

The geography of eco-innovation in Italy. Evidence from patent data at firm level

Part 1: Data exploratory analysis

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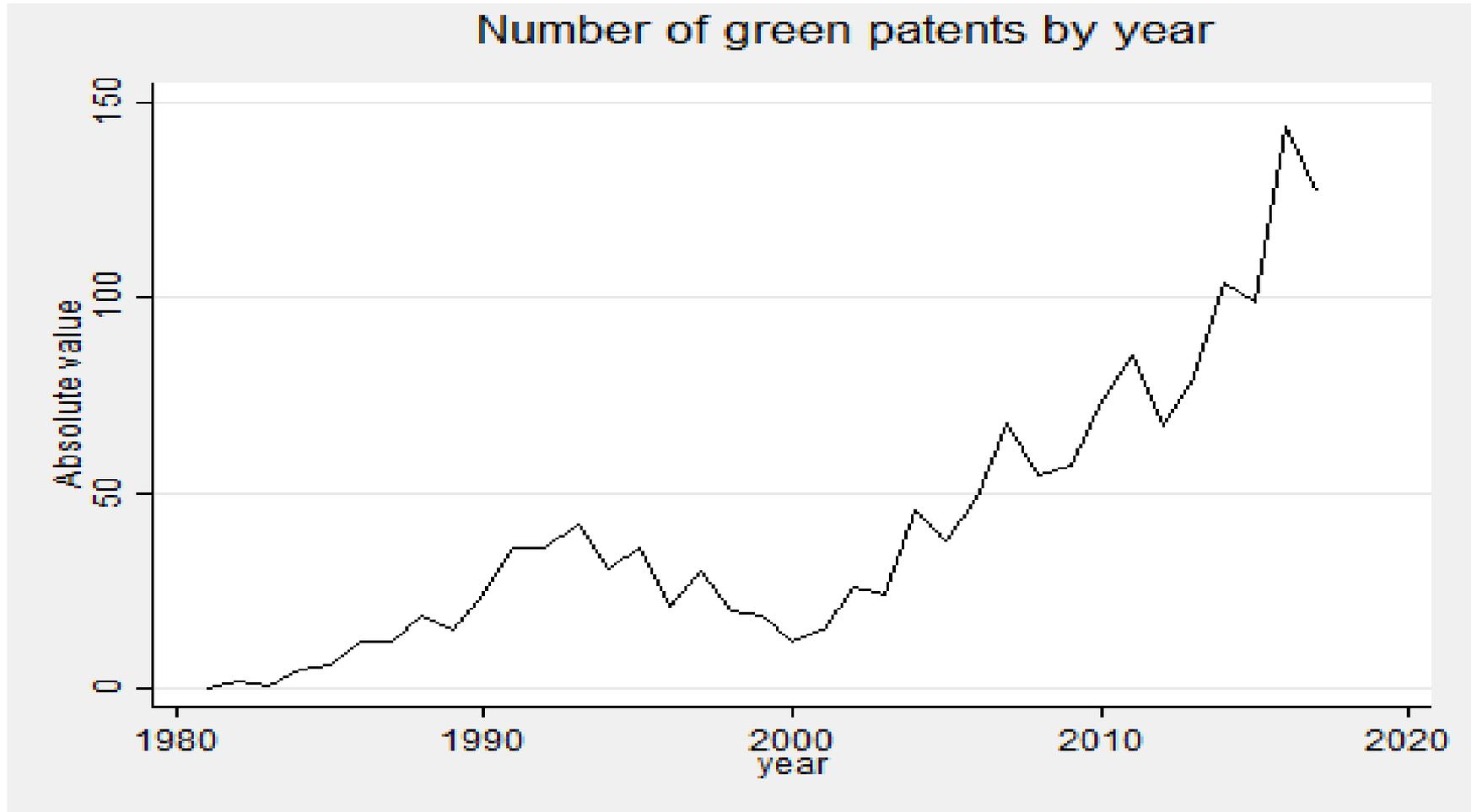
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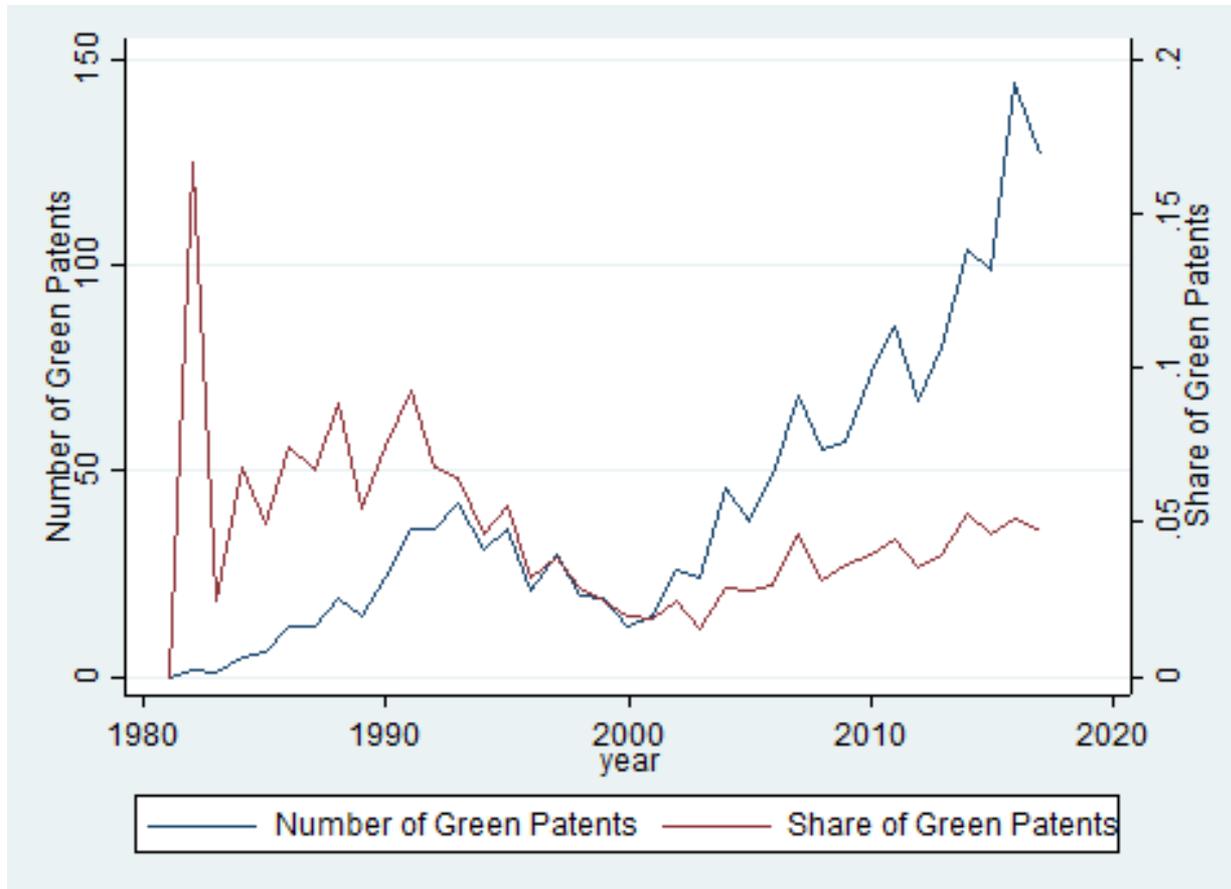
Dataset construction

- We measure innovation in green technologies by using patents. Data are from Orbis dataset provided by Bureau van Dijk, which has recently been linked to the European Patent Office's (EPO) PATSTAT dataset
- We count the number of granted patents per firm per year, including only priority patents and excluding equivalent patent filings. The fact that we focus on granted patents of firms' registered in Orbis implies that our sample is not likely to include the lowest quality patents (such as non-successful applications)
- In addition green patents are identified using the WIPO Green Inventory
- The WIPO Green Inventory includes all the IPC classes that are associated with environment friendly technologies in a variety of fields. In particular, it includes seven technological fields (alternative energy production, transportation, energy conservation, waste management, agriculture/forestry, and administrative regulatory and nuclear power generation)
- We obtained a final panel spanning from 1981 to 2017, reporting observations on more than 26.000 italian firms.

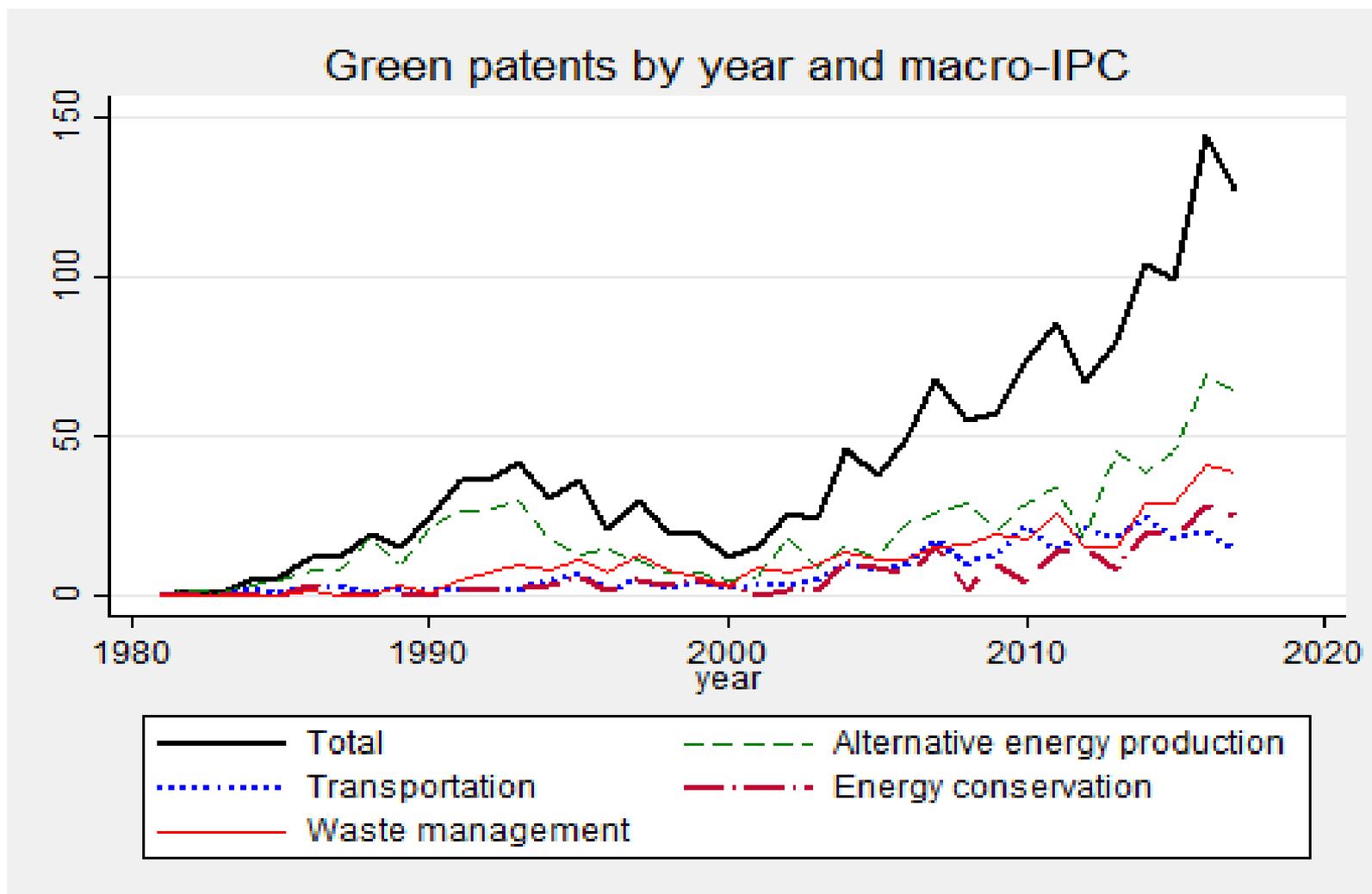
Green patenting in Italy over time (1/2)



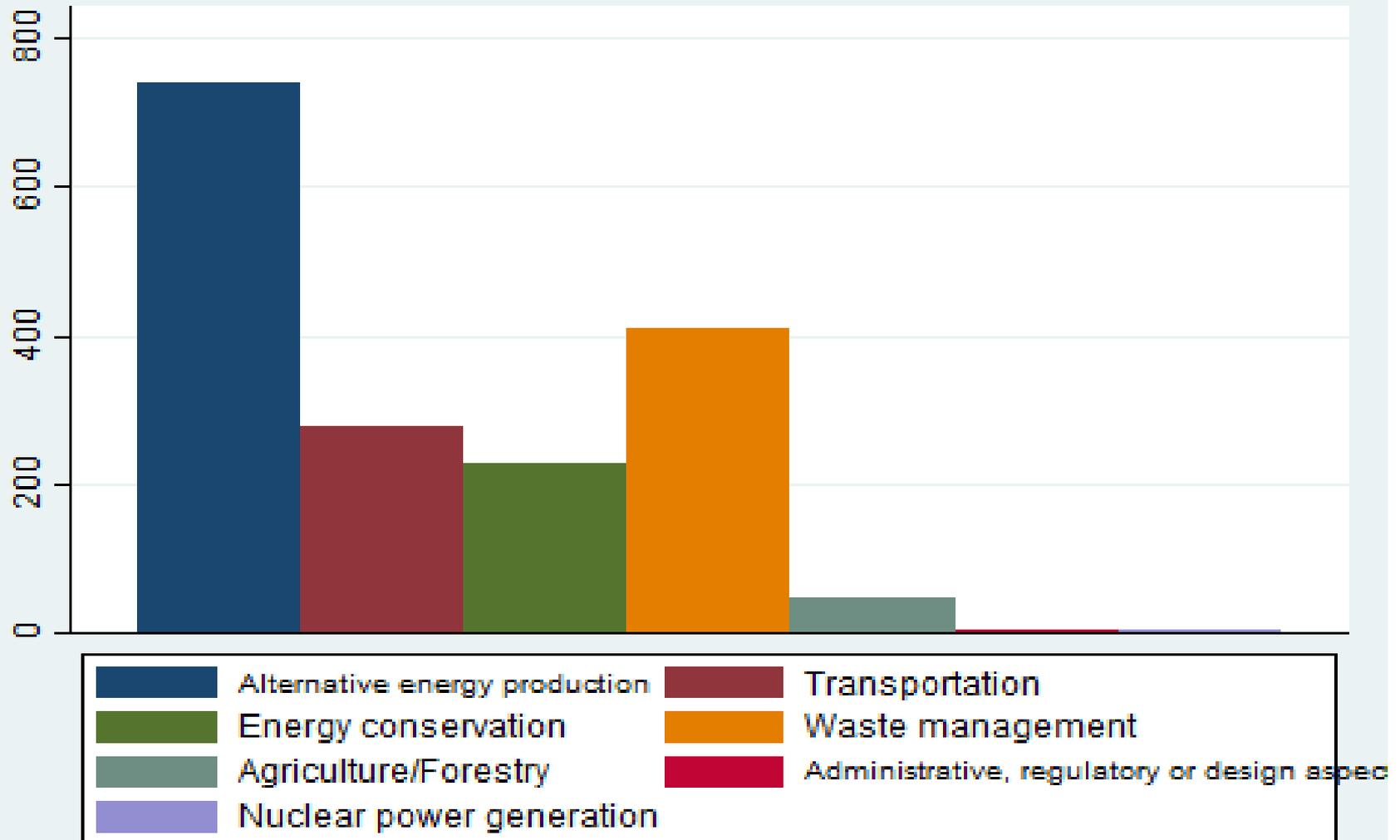
Green patenting in Italy over time (2/2)



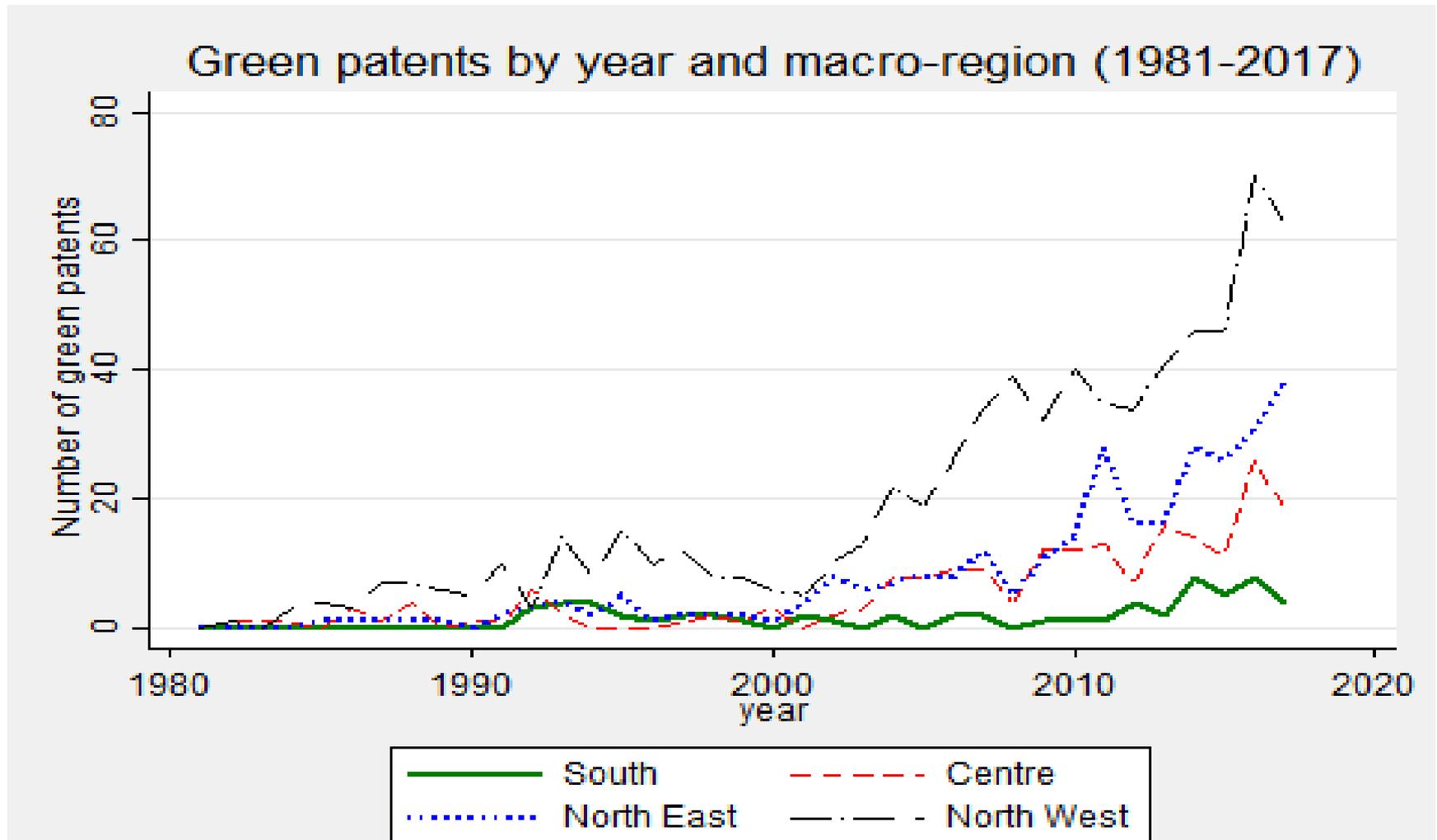
Green Patents in Italy by IPC codes



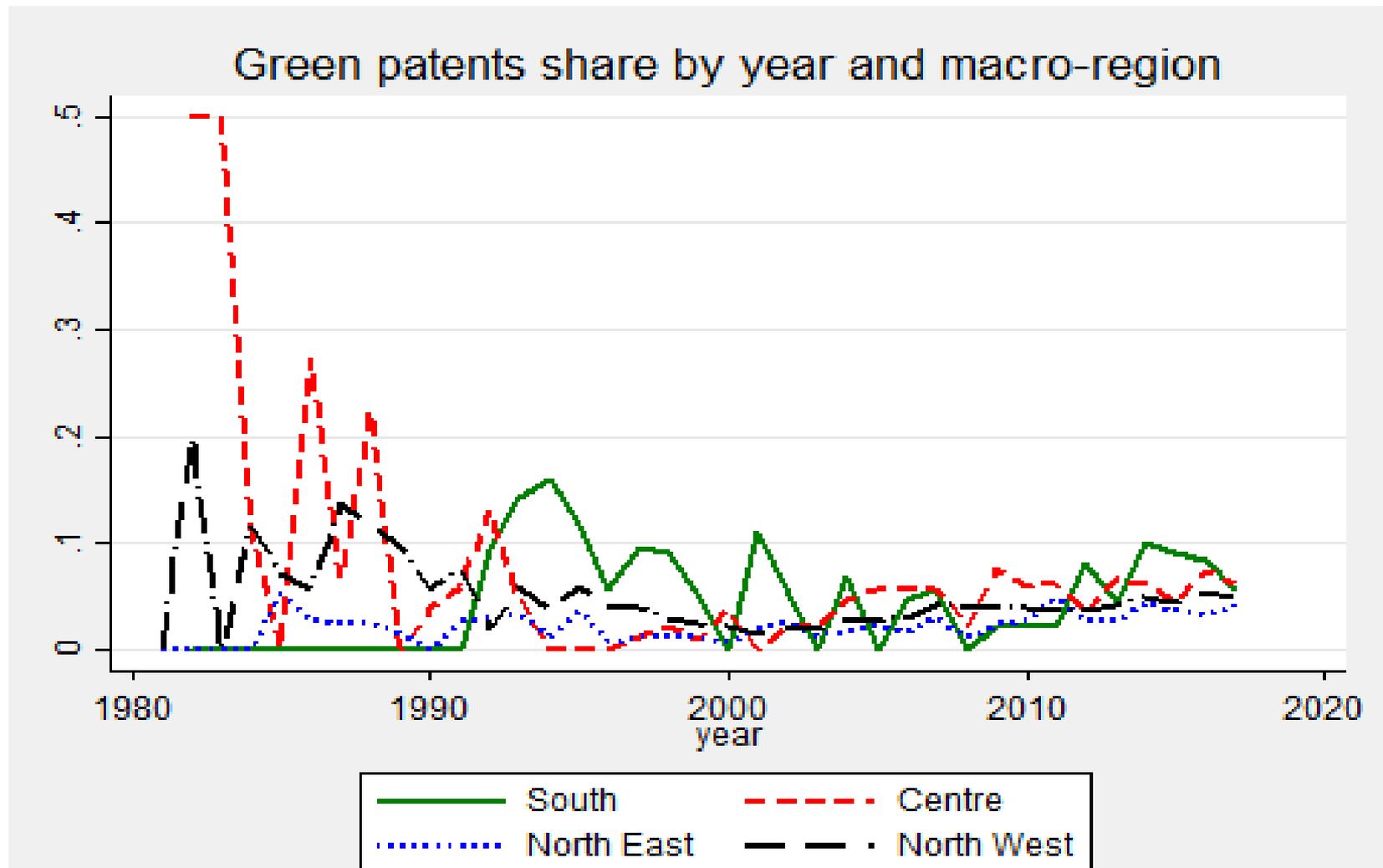
Cumulative patents green in Italy by IPC codes from 1981 to 2017



Green patenting by area

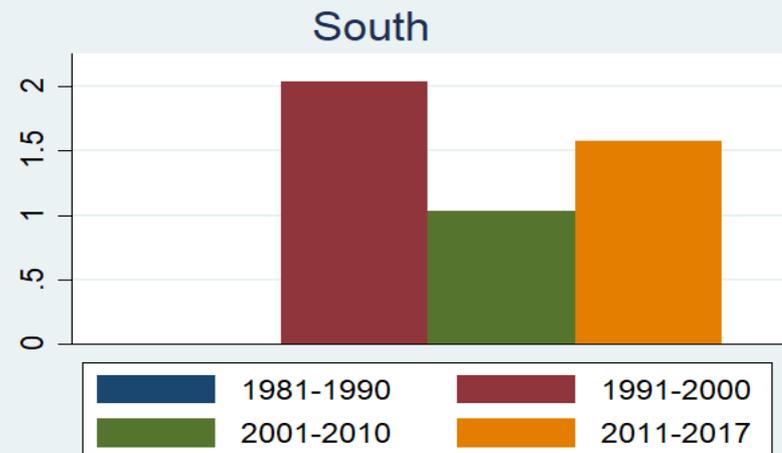
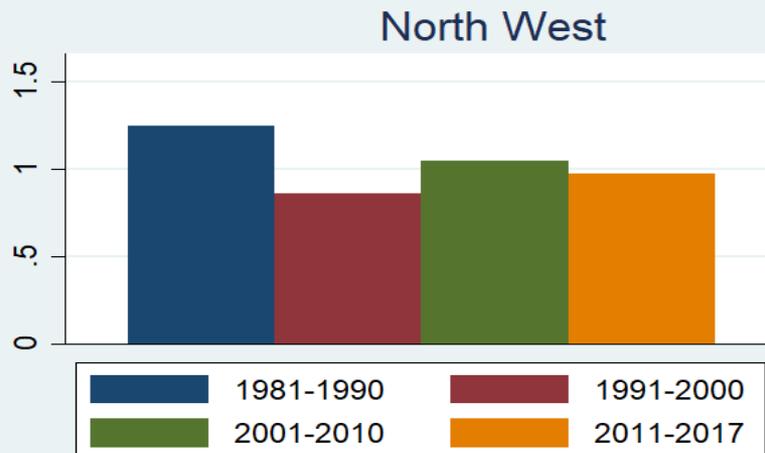
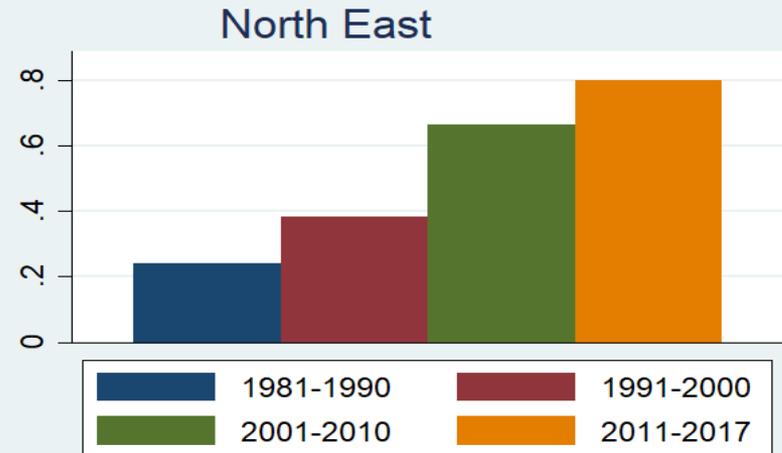
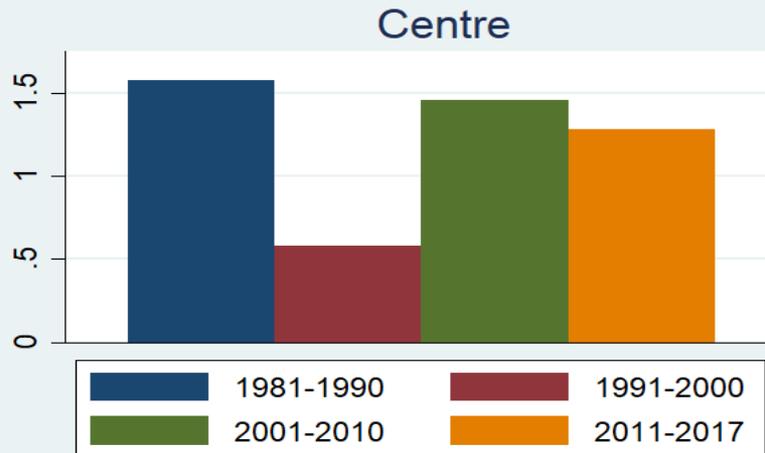


Green intensity in patenting by area



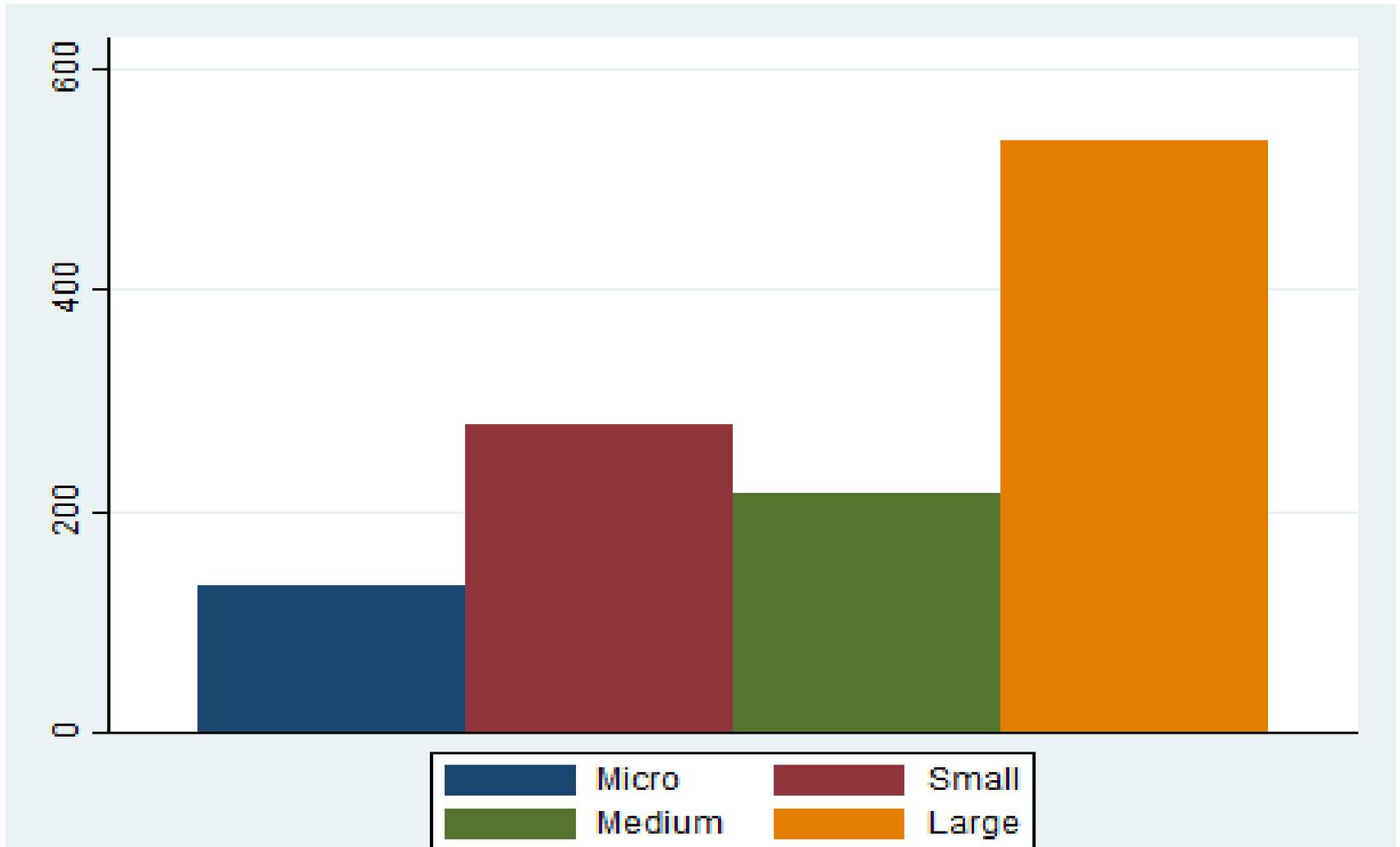
Specialization in green patenting

Balassa index by region and time



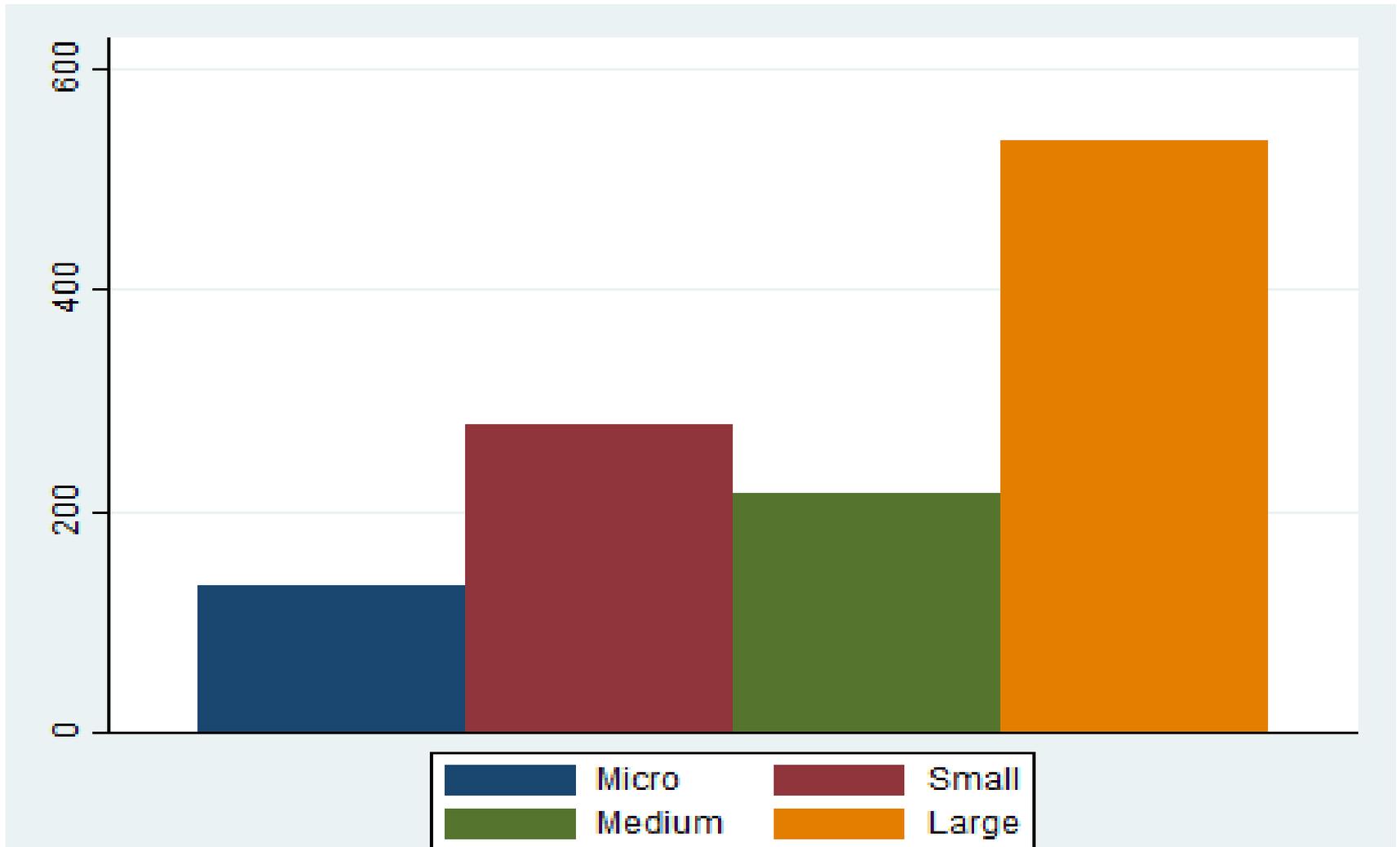
Green patents by firm size

Patenting accumulation from 1981 to 2017



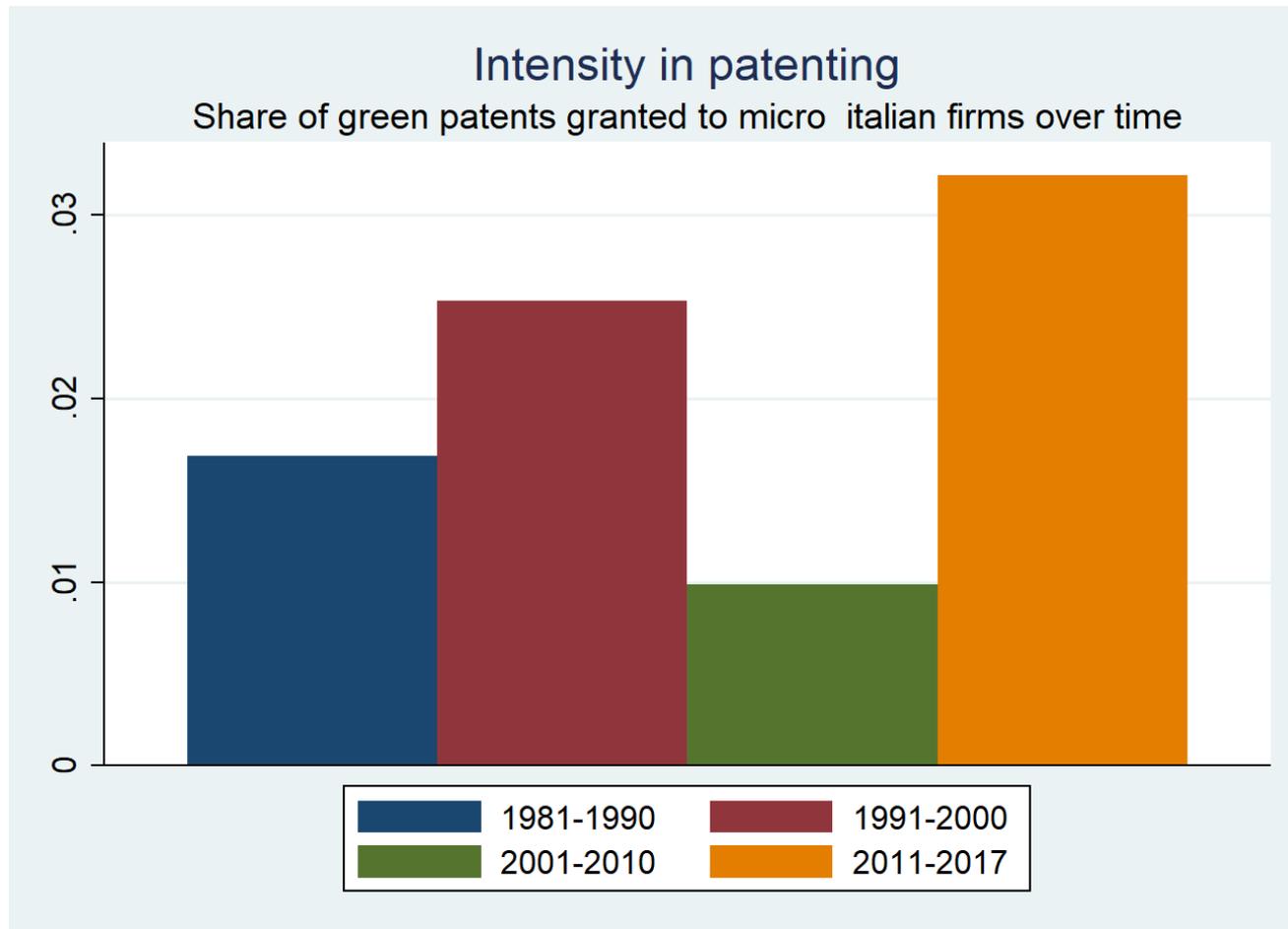
Green patents by firm size

Patenting accumulation from 1981 to 2017

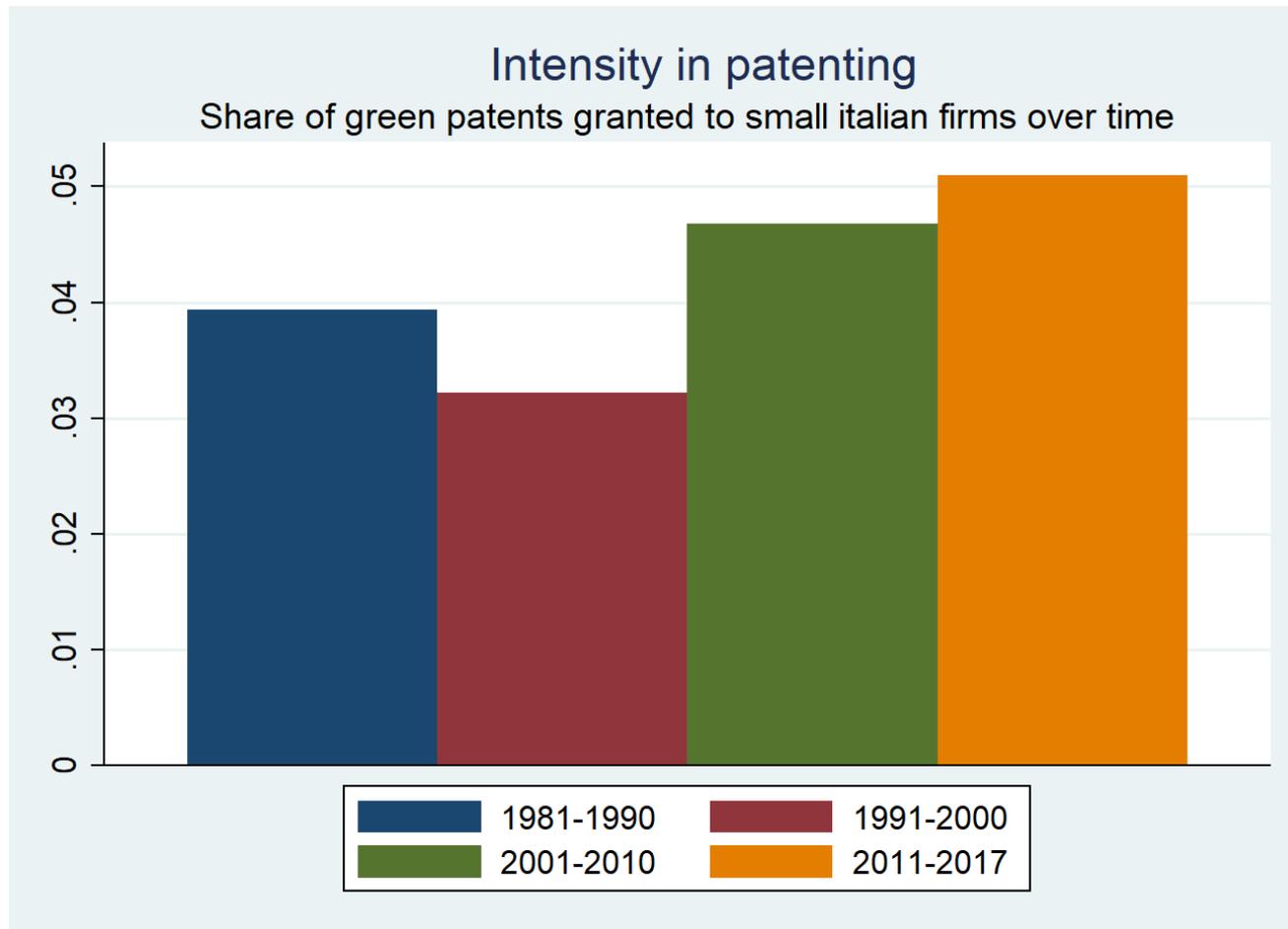


Green intensity in patenting over time

Micro-sized firms

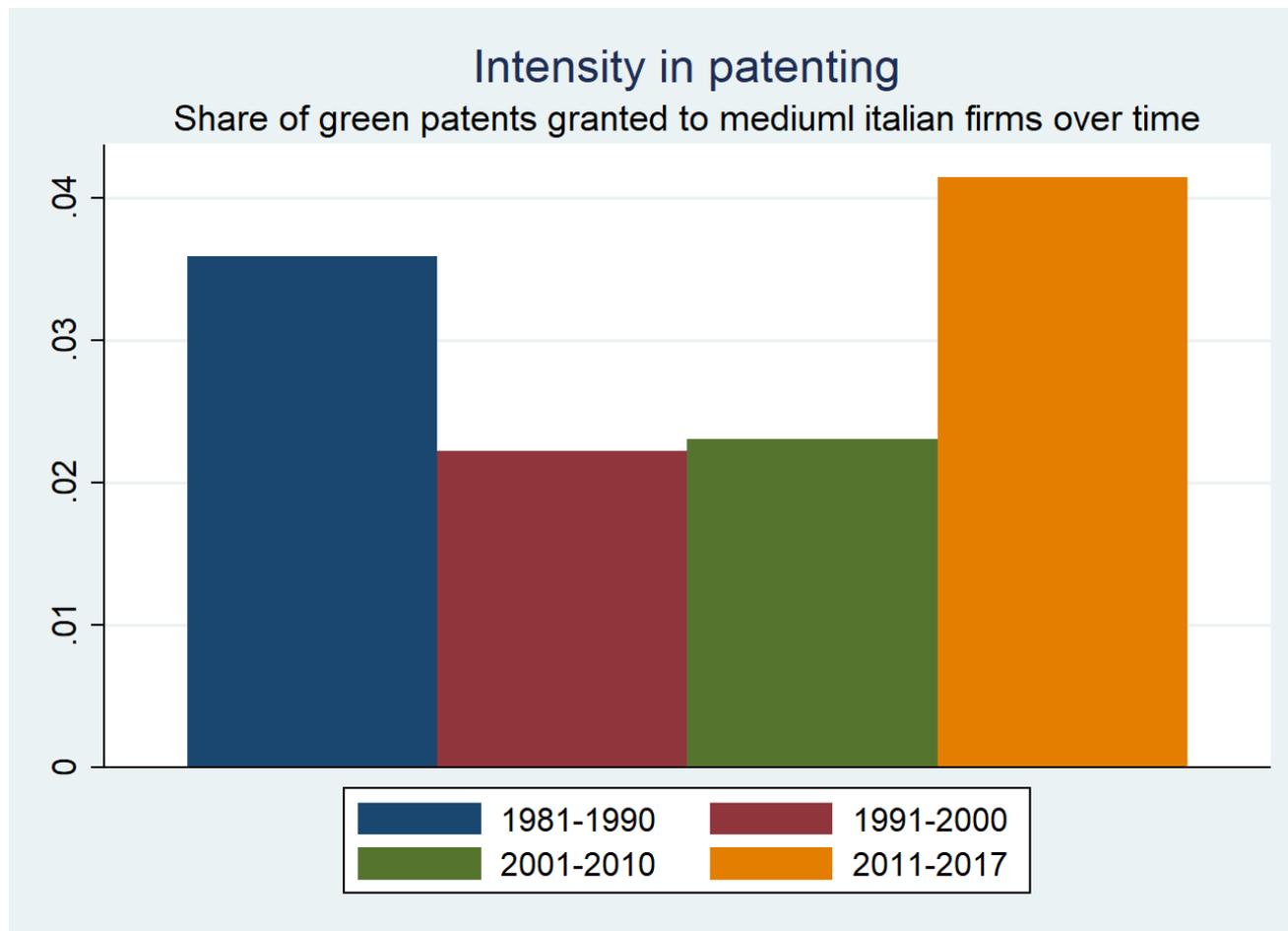


Green intensity in patenting over time small-sized firms



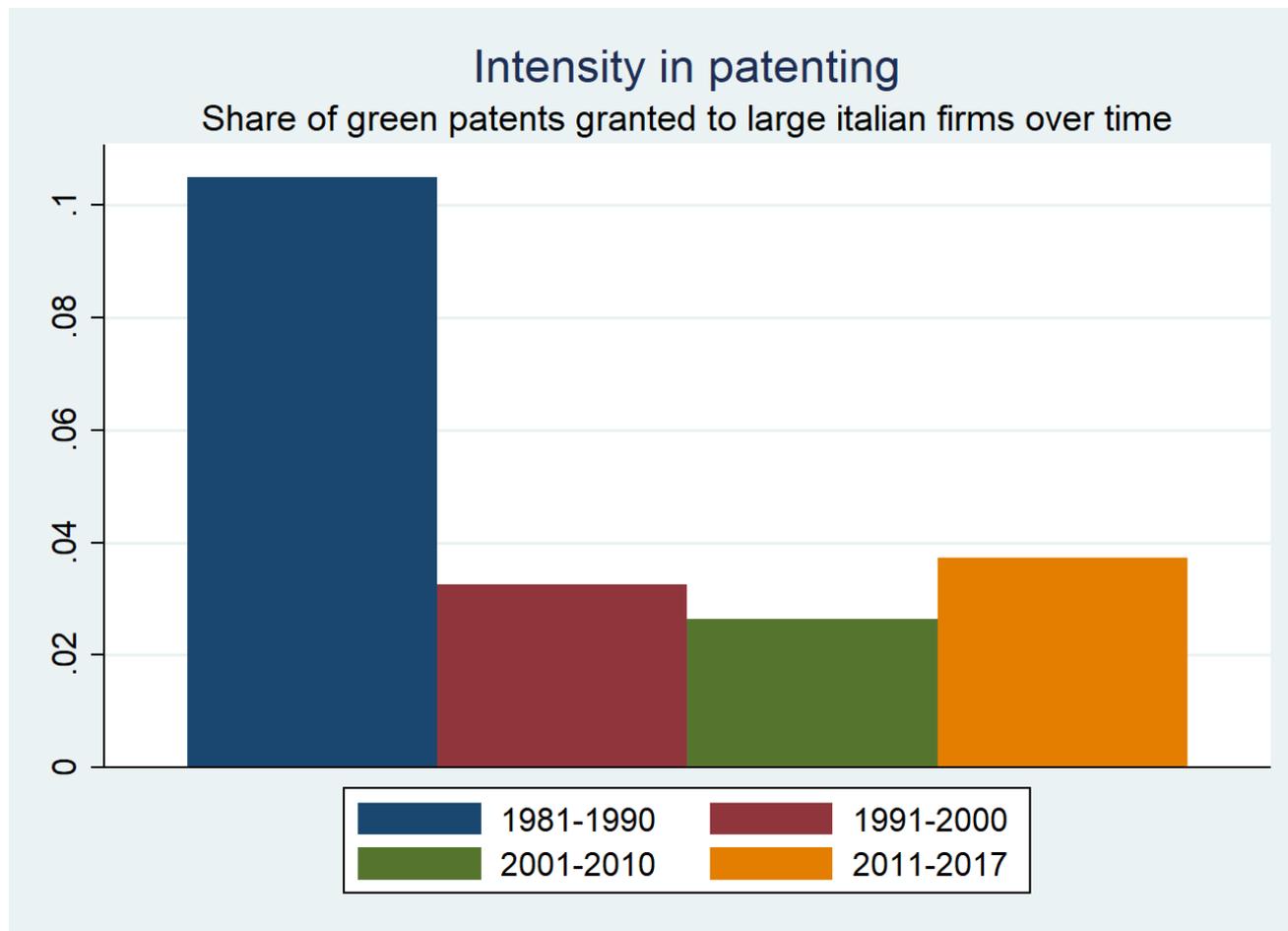
Green intensity in patenting over time

Medium-sized firms



Green intensity in patenting over time

Large-sized firms



Intensity in patenting by firm group

