Outline for a Bachelor/Master Thesis

Topic: Innovation assessment in patents and trademarks: A case study of firms

Context:

The progress of a society depends strongly on its capacity to innovate. Measuring innovation is therefore of particular importance. The main existing innovation indicators are based on patents, which are used for numerous analyses such as country comparisons or technology classifications. Yet, patents do not reflect all innovation activities – especially service sector innovation without technical content are not contained in patent analyses. This is critical as a large part of the value added is in the service sector. As an alternative to patents for innovation analyses, trademarks could be better suited as a data basis for innovation recording. The aim thus is to examine trademarks in relation to innovations.

The following aspects should be included in the thesis:

(1.) A literature review on trademarks and patents used as protection mechanisms for firms highlighting the advantages and disadvantages of patent or trademark protection, strategic implications and sector differences.

(2.) Introduction to the innovation field that should be assessed (e.g. robotics, artificial intelligence, biotechnology, medicine) with an explanation of the nature of the innovation as well as an assessment of the relevant firms in the market based on their patent and trademark applications.

(3.) Dependent on (2) an analysis of the active firms and their trademark and patent usage over time. The connection between patents and trademarks can be made based on text analyses (e.g. topic modelling), surveys or firm interviews.

(4.) Finally, the results of the analysis should be synthesized and discussed critically.

The thesis can be written in German or English.

Requirements:

Advanced knowledge in the field of innovation and programming is mandatory (and/or the motivation into acquire this knowledge)

Experience with SQL/ Python is of advantage but not mandatory.

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