

Strategic Technology and Innovation Management Programme 2019

Creating and capturing value from data

Miying Yang
m.yang2@exeter.ac.uk

In an increasingly digitized world, data is regarded as important resource. Many companies are facing the challenge of creating and capturing value from data. Decision makers often lack a comprehensive view of what value could be captured from existing data, which data is already available and which data needs to be added to make it valuable.

Aims

- to investigate how firms can create and capture value from data
- to help firms identify value opportunities from data

Progress



Approach

- Apply the concept 'value uncaptured' from previous research to the context of digitalization

Deliverables

- A tool for identifying opportunities of creating and capturing value from data
- Workshop slides

Engagement opportunities

- Identify barriers to implement data projects in your company and potential solutions

- Use the tool in a workshop

Barriers

- Barriers to implement big data projects in operations and supply chain management
- Cause and effect of the barriers

Organizational	Barriers
Supply chain integration	B14: Competition and conflicts within supply chain network and departments B15: Time-consuming to gather experts across various organizations within supply chain B16: Insufficient resources; lack of big data resources and capabilities in other firms in a supply chain (could be external) B17: Data is owned by various stakeholders across supply chains
Leadership, talent and skills	B18: Lack of big data analytic talents in supply chain domain B19: Employee's lack of trust and understanding in big data (lack of data-driven culture) B20: Lack of abilities to manage and organize existing data B21: Supply chain managers lack the understanding of the linkage between big data, supply chain capability and performances
Organizational change	B22: It requires changes in technology infrastructure and business in the initial phase B23: Transforming towards data-driven culture is not easy B24: High cost in implementing big data facilities B25: Lack of motivation in data governance (e.g. data)
Privacy and security concern	B26: Lack of motivation in data governance (e.g. data)
Technical	Barriers
S4: Value from Data	S1: Data generation and collection S2: Data management (integration, cleaning and storage) S3: Data analysis S4: Data quality
	B1: Paper and manual-based data still widely exist B2: Data usability: large amount of unreliable data B3: Data transmission (accuracy, velocity and security) B4: Data availability: lack of data or inability to identify suitable data B5: Existence of physical hardware to carry data B6: Lack of efficient way to hold huge volume data B7: Lack of a more general and complex mapping language for data integration B8: Lack of data analytic techniques and procedures B9: Lack of computation resources B10: Processing large amount of data is time-consuming B11: Lack of data accuracy, timeliness, consistency, completeness, relevancy, value-added, quality, believability, accessibility, and separation of data