| **Georg-August-Universität Göttingen**<br>**Modul B.WIWI-VWL.XXXX: Innovative Data Sources in Economic Research** | 6 C<br>2 SWS |
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| **Learning Goals/Competences:**<br>This seminar introduces students to the use of innovative data sources in economic research. Students will explore how advances in satellite technology, web data, and text analysis are transforming economic analysis by providing novel, high-frequency, and spatially detailed insights into economic activity. Through engagement with recent empirical research and hands-on applications, students will gain a deeper understanding of how to collect, process, and analyze these emerging data sources using modern computational techniques.<br>After successfully completing the course, students will have acquired the following competencies: Foundational knowledge of innovative data sources and their applications in economic research, including their advantages and limitations compared to traditional data sources. Competencies in data collection and processing, such as web scraping, working with APIs, handling satellite imagery, and using text data for economic analysis. Experience with statistical programming (e.g., Python, R, or Stata) for cleaning, analyzing, and visualizing data from novel sources. Skills in structuring and composing scholarly work, particularly in the development of a research project that leverages an innovative data source. Presentation and communication skills, including the ability to convey empirical concepts in a clear and concise manner in both written and oral form. Capacity for critical reflection, demonstrated through discussions and a term paper assessing the potential and limitations of innovative data sources in addressing key economic questions. | **Workload:**<br>Attendance time:<br>28 hours<br>Self-Study:<br>152 hours |
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| **Course: Innovative Data Sources in Economic Research** (Seminar)<br>*Contents:*<br>Students will engage with innovative data sources by designing and conducting their own data collection project. The seminar will guide students through the process of identifying, accessing, and analyzing non-traditional economic data, such as satellite imagery, web-scraped data, APIs, or text-based sources.<br><br>As part of their coursework, students will complete three key assignments:<br>1. **Exposé**: Students will submit a one-page proposal outlining their selected data source, the type of data they aim to collect, the methods they plan to use for data extraction, and potential economic questions that could be addressed using this data.<br>2. **Presentation**: Students will prepare an approximately 20 minute long presentation detailing their data collection project and present in front of the class at the final meeting.<br>3. **Term Paper**: The final paper (maximum 15 pages) will document the data collection process in detail, provide descriptive statistics or summary analyses, discuss challenges encountered during data acquisition, and evaluate the research and policy applications of the collected data. Students will critically assess the advantages and limitations of their chosen data source compared to conventional economic data. | 2 SWS |
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| **Examination: Term paper (max. 15 pages) with a presentation (ca. 20 minutes)**<br>**Prerequisites:**<br>Active participation | |

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| **Examination requirements:**<br>Students are expected to demonstrate a solid understanding of innovative data sources and their applications in economic research, competence in data processing and statistical analysis, and the ability to critically assess the strengths and weaknesses of unconventional economic data.<br><br>• Term Paper (up to 15 pages) [70%] – Students are required to document their data collection process, provide descriptive statistics or summary analysis, discuss challenges and methodological considerations, and critically reflect on the research and policy applications of their chosen data source. The paper should demonstrate a clear understanding of the economic relevance, advantages, and limitations of the data.<br>• Presentation (approx. 20 minutes) [30%] – Students will deliver a concise 15-minute presentation of their project, summarizing their data source, collection methods, key findings, and critical reflections. The presentation should effectively communicate complex empirical concepts and engage the audience in discussion. | |

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| **Admission requirements:**<br>none | **Recommended prior courses:**<br>none |
| **Language:**<br>Englisch | **Module coordinator:**<br>Dr. Carlo Birkholz |
| **Frequency:**<br>irregular | **Duration:**<br>1 semester |
| **Repeatability:**<br>twice | **Recommended semester:**<br>5 |
| **Maximum participants:**<br>12 | |