**How the Circular Economy can become a fundamental framework in transforming the Welsh Construction Industry: From a Small Firm Perspective.**

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**Abstract**

The term Circular Economy came into light for the first time in a study carried out by Pearce and Turner, (1990), which focused on the links between the environment and economic activities, primarily looking at a closed-loop material flow. Since then, the concept has become largely incorporated in a plethora of academic research. However, although circularity appears to have substantial influence, specific difficulties arise during its implementation that have become important considerations in construction, (Adams et al, 2017). The Construction industry is reported to be one of the most probable industries globally to embrace large circular values, (Lee et al, 2023). It has been suggested that the circular economy can contribute to the triple bottom line, originally sought as the future of sustainable development, which can enhance the quality of environmental indicators, promoting economic accomplishment and achieving social equity, (Wen et al, 2020). However, the triple bottom line perspective was introduced around the same time as sustainable construction meaning that the framework has become undermined by a tailored focus, (Slaper and Hall, 2011). Beyond the triple bottom line concept, the emergence of circular construction has become a fundamental transition towards sustainable behaviours, (Giorgi et al, 2022). circular construction, originally an expansion of the circular economy, has emerged as a technique to deliver construction projects, (Wuni, 2022). The concept has been considered the most sustainably construction-based method that has the potential to create significant value without depleting natural resources and contributing to climate change initiatives, (Khadim et al, 2023). Therefore, this paper proposes a multi-dimensional focus that requires the shift away from traditionality, and the embrace of sustainable change. The paper proposes a conceptual framework that can be used to assist in enhancing a bottom-up approach to sustainability, with adaptation of the circular economy framework. Thus, it’s important to understand how smaller businesses can undertake circular strategies without financial burden and accumulating extra cost for the typical small construction firm, (Ramos and Martinho 2021). Despite active encouragement for the deployment of a circular economy introduction and its priority within the construction industry, there is still little research in the topic area and produces a barrier in encouraging the smaller construction firms to move away from the conventional linear economic approach, (Hossain et al, 2020).

**Papers Aim:** To critically understand how the Circular Economy can become a fundamental concept in transforming change from a bottom-up perspective in the Welsh Construction Industry.

**Objectives:**

1. To critically evaluate the current role the circular economy has in the Welsh construction industry from a small firm perspective.
2. To evaluate the critical role small construction firms, play in the Welsh economy.
3. To understand practically the implications that are present in the current built environment.
4. To propose a conceptual framework that considers the implications and opportunities for small firms in Wales to embrace sustainable development.

The primary study involved in-depth semi-structured interviews with small firms that were operating in the Welsh Construction Industry only. Recent studies investigating the sustainable construction paradigm has focused on the ‘new normal’ as identified by Kulatunga et al, (2023). Therefore, this research takes a qualitative approach, due to its generation of narratives and consideration of how a particular context may influence individual perspective experiences. It was identified beforehand that information tends to be loosely outlined, using an unstructured format to interpret key data, (Fellows and Liu, 2022). To establish the best questions to enable full understanding of what needed to be achieved from the study, all questions were industry tested with an experienced contractor who had worked across the industry in the UK. Qualitative findings have shown that small firms are aware of the sustainability challenges that are impacting their everyday work, but the main barrier arising is the aspect of financial implications, fragmentation, and government support. There was very limited knowledge of the circular economy, this was evident in the extensive discussions undertaken, but when explained and illustrated to respondents there was a large interest in adopting the approach if adapted to a smaller perspective and supported with fundamental tools to embrace the change with ease.

To conclude, the paper has enhanced the broader perspective around the ways in which the circular economy can become a fundamental tool in enhancing sustainability in small Welsh construction firms. The proposed framework has enabled some clearer understanding of ways in which sustainability can become implemented from a bottom-up approach proposing fundamental change initiatives to embracing better sustainable practices. The next steps to understand the influence of this framework is to use it closely with the small firms involved in this study and embrace the next steps through a case study research initiative.

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