Politecnico di Milano

PhD in Management Engineering – 38° Cycle

Research Title: Assessing and measuring Circular Economy in Multinational Enterprises and Global Value Chains.

Scholarships and key dates	
Number of scholarships	1
Beginning of PhD	February 1st, 2023
Deadline for application	December 16th, 2022
Context of the research activity	
Motivations and objectives of the research in this field	Circular Economy (CE) approach is increasingly considered a system solution to overcome the limits of the conventional linear "take-make-use-dispose" model underlying the actual structure of the global economy. Multinational enterprises (MNEs) are expected to play different active roles in the transition toward a more CE approach given their centrality for many countries and for Global value chains (GVCs). In this respect MNEs are expected to play the role of initiator of the transition or coordinator of different economic actors involved in the CE transition. Furthermore, MNEs may play an important role in the development of new technologies and innovative solutions that are necessary for CE to be adopted at full scale given their availability of R&D facilities and personnel and their capacity to establish partnership. The research aims to better understand the role that MNEs play in the CE transition and the impact of the CE adoption at a company and GVC levels. Indicative but not exhaustive research issues pertaining to the theme are: - The adoption of strategies and business models (both at the company and/or at the systemic level) that embrace the paradigm of the CE, and their likely impact on the configuration and

	reconfiguration of the GVCs. - The role of MNE's innovation strategies in the transition to a CE paradigm. - The assessment and measurement of the circular transition at the MNE and GVC level.
Methods and techniques that will be developed and used to carry out the research	The identified themes will be analyzed adopting conceptual and empirical lenses. Empirical analysis will be conducted through qualitative, quantitative, or mixed methods. The investigation will consider the impact of the CE implementation on the MNEs strategic choices. Also, objective CE indicators at firm level will be developed and used to empirically analyse MNEs adoption of CE and the consequent reconfiguration of its GVCs. Indicators will also allow to compare different MNEs in terms of their degree of adoption of CE principles and their position in the circular transition. The relation between MNE innovation capacity and its adoption of the CE paradigm will be investigated also considering patent data. Particular attention will be paid to the Italian context referring to information on MNEs that are available in the Reprint database. At the industry level, CE transition will be investigated across different industries since some industries and companies may present different CE transition journey.
Composition of the research group	Number of Full Professors: 2 Number Associated Professors:2 Number of Assistant Professors: 2 Number of PhD Student:2
Names of the research directors	*Lucia Piscitello* *Stefano Elia*
Contacts	*lucia.piscitello@polimi.it* *stefano.elia@polimi.it*
Additional support	
Housing: financial aid per PhD student per year (gross amount)	*no*

Politecnico di Milano

PhD in Management Engineering – 38° Cycle

Research Title: Firm Resilience amidst Crisis and Uncertainty: the Role of Reshoring

Scholarships and key dates	
Number of scholarships	1
Beginning of PhD	February 1st, 2023
Deadline for application	December 16th, 2022
Context of the research activity	
Motivations and objectives of the research in this field	Recent events require a reconsideration of what organizations need to survive and stay competitive. The COVID pandemic, as well as the ongoing war in Ukraine, emphasize the fact that stability should not be taken for granted, as massive and unpredictable disruptions are a constant threat. This global condition requires organizations to equip themselves with strategies, tools and processes to cope with the resulting vulnerability and uncertainty: in one word, to achieve resilience. Resilience is especially important in the context of global value chains. As the recent Suez canal incident highlights, even localized shocks can quickly reach global scale, given that production processes are international and interconnected. While global value chains are substantially advantageous in terms of economic efficiency, they are as weak as their weakest link, as disruptions in any part of the chain may compromise it all. This research project aims to investigate global value chain restructuring, and in particular reshoring, as a possible means to achieve resilience. By bringing back production and shortening the global value chain - also thanks to advanced technologies like 3D printing - firms may achieve greater control over their economic activities and may be better capable of coping with disruption. However, at the same

	time, they would lose part of the well-known economic benefits of globalization. This trade-off, among other complications, makes the phenomenon complex and worthy of empirical investigation.
Methods and techniques that will be developed and used to carry out the research	This research will couple traditional and innovative methodologies. Among the former, besides the analysis of archival data (e.g. from the database Reprint), there will be a strong focus on surveys. Among the latter, the focus will be on experiments. Experiments will constitute the methodological backbone of the project. The project will leverage carefully designed vignette studies and/or natural experiments to establish a clear causal link between the decision to reshore and various possible antecedents (e.g. the level of uncertainty or the severity of the prospective crisis). Data gathered from archives and surveys will be used to complement and enrich experimental findings.
Composition of the research group	Number of Full Professors: 2 Number Associated Professors: 1 Number of Assistant Professors: 2 Number of PhD Student: 1
Names of the research directors	*Stefano Elia* *Lucia Piscitello*
Contacts	*stefano.elia@polimi.it* *lucia.piscitello@polimi.it*
Additional support	
Housing: financial aid per PhD student per year (gross amount)	*no*