Review of: "Strategic Citations in Patents: Analysis Using Machine Learning"

Mohd Shadab Danish[1]

1 Indian Institute of Management Raipur

Potential competing interests: No potential competing interests to declare.

The objective of this study is to investigate the correlation between patents and their citations by analyzing the level of similarity in innovative ideas, as reflected in the textual content of patent abstracts. Patents are crucial documentation of inventions, with patentees holding the associated rights. The impact of an inventor's innovation is directly proportional to the number of patents they create, and the citations received by those patents, which serves as an indication of their innovative capabilities. Existing assessment algorithms primarily rely on citation counts to evaluate the impact of inventors, yet they overlook the consideration of citation quality. It will greatly enhance the research if the author delves into the quality of citation comparisons before and after an inventor's departure from the organization, contributing valuable insights to the existing body of knowledge.

Few additional comments:

1. Provide a clearer explanation of the concept of strategic citations and how it is applied in the study.
2. Address the potential issue of reverse causality regarding the evidence of external influences on the rate of local citations.
3. Consider incorporating firm-level characteristics to account for their diverse impact on patent citations and control for potential heterogeneity.
4. Address how the study tackles the issue of considering the quality and authority of patents when assessing their importance, especially when they are cited by highly reputable patents or influential innovators.
5. Explore the feasibility of utilizing a network structure-based algorithm to examine the backward citation of patents before and after inventors leave their organizations.
6. Refer to the work by Feng et al. (2020) to incorporate multidimensional features into the patent citation network analysis, complementing the use of natural language processing (NLP) techniques to better understand cross-patent similarities.
7. Include a table in the data description section that presents a comprehensive list of variables used in the analysis.
8. Clarify the significance of analyzing the changes in knowledge flows resulting from inventors moving cities, ensuring that readers can derive meaningful insights from this analysis.
9. The paper would benefit from a more thorough and structured presentation, potentially requiring improvements in its organization and coherence.