



PhD in INGEGNERIA GESTIONALE / MANAGEMENT ENGINEERING - 40th cycle

**THEMATIC Research Field: NEW DIGITAL AND HUMAN-CENTERED BUSINESS MODELS
TO MANAGE SUPPLY CHAIN RISK, SUSTAINABILITY AND FINANCE**

Monthly net income of PhDscholarship (max 36 months)

€ 1500.0

In case of a change of the welfare rates during the three-year period, the amount could be modified.

Context of the research activity

**Motivation and objectives of the research
in this field**

Supply Chains today are global and complex, and are exposed to major challenges such as climate change, geopolitical tensions and health issues. Therefore supply chains today play a fundamental role in terms of Risk Management and Sustainable Development: they may be a source of major problems and negative impacts, on both the society and the environment, or they may become a key contributor to sustainability.

At the same time, the Digital Transformation is radically impacting supply chains and in particular the Procurement function: technologies such as the Internet of Things, Blockchain, 3D Printing, Big Data Analytics and Artificial Intelligence are becoming pervasive and can revolutionize the way supply chains are designed and managed, impacting the fundamental performance of delivery, quality, flexibility and cost, as well as environmental and social sustainability.

In addition, today supply chains need to manage not only physical and information flows, but also financial flows, since without a proper coordination of the three flows it is not possible to meet the overall goals. The discipline of Supply Chain Finance is strictly related to Risk Management and the Sustainability of supply chains (e.g. for ensuring a proper allocation of resources to all the actors in the supply chain, including the weakest ones and to mitigate the risk of bankruptcy for suppliers) and relies heavily on digital technologies to improve efficiency and effectiveness. Supply Chain Management Research today



| | |
|---|--|
| | <p>needs to address the challenges raised by Risk Management, Sustainability, Digital Transformation and Supply Chain Finance, combining multidisciplinary approaches to find innovative answers to the radical problems that the world is facing today.</p> <p>This is consistent with the main goals of Humantech project, with the purpose to create more resilient and human-centered supply chains.</p> |
| Methods and techniques that will be developed and used to carry out the research | <p>The PhD candidate will use multiple methods and techniques, with an empirical-based method.</p> <p>In particular, a literature review considering both academic and grey literature will be necessary. In additional, qualitative and quantitative methodologies might be requested, in order to tackle the goals of the project</p> |
| Educational objectives | <p>The PhD candidate will develop competences and attitudes aimed at developing and implementing innovative solutions in the field of supply chain management:</p> <ul style="list-style-type: none"> - New methods and practices for Supply Chain Risk and Resilience management; - Innovative methods practices to assess and improve Supply Chain Sustainability and Circularity; - New applications of digital technologies to improve Supply Chain Circularity and Resilience; - Innovative Supply Chain Finance Solutions; |
| Job opportunities | <p>Upon completion of the PhD program, the graduate will have the skills and competences to work as researcher in both academia and other research centers (e.g. public and private institutions).</p> <p>The candidate will also have the opportunity to join companies in the following roles:</p> <ul style="list-style-type: none"> - Supply Chain Sustainability Manager; - Supply Chain Risk&Resilience Manager; - Supply Chain Digital Transformation Manager; - Supply Chain Finance Manager; |
| Composition of the research group | <p>2 Full Professors 1 Associated Professors 3 Assistant Professors</p> |



| | |
|---------------------------------------|-------------------------------------|
| | 4 PhD Students |
| Name of the research directors | Antonella Moretto; Federico Caniato |

| Contacts |
|---|
| antonella.moretto@polimi.it; federico.caniato@polimi.it |

| Additional support - Financial aid per PhD student per year (gross amount) | |
|---|----|
| Housing - Foreign Students | -- |
| Housing - Out-of-town residents (more than 80Km out of Milano) | -- |

| Scholarship Increase for a period abroad | |
|---|---------|
| Amount monthly | 750.0 € |
| By number of months | 6 |

| Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information |
|--|
| <p>PhD candidate will have the chance to attend PhD courses, to attend international conferences and international summer schools, selected on the basis of the purpose of the research project. If coherent with the development of their doctoral program, the PhD candidate will have the opportunity to be involved in: teaching activities, tutoring to master students, tutoring to PhD candidates for administrative processes. PhD candidate will be provided with a desk.</p> <ul style="list-style-type: none"> •Involvement in projects: "For the overall development of their capabilities, PhD candidates will work on sinergical projects to favour empiral data collection and network development for their career. Projects will give candidates the opportunity to work in group (peers and other senior professors)". •Teaching and tutoring: "If coherent with the development of their doctoral program, the PhD candidate will have the opportunity to be involved in: teaching activities, tutoring to master students, tutoring to PhD candidates for administrative processes". <p>Funding for educational activities: 6.100,00 Euros for three years.</p> |