

Comparing the adaptive capacity of service ecosystem

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Purpose - Service-ecosystems are self-adapting systems. Therefore, they need a self-adapting capacity. The paper compares the adaptive capacity of two service ecosystems and thereby shows how the adaptive capacity can be evaluated.

Design and methodology - The paper applies the concept of adaptive capacity which was introduced to capture the ability of a system to adapt to environmental changes (Engle, 2011; Lockwood *et al.*, 2015). „[...] [T]he basic role of adaptive capacity is generally accepted as a desirable property, or positive attribute of a system“ (Engle, 2011, p. 649).

Adaptation is distinct from adaptive capacity. “Adjustment in natural or human systems in response to actual or expected ... stimuli or their effects, which moderates harm or exploits beneficial opportunities” (IPCC, 2001, p. 982, cf. IPCC, 2007). The concept of adaptive capacity, influenced by social-ecological systems research (Holling, 1986), has been defined by the Millennium Ecosystem Assessment (2006, Glossary, 599) and IPCC (2001, p. 6; IPCC, 2007) as: “The ability of a system to adjust to change to moderate potential damages, to take advantage of opportunities, or to cope with the consequences”.

Findings - The paper will assess the adaptive capacity of two service ecosystems by using the adaptive capacity concept. The adaptive capacity will be presented by using the “adaptive capacity wheel” as shown in (Gupta *et al.*, 2010) for Delft and Zaandam.

Research limitations and implications - The concept of adaptive capacity is only applied to two service ecosystems. By that it show the viability of the two systems. More systems can be analyzed in a similar way to get new insights about managing service ecosystems.

Practical implications - The more S-D logic resonates in practice the more there is a need to offer usable measures for managing service ecosystems. The paper offers a tool for managers to evaluate the adaptive capacity of their service ecosystems.

Social implications - S-D logic is not limited to business. Therefor non-business systems can also use the concept of adaptive capacity for evaluating their viability strength. It can even be used by politicians for assessing their work in terms of adaptive capacity as shown in figure 1.

Originality/value - This is (to my knowledge) the first paper evaluating the adaptive capacity of service-ecosystems. It has been argued that service ecosystems are self-adjusting systems (Vargo and Lusch, 2016, pp. 10–11). To be self-adjusting the system needs a capacity to adopt or to adjust. The paper shows how to assess the adaptive capacity of a service ecosystem.

Keywords: Service-ecosystem, adaptive capacity, adaptive capacity wheel, S-D logic

Paper Category: Research paper

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