Barriers of Circular economy: Empirical evidence from Listed Manufacturing Sector in Sri Lanka

Gayara Jayasinghe[1], Hiranya Dissanyake[2]
Wayamba University of Sri Lanka[1,2]
gayaraj@yahoo.com, hiranya@wyb.ac.lk

In this 21st century, most companies in the world are concerned about the impact on the environment beyond the profit objective. Accordingly, to achieve sustainable development goals in 2030, it is essential to consider that goals related to water, energy, climatic actions, and life on the land can be achieved by implementing circular economy practices. Unfortunately, a dearth of studies considers this area in the world, and according to researchers' knowledge, there is no comprehensive study conducted to identify barriers to a circular economy in Sri Lanka. Therefore, this study aims to identify the barriers to implementing a circular economy under institutional, Financial, Infrastructural, societal, and technological sectors in listed manufacturing entities in Sri Lanka. A quantitative, descriptive study was conducted using 86 samples from listed companies belonging to capital, materials, Food, Beverage and tobacco, consumer durables, and apparel sectors. This study collects data using an online questionnaire from sustainability officers, and data analysis is conducted using frequency analysis. The findings of this study suggest that 44.2% of companies face limited attention in the end stage of life designing current products under technological barriers, 37.2% consider recycled materials more expensive than others under financial barriers, 27% face trust issues in exchanging information under the institutional barrier and 19.8% faces lack of awareness under the societal barrier. In addition, 20% of companies face disturbance of current institutions designed by unequal fields under the infrastructural barrier. The findings of this study are essential for the policymakers to introduce policies to overcome the challenges faced by the companies and implement them in organizations to achieve SDGs six, seven, thirteen, fourteen, and fifteen in 2030 through the improvement of the level of environmental sustainability in organizations.

Keywords: *Barriers, Circular Economy, Manufacturing, Sri Lanka, Sustainability Development Goals (SDG)*

Barriers of Circular economy: Empirical evidence from Listed Manufacturing Sector in Sri Lanka

Circular Economy-"The concept of the circular economy proposes new patterns of production, consumption and use, based on circular flows of resources" (Masi et al., 2018 ,p.5)

Purpose To examine the barriers implementing circular economy under institutional, Financial, Infrastructural, societal, and technological sectors in listed manufacturing entities in Sri Lanka

Methodology
Table 1

| Research Philosophy	Positivism
Research Approach	Deductive
Research Strategy	Survey
Methodological Choice	Mono Method Quantitative
Sample	Capital goods, materials, food beverage, Tobacco and consumer durables and apparels sectors.(86 Respondents received out of 109 questionnaires)
Unit of Analysis	Sustainability Officers
Data Collection	Questionnaire Survey
Data Analysis Method	Reliability Analysis, Frequency Analysis
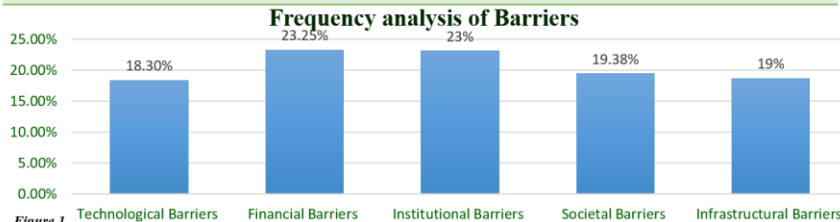
Figure 1

Gayara Jayasinghe[1], Hiranya Dissanyake[2] Wayamba University of Sri Lanka[1,2]

Results
• Ensured Reliability and Validity

Table 2

Barrier	Highly Frequent Barrier
Technological	Most companies face limited attention in the end stage of life designing current products (44.2%)
Financial	Most companies Faces recycled materials are more expensive than others(37.2%)
Institutional	Most Companies face trust issues in exchanging information (27%)
societal	Most Companies face a lack of awareness(19.8%)
Infrastructural	Most companies' faces disturbance of current institutions designed by unequal fields (20%)

Conclusion

Table 3

Implications	Future Research
The findings of this study are essential for the policymakers to introduce policies to overcome the challenges faced by the companies. Findings help to implement them in organizations to achieve SDGs 06,07,13,14,15 in 2030 through the improvement of the level of environmental sustainability in production and consumption.	Researchers can conduct Qualitative and mixed method researches

8