive advantage?

Put bluntly, results of SIS research do not have the potential to create competitive advantage. They lose their impact upon publication. They may at best inform managerial decision makers on SIS topics. This paradox is rooted in the characteristic differences of strategy and scientific research. While there are indeed broader interpretations of IS strategy (Galliers, 1993), following the interpretation of Porter (1996) and Barney (1991). Strategy is inextricably linked with entrepreneurial action and competitive advantage. This refers to creating and sustaining a unique mix of customer value that is not simultaneously being implemented by any current or potential player, thereby enabling a company to outperform others in the same industry or market. Competitive advantage is based on information asymmetry between the very few who possess it and the many who do not. Scientific research, in contrast, is characterized by an inter-subjectively verifiable elicitation, systematic documentation, and public dissemination of general as well as quality-assured insights. Hence, results of SIS research cannot constitute the foundation of a unique value mix inimitable even for potential competitors and at the same time be publicly available, reconstructable by subject matter experts, and valid beyond the single or very few cases – no matter in line with which research paradigm and research method they were developed.

On the one hand, one might argue that making decisions on SIS topics, solving SIS business problems, and creating IS-supported competitive advantage is the executives' cup of tea only. In this first case, it would be legitimate for SIS researchers to focus on advancing SIS theories and to interact with industry for data collection purposes solely. We would then also rely on executives identifying appropriate SIS research results and managing to capitalize them on their own.

On the other hand, who if not the members of a research community that consecrated itself to topics of strategy should make the results of scientific research understandable for industry and thereby ensure that IS research eventually provides "the business and social benefits that we seek" (Galliers, 1991). In this second case, SIS researchers would not only inform, but also become engaged in solving SIS business problems and directly help companies gain IS-supported competitive advantage. SIS researchers would also engage in generalizing, validating, and disseminating novel insights gained throughout the solution of SIS business problems to advance the scientific knowledge base.

In our perception, it is the first case that applies to the majority of SIS researchers worldwide – deliberately chosen or not. It is our firm conviction that this is not enough! Moreover, making use of the scientific knowledge base cannot be left to industry. Advancing theory should neither be the only nor the most important *raison d'être* of SIS researchers. Feeling responsible for advancing companies and becoming facilitators of IS-supported competitive advantages have to be additional imperatives.

In order to achieve this, we need more individuals capable of boundary-spanning. Only boundary spanners can bridge between multiple worlds (Aldrich and Herker, 1977; Carlile, 2002; Tushman and Scanlan, 1981). For many reasons, these individuals will be mainly SIS researchers. Foremost among the reasons is the motivation of researchers to write research papers with a substantial chance to be accepted in academic journals. In an ideal-typical world, IS practitioners may become co-researchers as assumed in participatory action research (Baskerville, 1999). Though, due to the criticality of SIS topics, the probability that SIS practitioners become co-researchers seems to be rather low – even in an ideal-typical world. As boundary-spanning SIS researchers mediate between academia and industry, they face considerable challenges.

In the remainder of this opinion piece, we first elaborate on the challenges of boundary-spanning SIS research (Section 2). We then share some of our insights into the business and information systems engineering (BISE) community from the German-speaking countries (Section 3). The strong industry connections of this community may inspire boundary-spanning SIS research – at least as far as engagement in the solution of business problems is concerned. The insights may also help the IS discipline at large become aware of its internal diversity. Against this backdrop, we sketch some ideas and recommendations on the identified challenges and on what role *JSIS* may play (Section 4). The paper ends with concluding remarks regarding the consequences for individual researchers, the SIS research community, and *JSIS* (Section 5).

For increased force of argument, we avoid reiterating well-known debates (e.g. rigor vs. relevance, behavioral vs. design science research) throughout the paper. Moreover, we often abstain from softening expressions that would befit the complex collection of shades of gray when discussing strategic information systems.

2. Challenges of boundary-spanning strategic information systems research

The following challenges of boundary-spanning SIS research do not pretend to constitute a full list, but they are the ones we believe to be the most important.

2.1. Making SIS researchers ready for industry projects

SIS researchers need to be prepared for expectations and rules governing managerial behavior to differ from the academic world. For example, creating and sustaining competitive advantage requires unique or first-of-a-kind solutions. Such solutions neither have to be perfect nor meet the highest academic standards, but good enough to perform activities differently than one's rivals do (Harrison and Pelletier, 1997). In contrast to scientific research, the fact *that* a particular problem is solved typically outvalues the question of *how* a class of problems can be solved. Moreover, managerial practice in some ways turns the scientific model on its head, seemingly treating success as an independent variable and managing all other

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