Using Artificial Intelligence to Co-Create Value with Customers

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Pre-ICIS SIGDSA Symposium

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Research-in-Progress

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Abstract

The advent of interrelated technologies such as Big Data (BD) and Artificial Intelligence (AI) has radically transformed how industrial firms can co-create value with their customers. We collect data from an organization in the manufacturing industry to understand how it co-creates value from BD using AI. In addition to secondary data collection, we engage with the company actors and the customers involved in developing the solution based on AI by conducting a series of focus groups and adopting a semi-structured interviewing approach. We propose a conceptualization of value co-creation to identify the potential relationship between AI-augmented solutions and the customer journey. Furthermore, we offer performance metrics for value co-creation on AI applications with customers. Finally, we present theoretical and practical implications and suggest future research directions to advance the field of value co-creation and AI.

Keywords

Artificial Intelligence (AI), Big Data (BD), Value Co-creation, Machine Learning (ML)

Introduction

Customer centricity pushes the focus of established firms from being organization-centric and making decisions solely with shareholder equity in mind to driving value with the customer (Fairfield, 2015). This shift's success depends on overcoming the beliefs of the involved parties that cannot occur overnight (Fairfield, 2015). Nevertheless, with the arrival of enabling technologies such as Big Data (BD), Artificial Intelligence (AI), and the Internet of Things (IoT), the digital movement has fast-tracked the operational transformations of firms (Porter & Heppelmann, 2014).

The amalgamation of these distinctive technologies has empowered novel business models (Teece, 2018). As technological progress hastens the transformation rate in established industries, driving new layers of complexities, companies must prioritize managing this uncertainty (Teece, 2018). In addition, the technologies' novelty has enabled multiple actors to orchestrate new value propositions (Hinings et al., 2018). In short, digital transformation has disrupted how industrial organizations cooperate with various actors to create and capture value (Porter & Heppelmann, 2014; Teece, 2018).

AI is one of the technologies receiving increased attention concerning value co-creation (Enholm et al., 2021). AI offers businesses exceptional prospects for creating innovative products and services (Berente et al., 2021), and businesses presume an overpowering influence of AI on their services (Ransbotham et al., 2017). Ramaswamy and Ozcan (2018) conceptualized value co-creation as creating value with various actors through collaboration provided by "technological platforms enhanced by digital technologies" (Ramaswamy & Ozcan, 2018). AI promises industrial firms the potential to reconfigure their service offerings (Wiener et al., 2020) with widespread effects on how they engage with their stakeholders and extract value.

However, despite the numerous studies exploring the combination of technologies and value co-creation (Ramaswamy & Ozcan, 2018), we notice a research gap in how firms may use AI in the value co-creation process (Kaartemo & Helkkula, 2018). Some have proposed that firms must comprehend the foundation of establishing digital capabilities as a source of innovation and competitive advantage (Lenka et al., 2017). We, therefore, join the academic discussions to find *how firms may use AI to co-create value from Big Data (BD) sources with customers.*

Research Methodology

We follow an established manufacturing firm that aims to develop a new service based on AI and BD exchange with its customers. We conduct a single case study method to derive a more profound understanding of the context and extrapolate key findings (Stake, 1995). We begin our data collection by conducting a series of focus groups that include several managers within the studied firm. Through decision-making, these managers influence the inputs related to this service. This initial approach will help the researchers to strengthen the contextual understanding.

Moreover, we collect secondary data that we analyze on an ongoing basis. Finally, we complete our examination by launching semi-structured interviews. As the service unfolds over time, adopting a qualitative interview approach will enable us to conduct follow-up interviews on several occasions and incorporate a longitudinal character into our research (Gioia et al., 2013).

Potential Contributions

This research attempts to address some rising questions in the AI field. First, we aim to develop a value co-creation conceptual model to capture the different factors affecting the customer journey (Kaartemo & Helkkula, 2018). Perhaps, one key outcome we endeavor to unfold relates to the limits of AI suggested by Berente et al. (2021). Last, we reveal the performance metrics that firms can adopt when engaging through AI and BD with customers in the value co-creation journey (Enholm et al., 2021).

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