

# Anatomy of value co-creation: case of local governments in japan for covid-19 responses

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**Purpose** – The core of Service Science is the value co-creation through the joint and collaborative efforts among firms, customers, and other stakeholders in service ecosystems. But the previous abstraction of value co-creation does not capture multiplayer value co-creation interactions in the multilayered context of service ecosystems (Spohrer, Vargo, Casewell, and Maglio, 2008; Barile, Lusch, Reynosp, Saviano, and Spohrer, 2016). To represent the multiplayer value co-creation interaction patterns in the multilayered context of service ecosystems, we newly introduce “connectivity fingerprint”, which is the neuroscience method of neatly characterizing the connectivity patterns of complex interactions in the brains, to visualize multiplayer value co-creation process.

**Design/Methodology/approach** – We conducted interviews of 27 prefectures for their policy decision making in the COVID-19 pandemic. We developed value co-creation connectivity fingerprint based on the cooccurrences of the specific connections between the prefectural governments and other stakeholder organizations in the interview transcripts. These connectivity fingerprints of value co-creation of prefectures represent the unique patterns of the integration of resources from different stakeholders for the service recipients for different prefectures, which have diverse culture and organizational histories.

**Findings** – Value co-creation connectivity fingerprint was applied in the case of Covid-19 situations in Japan, to visualize how local governments interact with public health experts, economic experts, doctors, business practitioners, and information media (traditional and social media) to serve the citizens. Connectivity fingerprint shows how an organization functions through interactions with diverse actors beyond dyadic context. It also represents how the diverse stakeholders share information and communicate with service providers to serve the service receivers in the service ecosystem in the multilayered context. Finally, it quantifies the strength of the relationships between the prefectural governments and different types of stakeholders and value co-creation interactions in the multilayered context of service ecosystems, which include stakeholder at different levels of ecosystem such as central government (upper level) and individual citizens and business practitioners (lower levels).

**Originality/value** – This paper advances the idea of “Neuro Service Science” as a new stream of research in Service Science, which burrows the concepts and methods from neuroscience, which has historically dealt with the complex network systems, to describe and understand the similarly complex network systems existing in the ecosystems of service science. For the first step of this endeavor, we are developing both a descriptive and theoretical method of connectivity fingerprint which visualized and mapped multiplayer value co-creation interactions beyond dyadic context of service ecosystems. Practically, connectivity fingerprint could be applied for organizational and societal wellbeing through the integration of internal, external, and societal contexts and situations to innovate new products and services which can lead to sustainable organization and society.

**Key words** Connectivity Fingerprint, Neuro Service Science, Service Science, Value Co-Creation

**Paper type** – Research paper