Innovation Processes for Product Service Systems

- Product Service Systems (PSS) are not a new phenomenon. Classic examples include, for instance, public libraries.
- Only relatively recently have PSS started to gain attention in innovation research.
- Previous literature has evolved mainly from operations management, environmental management, or the design disciplines.

**PSS definition – 5 key elements**

1. Integrated offering of tangible products, intangible services, and an enabling infrastructure
2. Provision of product-unspecific functional value
3. Users and the offering firm engage in an enduring contractual relationship
4. Product ownership is not transferred to the users
5. Users become temporary proprietors enabling a high use-flexibility

**Research objective**

PSS innovations are the central unit of analysis of this research project. From the innovation research perspective, this project contributes to an advanced understanding of how PSS innovations can best serve users, society and the environment. Current societal concerns are an important driver for the project.

Discussions about future societal models, often include PSS (e.g., car and bike sharing systems) due to their positive environmental impacts (e.g., increased resource efficiency). Additionally, PSS are expected to have a lasting positive impact on consumer behavior through facilitating the “renaissance” of sharing amongst people (e.g., collaborative consumption, sharing economy). PSS have further relevance for industry as they complement the current servitization trend.

**Research questions**

Relevant research questions are, for example: How does a transition from product to a PSS-oriented development impact firms’ innovation processes? What is the ecological impact of PSS on firms’ innovation trajectories? How can PSS support firms’ diversification strategy as business model innovations? What PSS innovation potentials enables information technology through transaction cost reduction? How does ownership impact users’ innovation behavior for quasi-public goods? Can PSS concepts solve the tragedy of the commons for quasi-public goods? How can PSS serve as strategy against imitation from competitors?

**Research approach**

To complement previous research, the project applies an interdisciplinary perspective combining innovation research (managerial as well as economic concepts and theories) with environmental management. The project combines qualitative methods, such as case-studies, primarily within pre-studies with quantitative technics, such as surveys. The use of experiments is also currently being considered.

**Initial project results**


* as of 02/2013. Previously paper versions presented at conferences or published as working papers are omitted.

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