

# MANAGEMENT, PRODUCTION AND DESIGN

## Digital Technologies, growth and employment

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<b>Context of the research activity</b>	<p>The research aims at exploring the impact of new digital technologies, particularly those encompassed by ultra-fast broadband (UFB) connections, on local GDP growth and labour markets in Italy. In March 2021, the European Union (EU) released the “Digital Compass 2030” plan to spur the deployment of digital infrastructures, with the aim of stimulating a substantial digital transformation of EU firms. The EU plan specifically considers UFB as a critical infrastructure to obtain such targets, so that all across Europe - particularly, in Italy - Next Generation EU funds are largely being devoted to the deployment of UFB connections. Given the dimension of the public investment involved, it becomes important to assess its impact on local economy, specifically on GDP growth, labor markets and entrepreneurship.</p>
	<p>High-speed internet access via broadband infrastructures is widely recognized as an engine of economic growth. Owing to its nature of general purpose technology, UFB originates positive externalities transversally on economic sectors.</p> <p>Understanding the potential of these effects is increasingly important to ensure economic growth and improve welfare. In this research, the aim is to</p>

<p><b>Objectives</b></p>	<p>study the causal relationship between UFB, local economic growth, and its effects on local labor markets, specifically through employment, wages, entrepreneurial activity and structural changes in workforce composition. Furthermore, the project aims to explore the potential for UFB investment in spurring self-employment and entrepreneurial activity, especially in start-ups. Although very high capacity networks are expected to be key in our economy in the near future, the literature on their impact on growth is extremely scant, and mostly based on aggregate data at the country or regional level. This research will thus aim to fill this gap and be a tool for Institutions and Policy Makers to have sound analysis on the impact of modern broadband infrastructures on local GDP and labour markets.</p> <p>To this aim, the Polito research team already has access to TIM&amp;OpenFiber data set for the period 2013-2019 (and possibly some updates). Those data will be matched with the MEF/INPS municipality-level data on GDP (disaggregated for types of income, such as self-employment, retiree, or employee incomes), employment, and wages, with the INAPP firm-level data on workforce composition, as well as with detailed information on economic and demographic variables for each municipality.</p> <p>The research activity is based on a multidisciplinary approach primarily based on economic and econometric background but also on a detailed institutional and legal (administrative law) reconstruction of the interplay between State Aid legislations and its current adoption. The goal is to provide to the Policy Makers quantitative evidence on the impact of public intervention in the economic system and thus be able to assess the merit (and cons) of their decisions.</p>
<p><b>Skills and competencies for the development of the activity</b></p>	<p>Economics background. It would be important to have knowledge on basic econometric and in the use of the software STATA</p>