



# PhD in INGEGNERIA GESTIONALE / MANAGEMENT ENGINEERING - 37th cycle

**THEMATIC Research Field: HOW TO MEASURE 'IMPACT' IN THE HEALTHTECH INDUSTRY  
FROM THE PERSPECTIVE OF VALUE-BASED HEALTH CARE. THEORETICAL AND  
PRACTICAL CHALLENGES**

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

**€ 1400.0**

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**

The concept of "*Value-Based Health Care*" (VBHC) has risen in the last years as one of the most disrupting paradigms for the design and management of care delivery. Digital innovation - also as a necessary answer to the urgent challenges posed by the Covid-19 pandemic flue - has reinforced the transition to new paradigms of care delivery. Despite this significant change, our current capability to measure either the 'impact' or the 'value' generated by digital innovation from the perspective of VBHC is still limited. Traditional techniques from health economics - e.g., cost-benefit analysis (CBA), cost-utility-analysis (CUA), etc. - are not able to capture the peculiarities of digital innovation. Traditional techniques from Health Technology Assessment - e.g., EUnetHTA Core Model, EVIDEM, mini-HTA, MAST, etc. - overlook the organizational impact of digital innovation. Traditional techniques from finance - e.g., discounted cash flows, multiples, real options, etc. - are not able to deal with the peculiar business models and competitive advantages at the basis of digital transformation. Against these gaps, this doctoral research aims at advancing both theory and practice of how to measure either the 'impact' or the 'value' of digital innovation from the perspective of VBHC. The research will cover different units of analysis: a) specific technologies (e.g., digital therapeutics, smart patient support programs, robotics etc.); b) specific care delivery programs (e.g., telemedicine, telehealth,



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|   | telerehabilitation, etc.), and c) start-ups.  |
| <b>Methods and techniques that will be developed and used to carry out the research</b> | The research design will combine both quantitative and qualitative methods. In particular, the PhD Student will carry out, under the supervision of the research group, desk analyses of both incumbents and startups through already available databases, surveys to collect primary data, as well as in-depth multiple case studies through interviews and document analysis.   |
| <b>Educational objectives</b>   | Beyond developing a distinctive understanding of the HealthTech industry from a Strategic, Entrepreneurial, Innovative and Financial perspective, the PhD Student will learn how to design a sound research project, how to develop a new theory and validate it through robust research design. Moreover, the PhD Student will learn how to interact with the scientific community (i.e., conferences and papers) and with leading companies and Institutions.   |
| <b>Job opportunities</b>  | At the end of his/her PhD, the selected Student will have the opportunity to explore - together with the research group and his/her supervisor - different job alternatives, such as remaining in academia with a Post-Doc position within the research group or in other Business Schools; applying for a position in enterprises, consultancy firms or Institutions interested to the distinctive competences and network of contacts developed during the PhD. |
| <b>Composition of the research group</b>  | 4 Full Professors<br>3 Associated Professors<br>3 Assistant Professors<br>11 PhD Students   |
| <b>Name of the research directors</b>   | Emanuele Lettieri e Giovanni Toletti  |

| <b>Contacts</b>  |  |
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| Prof. Emanuele Lettieri, emanuele.lettieri@polimi.it<br>Prof. Giovanni Toletti, giovanni.toletti@polimi.it |  |

| <b>Additional support - Financial aid per PhD student per year (gross amount)</b> |    |
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| <b>Housing - Foreign Students</b>   | -- |



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| Housing - Out-of-town residents<br>(more than 80Km out of Milano) | -- |
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| Scholarship Increase for a period abroad |          |
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| Amount monthly                           | 566.36 € |
| By number of months                      | 6        |

| Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information   |
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| <p>The selected PhD Student will be offered the opportunity to develop teaching capabilities through the involvement as a teaching assistant in one/two of the courses chaired by the Professors affiliated to the research group, also according to her/his attitude and interests. Courses cover topics about Finance, Innovation, Entrepreneurship, Business Administration. There will be also the opportunity to be involved in the development of new educational programs both at the Master of Science level and the post-graduate level (jointly with MIP Graduate School of Business). The selected PhD Student will have desk availability, even if the opportunity for smart working will be offered two days per week.</p> <p><i>Funding for educational activities: 1<sup>st</sup> year: 1200 euros per student, 2<sup>nd</sup> year: 1200 euros per student, 3<sup>rd</sup> year: 1200 euros per student. Teaching assistantship: There are various forms of financial aid for activities of support to the teaching practice. The PhD student is encouraged to take part in these activities, within the limits allowed by the regulations.</i></p> <p><i>Desk availability: shared use</i></p> <p><i>Computer availability: individual use</i></p> |