



# PhD in ARCHITETTURA, INGEGNERIA DELLE COSTRUZIONI E AMBIENTE COSTRUITO / ARCHITECTURE, BUILT ENVIRONMENT AND CONSTRUCTION ENGINEERING - 39th cycle

**PNRR 118 PA Research Field: ASSESSING POLICY IMPACTS AT SUB-REGIONAL LEVEL**

Monthly net income of PhDscholarship (max 36 months)
<b>€ 1275.0</b>
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	<p>The economic policies implemented by public administrations have a differentiated impact in the territory, since the same intervention leads to different results depending on the local conditions. Among these conditions, the presence of complementarities with what already exists in the regional economy, and the possibility of synergies with the economic behaviours of private operators can lead to better-than-expected impacts. Other situations can have the effect of lowering policy impacts, for example situations of crowding-out or of rejection by the local population.</p> <p>Even most policies which are not implemented with a territorial focus will have spatially differentiated impacts, depending on the local situation. For instance, industrial policies can impact differently depending on local sectoral specialisation.</p> <p>There exist several types of models which try and estimate the regional impacts of policy measures. However, in most cases, these models stop at a NUTS2 scale, which is that of the Italian regions, or even at the scale of macroregions. For example, the Annex to the PNRR estimates its impact for the regions of Mezzogiorno.</p> <p>The lack of tools at sub-regional means that, usually, national and local administrations are not able to</p>



	<p>understand the expected results of the policies at a scale smaller than regional, although different provinces, different local labour systems and different municipalities are differently hit.</p> <p>Regional governments, therefore, are very interested in having tools to estimate policy impacts inside their territory, considering the existing specificities within regions which are quite large and differentiated.</p> <p>The analytic tools to estimate these policy impacts have seldom been developed because of (i) lack of data, (ii) lack of time and financial of resources and (iii) lack of analytic advancements, since provinces and municipalities are not simply smaller regions.</p> <p>This research, therefore, in collaboration with Polis-Lombardia, the research institute of the Lombardy Regional Government, aims at filling this gap and studying methodologies to estimate the sub-regional impacts of national and regional policies.</p> <p><b>This research, therefore, is relevant to the objective 'M5C3: Interventi speciali per la coesione territoriale',</b> but is also relevant to the horizontal objective of PA enhancement, as it will make new tools to assess policies to local administrations.</p> <p>This will be very important to enhance the effectiveness of policymaking, since it will be able to better tune the interventions.</p>
<p><b>Methods and techniques that will be developed and used to carry out the research</b></p>	<p>There is the need of more than one tool, since different methodologies are required by different types of policies. For instance, Input-Output modelling is good when the policy produces a stimulus to demand, while DSCGE might be better to assess growth-enhancing stimuli.</p> <p>The way in which different techniques can be pushed to a lower spatial scale is also different methodologically, that's why this task requires a full 3-years research programme. For Input-Output, the easiest and most diffused way of dividing the impact over different regions is the FLQ. This technique has also been used in a pilot over the Piano Lombardia (Dal Bianco et al., 2022). However, beyond official statistics, survey data or firm data can be used to estimate sub-regional input-output relationships in a more accurate way. Other possibilities are to estimate sub-</p>



	<p>regional extensions of regional models. For example, the econometric sub-regional estimation of the MASST2 model (Affuso &amp; Fratesi, 2011), where a sub-regional model was built to implement scenarios at nuts3 level. Moreover, currently DSCGE are very diffused but are not extended to the subregional level. This puts conceptual and methodological challenges, as the same functional relationships which hold at a larger scale might not hold at a lower one.</p> <p>Consistently with the need of regional governments to have tools to estimate policy impacts at sub-regional level, <b>a mandatory internship (6 months) will be held at Polis-Lombardia</b>, which is the research centre of the Lombardy regional government, the body to which ex-ante policy impacts are demanded and which advises the government based on economic evidence.</p> <p>During the internship the PhD student will be able to study the actual necessities of the public administration, as well as collect the data which are needed for the empirical testing and applications of the developed models.</p> <p><b>A period abroad (6 months) will take place at a European university</b> where there is a research group working on policy assessment and modelling, which had a previous collaboration with the principal investigator. The destination will be decided by the end of 2023.</p> <p>Since the thesis involves the use of various techniques, the final destination of the period abroad will depend on the technique for which there is more need of advice, because different centres are specialised in different techniques.</p>
Educational objectives	<p>The PhD student, at the end of the 3 years, will:</p> <ul style="list-style-type: none"> <li>• Have a good and practical understanding of the actual necessities of regional governments in terms of policy assessment.</li> <li>• Master several techniques which can alternatively be used to assess different types of policies.</li> <li>• Have a unique knowledge of the ways in which sub-regional extensions of regional impact models can be developed. This knowledge is unique because it will be</li> </ul>



	developed during this research.
<b>Job opportunities</b>	<p>There are 3 possible jobs for which this PhD position prepares:</p> <ul style="list-style-type: none"> <li>•A career in academia, in the field of regional economics, with a specific focus on modelling and quantitative techniques;</li> <li>•A career in the public administration, which needs internal experts who assess the policy initiatives and estimate their impacts; and</li> <li>•A career in a consultancy, since when local administrations don't have these competences internally, they can resort to consultancies.</li> </ul>
<b>Composition of the research group</b>	1 Full Professors 1 Associated Professors 1 Assistant Professors 0 PhD Students
<b>Name of the research directors</b>	Prof. Ugo Fratesi

<b>Contacts</b>
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<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>	637.5 €
<b>By number of months</b>	6

<b>National Operational Program for Research and Innovation</b>	
<b>Company where the candidate will attend the stage (name and brief description)</b>	Polis-Lombardia
<b>By number of months at the company</b>	6
<b>Institution or company where the candidate will spend the period abroad (name and brief description)</b>	To be defined



By number of months abroad	6
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**Additional information: educational activity, teaching assistantship, computer availability, desk availability, any other information**

**Additional support:**

**Budget for the research activity (only for positions supported by scholarship):** total amount Euro 5197.60 per student.

In detail:

- 1<sup>st</sup> year Euro 1732.53
- 2<sup>nd</sup> year Euro 1732.53
- 3<sup>rd</sup> year Euro 1732.53

**Additional information about the organization and regulations of ABC-PhD programme can be found in the Regulations for the 39th Cycle of ABC-PhD:** download is available at link: <https://www.dottorato.polimi.it/corsi-di-dottorato/architettura/architettura-ingegneria-delle-costruzioni-e-ambiente-costruito>

**Additional information about ABC department and ABC-PhD programme:** available at link: <https://www.dabc.polimi.it/>

**Desk availability:** The ABC department provides non-permanent desks to be temporarily booked in common PhD rooms.

**This scholarship is funded by the PNRR national programme under the research line on "Public Administration" in D.M. 118. This means that the owner of the position will be obliged to submit periodical reports about her/his activity.**