FACULTEIT ECONOMIE EN BEDRIJFSKUNDE

UNIVERSITEIT GENT

Invitation

You are cordially invited to the public defense to obtain the academic degree of

DOCTOR OF BUSINESS ECONOMICS

by Juliana Sanchez Ramirez

Applications, challenges, and implementations of AI in B2B business

Supervisors:
Prof. dr. Kristof Coussement - Prof. dr. Dries F. Benoit

Friday, 30 January 2026 at 14h00
In room 'VA02', at IÉSEG School of Management, 27 Boulevard Vauban, Lille, France.
Please confirm your attendance no later than 23 January by email to juliana.sanchezramirez@ugent.be

EXAMINATION BOARD

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Abstract

This dissertation examines the integration of artificial intelligence (AI) in business-to-business (B2B) software environments through a multi-method research design conducted within a B2B European software company. Motivated by the growing strategic role of AI in reshaping data-driven decision processes and organizational coordination in B2B environments, this research investigates how AI applications create business value, encounter analytical and organizational constraints, and become embedded in organizational practice. To guide this purpose, the dissertation develops an analytical framework comprising three interrelated dimensions, applications, challenges, and implementation.

The three dimensions are examined through a combination of quantitative and qualitative studies conducted within a B2B software environment. Within the applications dimension, the research shows how behavioral and interaction data can be transformed into analytical outputs that inform customer acquisition and retention decisions. The studies demonstrate how usage patterns, engagement trajectories, and trial usage can be modeled in ways that extend the informational basis of managerial action. In the challenges dimension, the analyses reveal both analytical and organizational conditions that shape the feasibility and usefulness of AI applications. These include the effort required to structure heterogeneous data, the need to maintain interpretability when working with more complex analytical designs, and the constraints created by existing coordination and governance structures. The implementation dimension traces the organizational process through which analytical tools are conceived, designed, and brought into use. The findings show how implementation unfolds through successive phases of data definition, model specification, and tool integration, shaped by the interactions between technical experts, managers, and relevant organizational stakeholders.

Together, the three studies offer an integrated empirical foundation for understanding how AI becomes embedded within B2B organizations. The analyses show that data-driven applications evolve through processes that translate behavioral information into actionable insights, enabling firms to anticipate customer needs and support informed decision-making. The findings further demonstrate that technical and organizational constraints together shape the feasibility and impact of AI initiatives, as successful implementation depends on sustained alignment among data infrastructures, analytical models, managerial roles, and operational routines. Synthesizing these insights, the dissertation advances a multi-level perspective on AI integration in B2B contexts, demonstrating that AI contributes to business performance through three recursive mechanisms, value creation, value preservation, and value institutionalization, that unfold across different stages of the customer and organizational lifecycle. Taken together, these mechanisms show that the value of AI integrations in B2B contexts emerges from the ongoing alignment and co-evolution of data assets, analytical configurations, and organizational practices, through which predictive systems become operationally relevant and institutionally sustained.

Curriculum vitae

Juliana Sanchez Ramirez (°1995, Tabio) holds the degree of Master of Science in Big Data Analytics for Business (2021, IÉSEG School of Management). Since October 2022, she has been enrolled in a joint PhD program at the University of Lille and Ghent University, under the supervision of Prof. Dr. Kristof Coussement, Prof. Dr. Dries F. Benoit, and Prof. Dr. Arno de Caigny, with funding from IÉSEG School of Management, the Hauts-de-France Region, and the industry partner ENFOCUS. Her research examines the integration of artificial intelligence in B2B software environments, focusing on how AI-driven analytics create business value, the analytical and organizational challenges they face, and how such systems are implemented and embedded in organizational practice. One dissertation study has been published in Industrial Marketing Management. A second study is a working paper that has been presented at leading international conferences, including the ORBEL Conference 2024 and the ISMS Conference 2024. A third study is a working paper that was presented at, and published in the proceedings of, the Academy of Management Annual Meeting (AOM 2025), held in July 2025 in Copenhagen, Denmark. In addition, she has one peer-reviewed publication outside the doctoral dissertation, published in 2025, on improving B2B customer churn using action rule mining.