

Sustainable business models for innovation and success: bibliometric analysis

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Abstract. In the ongoing world trends focusing on the ecological issue, corporate social responsibilities, sustainable development goals, the current business could not be competitive without the implementation of the innovations. Besides, the application of changes contributes to the relevant transformation of the business model, considering the worldwide trends. The paper deals with the analysis of the leading scientific trends in analysing of the sustainable business models and innovations. In the paper, the authors used the bibliometric analysis of the scientific papers from Web of Science and Scopus. The main limitation to select scientific papers were as follows: published for 2000-2019 years; the language of the paper – English; papers which contain keywords – sustainable, business model and innovations. For the analysis, the VOSviewer, Scopus and Web of Science tools were used by the authors. Tools from the scientific databases allowed to identify the main parameters of the scientific publications: quantity, dynamic, country, the most cited papers, etc. VOSviewer allowed visualising the main scientific clusters which analysed the sustainable business model. Considering the findings, the rapid increase of articles on the sustainable business model was in 2000. The authors identified 13 clusters; three of them had strong linking. The most significant cluster contained focused on innovations, the second – on corporate social responsibilities and environmental management, the third cluster – on cleaner production as a core element of a sustainable business model. The tendency of scientific investigation allowed concluding that sustainable business model could not be without a complex system of innovations, corporate social responsibilities and cleaner production.

1 Introduction

The extending of environmental issues and innovations in everyday life provoke the increasing relevant products and services. The stakeholders make decisions considering not only economic factors but also the social and ecological parameters. Such transformation of market and stakeholder's behaviour provokes the reorientation of companies' model, strategy

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and missions. In this case, the management of companies should transform their models from traditional to the sustainable business model.

Traditionally the scientists defined a sustainable business model as a model which orient not only for economic profit but focus on achieving sustainable development goals. In this case, some group of the scientists [1–3] highlighted that in this process, the information gap and investment in education were the core elements of a sustainable business model. The scientists in the papers [4–12] proved that the investment and the financial system had a significant impact on the implementation of a sustainable business model and innovations. From the other point of views, the scientists in the papers [13–17] proved that key elements of a sustainable business model were ecological innovations and energy efficiency technologies. Besides, the scientists in the papers [18–23] proved the linking between innovations, sustainable business model and country’s competitiveness. The scientists in the papers [24–29] proved that sustainable business model could not be realised without innovations. The results of the analysis showed that the scientists analysed sustainable business model from the environmental, economic and social point of views. The aim of the paper is analysing the main scientific clusters of investigating the issues of sustainable business model.

2 Results and Discussions

The analysis of the documents in Scopus proved that the number of documents which analysed the sustainable business model has been increasing from 2000 years. The pic of the documents was in the 2019 year. The rapid growth began in the 2015 year. Such a tendency was a result of extending of sustainable development goals among the business sector (Fig. 1).

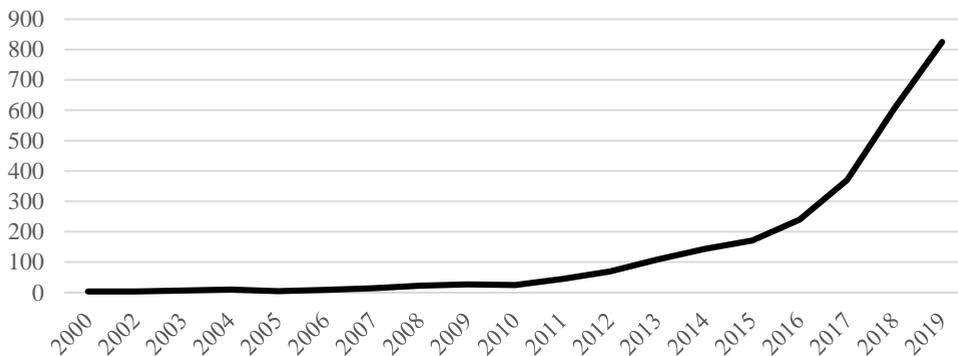


Fig. 1. The number of papers on the sustainable business model in Scopus

Sources: developed by the authors using Scopus Tools

The findings (Fig. 2) proved that mostly the scientists analysed the sustainable business model under the subject areas as follows: business, management and accounting (20%); environmental science (15%); engineering (13%); energy and social sciences (12%).

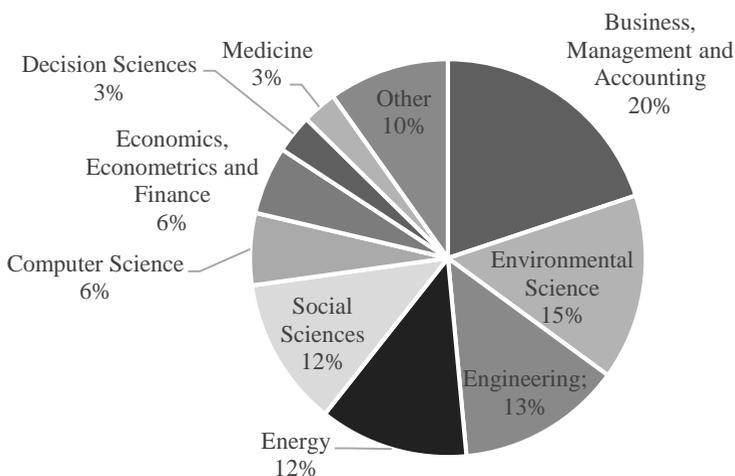


Fig. 2. The number of papers on the sustainable business model in Scopus

Sources: developed by the authors using Scopus Tools

Besides, most papers were published in the high-ranked scientific journals with high SNIP, SJR and CiteScore (Table1) as follows:

- Journal of Cleaner Production.
- Sustainability Switzerland.
- Procedia CIRP.
- Biopreservation and Biobanking.
- Resources Conservation and Recycling.
- Business Strategy and The Environment.
- Journal of Business Ethics.
- Energy Policy.
- Energies.
- Organization and Environment.
- Corporate Social Responsibility and Environmental Management.
- International Journal of Business Excellence (Table 1).

Table 1. Top 15 Journal which published papers on the sustainable business model

| Title of the Scientific Journal | Numbers of Paper | SNIP | CiteScore | SJR |
|---------------------------------------|------------------|-------|-----------|-------|
| Journal of Cleaner Production | 352 | 2.308 | 7.32 | 1.602 |
| Sustainability Switzerland | 222 | 1.169 | 3.01 | 0.549 |
| Procedia CIRP | 56 | 1.192 | 2.15 | 0.725 |
| Biopreservation and Biobanking | 31 | 0.844 | 1.74 | 0.891 |
| Resources Conservation and Recycling | 26 | 2.258 | 6.82 | 1.541 |
| Business Strategy and The Environment | 25 | 2.488 | 7.93 | 2.166 |
| Journal of Business Ethics | 23 | 2.006 | 4.46 | 1.86 |
| Energy Policy | 21 | 1.786 | 5.45 | 1.988 |

| | | | | |
|--|----|-------|------|-------|
| Energies | 19 | 1.156 | 3.18 | 0.612 |
| Organization and Environment | 16 | 2.609 | 7.51 | 2.605 |
| Corporate Social Responsibility and Environmental Management | 15 | 2.372 | 7.18 | 1.67 |
| International Journal of Business Excellence | 15 | 0.569 | 0.95 | 0.277 |

Sources: developed by the authors using Scopus Tools

With the purpose to establish the visualising mapping of the scientific schools on sustainable business model 2 706 paper which were published 2000-2019 years and indexed by Web of Science and Scopus. For analysing the authors used VOSviewer.

The analysis of the co-occurrence network of scientists (Figure 3) who were investigating the sustainable business model issues allowed allocating six most significant cluster of the scientific schools. One of the authoritative backgrounds on that issue had Bocken N. (24 papers), Evans S. (27 documents) and Svensson G. (28 articles) [30].

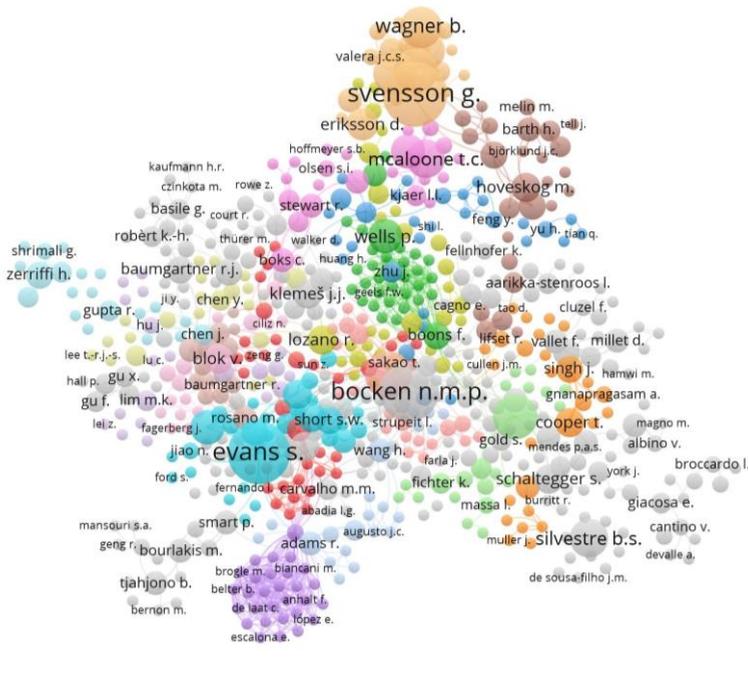


Fig. 3. The co-occurrence network of scientists who were investigating the sustainable business model issues

Sources: developed by the authors using VOSviewer

At the same time, the National Natural Science Foundation of China was the biggest sponsor of investigation on the sustainable business model. But the findings from Fig. Three proved that most scientists from Europe analysed issues, as mentioned above. The primary funding sponsors who support the investigations on the sustainable business model showed in Table 2.

At the same time, the new directions in analysing of the sustainable business model – the impact of digital transformation on the business model. Besides, the most analysed trends were sustainable development issues, product design and innovations.

3 Conclusion

The findings proved that sustainable business model as a scientific direction begins developing from the 2000 year. The pic of papers was in 2015 years. The results allowed allocating main scientific clusters which analysed the sustainable business model. Thus, three among 13 clusters had strict linking. The first clusters focused on innovations from a different point of views (social, environmental, sustainable). The second cluster combined the scientists who analysed the corporate social responsibilities and environmental management as a core element of a sustainable business model. The third biggest group merged the researchers who were investigating cleaner production as a driver of sustainable business model.

At the same time, one of the paper's limitation was not broad combinations of keywords. Thus, for further investigation, it would be necessary to extend the keywords' combos. Besides, the in-depth analysis of co-citation would allow identifying the linking between scientific schools and scientists' cooperation in further investigation.

Funding: This research was funded by the grant from the Ministry of Education and Science of Ukraine (Nos. g/r 10117U003930, 0118U003574).

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