



# PhD in INGEGNERIA GESTIONALE / MANAGEMENT ENGINEERING - 38th cycle

**PARTENARIATO PNRR Research Field: ASSESSING AND MEASURING CIRCULAR  
ECONOMY IN MULTINATIONAL ENTERPRISES AND GLOBAL VALUE CHAINS**

**Monthly net income of PhDscholarship (max 36 months)**

**€ 1450.0**

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**

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.



<b>Methods and techniques that will be developed and used to carry out the research</b>	<p>The identified themes will be analyzed adopting conceptual and empirical lenses.</p> <p>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.</p>
<b>Educational objectives</b>	<p>The involved PhD student will learn (i) to understand how the paradigm of circular economy can be reconciled with the paradigm of global value chains; (ii) to understand how multinational companies should adapt and modify their activities, location and governance choices to improve the circularity of their value chains; (iii) to understand the role of digital technologies and innovation in fostering the adoption of sustainable and circular economic production models; (iv) to understand how the adoption of circular economy may affect and redefine the competitive and comparative advantages and the relationships among firms and among countries.</p>
<b>Job opportunities</b>	<p>Upon PhD completion, the candidate will have the opportunity to proceed with the academic career in prestigious universities, to work in multinational companies that are embracing the transition towards a sustainable and circular production model, and to join public sector agencies and international organizations engaged with policy design and assessment for the sustainable and green transition, along with consulting</p>



	organizations that advise multinational companies on the adoption of sustainable and circular production models.
<b>Composition of the research group</b>	2 Full Professors 2 Associated Professors 2 Assistant Professors 2 PhD Students
<b>Name of the research directors</b>	Proff. Lucia Piscitello e Stefano Elia

<b>Contacts</b>	
Lucia.piscitello@polimi.it Stefano.elia@polimi.it	

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

<b>Scholarship Increase for a period abroad</b>	
<b>Amount monthly</b>	725.0 €
<b>By number of months</b>	6

<b>Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information</b>
<p>The Ph.D. student will attend several methodological and disciplinary courses both at Politecnico and abroad to gain knowledge about the most advanced research methodologies and about the specific topic of the Ph.D..</p> <p>He/she will be supervised through frequent meetings, and will receive feedbacks on his/her intermediate results during regular meetings with the Doctorate board. The student will be also involved in teaching activities in courses such as development economics, economics and management of multinational enterprises, and/or invest in foreign markets Lab. He/she will also attend national and international conferences where he/she will have the opportunity to present his/her papers, receive further feedback and develop his/her network of scholars for future collaborations. He/she will be offered a desk and PC at the DIG building.</p> <p>CUP: D43C22001410007</p> <p>Decreto Direttoriale Avviso: D.D. 3277 del 30/12/2022 Avviso pubblico per la presentazione di Proposte di intervento per la creazione di 12 Ecosistemi dell'innovazione sul territorio nazionale da finanziare nell'ambito del Piano Nazionale di Ripresa e Resilienza, Missione 4 Componente 2 Investimento 1.5 - Creazione</p>



e rafforzamento di “ecosistemi dell’innovazione”, costruzione di “leader territoriali di R&S” - finanziato dall’Unione europea - NextGenerationEU.

Decreto di concessione: D.D. 1055 del 23/06/2022