ARCHETYPES OF CIRCULAR BUSINESS MODELS IN THE CONSTRUCTION INDUSTRY SUPPLY CHAIN

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Abstract

The construction industry is recognized as one of the main generators of waste when compared to other industrial sectors. Surprisingly, there are few studies that address the circular economy in the construction industry (Rose & Stegemann, 2018). Thus, aiming to fill this gap, this article’s objective is to identify in the literature about circular supply chain the concepts of archetypes of circular business models in the construction industry, including technology, social and organizational groups, through a systematic literature review (SLR). We performed the SLR using the Web of Science and Scopus databases, which resulted in 487 articles. The articles’ abstracts were read to filter those who would have all the content read, considering the proposed objective, then we performed the content analysis of the resulting articles. We have identified that three archetypes (create value from ‘waste’, maximize material and energy efficiency, and substitute with renewables and natural processes) are present in construction industry circular supply chains, forming the technological group. This indicates a direction of business models in the construction industry, focusing on one of the groups of archetypes. However, it is crucial to equally assess the archetypes of the social and organizational groups for a holistic and sustainable approach.

Keywords: circular economy, sustainable business model, circular supply chain, construction industry, archetypes.
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Purpose: The construction industry is recognized as one of the main generators of waste when compared to other industrial sectors. Surprisingly, there are few studies that address the circular economy in the construction industry (Rose & Stegemann, 2018). Thus, aiming to fill this gap, this article's objective is to identify in the literature about circular supply chain the concepts of archetypes of circular business models in the construction industry, including technology, social and organizational groups, through a systematic literature review.

Research Approach: We performed a systematic literature review using the Web of Science and Scopus databases. A Boolean search was performed using the following keywords and connectors: "sustainable business model*" OR "circular economy" AND "construction industry". In addition, we selected the "article" filter as the only valid document and excluded the year 2023. Thus, 487 articles were found, which were statistically analyzed with the aid of the Bibliometrix software. After this step, the abstracts were read to filter those who would have all the content read, considering the proposed objective. Then, with the help of Atlas/ti software, we performed the content analysis of the resulting articles.

Findings and Originality: The archetypes of sustainable business models are characterized by Bocken (2014), totaling eight archetypes: create value from ‘waste’, maximize material and energy efficiency, substitute with renewables and natural processes, deliver functionality rather than ownership, adopt a stewardship role, encourage sufficiency, re-purpose the business for society/environment, and develop scale-up solutions. The findings of this article are related to the conciliation of knowledge about circular supply chains in the Construction Industry (CI) and archetypes of sustainable business models. Therefore, this article has identified that the first three archetypes mentioned above are present in CI’s circular supply chains, forming the technological group. This indicates a direction of business models in the construction industry, focusing on one of the groups of archetypes. However, it is crucial to equally assess the archetypes of the social and organizational groups for a holistic and sustainable approach.

Research Impact: The impact of this research resides in the systematic review of the archetypes of business models in the construction industry, which contributes to the elaboration of circular business models in this sector, as well as the definition of research gaps for future studies that may contribute to the evolution of knowledge on the subject.

Practical Impact: The understanding and application of circular business models in the construction industry need to be deepened. This article has assisted in this understanding, highlighting the main areas of business models and the need to delve deeper into the social and organizational archetypes. Through the analysis of aspects of archetypes and business models, a joint approach is sought to enable a better functioning of the construction industry circular supply chain.

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