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Financial Profitability Model for Sustainability in Latin America's Circular Economy: A Systemic Analysis

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Abstract

A systematic review was carried out on the production and publication of research papers related to the study of the variables Financial Profitability Model and Circular Economy, the PRISMA approach (Preferred Reporting Items for Systematic reviews and Meta-Analyses). The purpose of the analysis proposed in this document was to know the main characteristics of the publications registered in the Scopus and WoS databases and their scope in the study of the proposed variables, achieving the identification of 37 publications in total. Thanks to this first identification, it was possible to refine the results through the keywords entered in the search button of both platforms, which were FINANCIAL PROFITABILITY MODEL, CIRCULAR ECONOMY, reaching a total of 14 documents, excluding duplicates and those that did not meet the analysis criteria. From this analysis, it is expected to know the contributions of the scientific community to the study of profitability models in the financial area of companies, for sustainability through circular economy practices at the Latin American level. However, the study was carried out from research without discriminating country of origin, in order to analyze the perspective of the business sector in different countries at a global level.

Keywords: *Financial Profitability Models, Sustainability, Circular Economy.*

1. Introduction

Financial profitability in the circular economy is a fundamental concept to foster sustainability in Latin America, where the intersection of economic growth and environmental conservation plays a fundamental role. The approach that the circular economy brings with it highlights those regenerative and restorative aspects which allow the use of resources, leaving behind those traditional economic mechanisms and opening the possibility of incorporating more environmentally friendly models for Latin American economies. This content, which is characterized by a high range of natural resources and rich biodiversity, is in constant struggle with economic challenges and the unlimited resources we have with the environment. Integral power, financial profitability,

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encompasses a new framework of the circular economy, which has given rise to a strategic imperative of global interest.

The recent need for different nations to impart a balance in economic development, Latin America aims to be able to renew its economic policies since these circular economies opt for a development path where the environmental factor is a topic of interest, as well as in the optimization of resources and achieve minimization of the environmental impact present in the large economies. Achieving financial profitability in this context of circular economies in this geographical region requires the implementation of new business models where innovation is the main axis, technological advances and new development policies that comprehensively support and can promote new sustainable practices. Investment in research and development, coupled with strategic collaborations between governments, businesses and communities, can catalyse the transition to a more circular and financially viable economy.

Likewise, financial profitability models are based on the premise of being able to play a fundamental role in the transformation and renewal of new economic models, which seeks to promote sustainability in order to incorporate circular economy principles into their strategies and investments. By allowing companies and the productive and economic sectors of economies in Latin America to sponsor these circular practices and integrate environmental, social and governance criteria into financial decision-making, based on this context, these financial models contribute to the creation and renewal of new ecosystems, where profitability is aligned with the sustainable development goals.

Taking into account the context imparted by the circular economy in financial profitability models, this is not without challenges since Latin America, along with its vast economic diversity, requires the implementation of personalized approaches which seek to improve financial profitability in circular economies. From sustainable agriculture and a mining sector that is much more responsible and friendly to ecological manufacturing processes, the multiple opportunities offered by this circular economic model for companies where financially increase their productivity and net income and at the same time achieve a contribution to the ecological well-being of the regions of this continent. This comprehensive integration of financial profitability and sustainability not only safeguards natural resources, but also positions Latin America as a global leader in responsible economic practices, attracting international investment and fostering a resilient and equitable future for the region.

2. General Objective

To analyze, from a bibliometric and bibliographic perspective, the production of research papers on the variables Financial Profitability Model and Circular Economy, published in high-impact journals indexed in the Scopus and Wos databases by Latin American institutions.

3. Methodology

The present research is qualitative, according to Hernández, et al., qualitative approaches correspond to the investigations that carry out the procedure of obtaining information to review and interpret the results obtained in these studies; To do this, it searched for information in the Scopus and Wos databases using the words FINANCIAL PROFITABILITY MODEL and CIRCULAR ECONOMY (2015)

Scopus

TITLE-ABS-KEY (financial AND profitability AND model, AND circular AND economy) AND PUBYEAR > 2016 AND PUBYEAR < 2023

Wos

Results for FINANCIAL PROFITABILITY MODEL, CIRCULAR ECONOMY (All Fields) and 2022 or 2021 or 2018 or 2019 or 2020 (Publication Years)

3.1 Research design

The research design proposed for the present research was the Systematic Review that involves a set of guidelines to carry out the analysis of the collected data, which are framed in a process that began with the coding to the visualization of theories. On the other hand, it is stated that the text corresponds to a descriptive narrative since it is intended to find out how the levels of the variable affect; and systematic, because after reviewing the academic material obtained from scientific journals, theories on knowledge management were analyzed and interpreted. (Strauss & Corbin, 2016) (Hernandez, Baptista, & Fernandez, 2015)

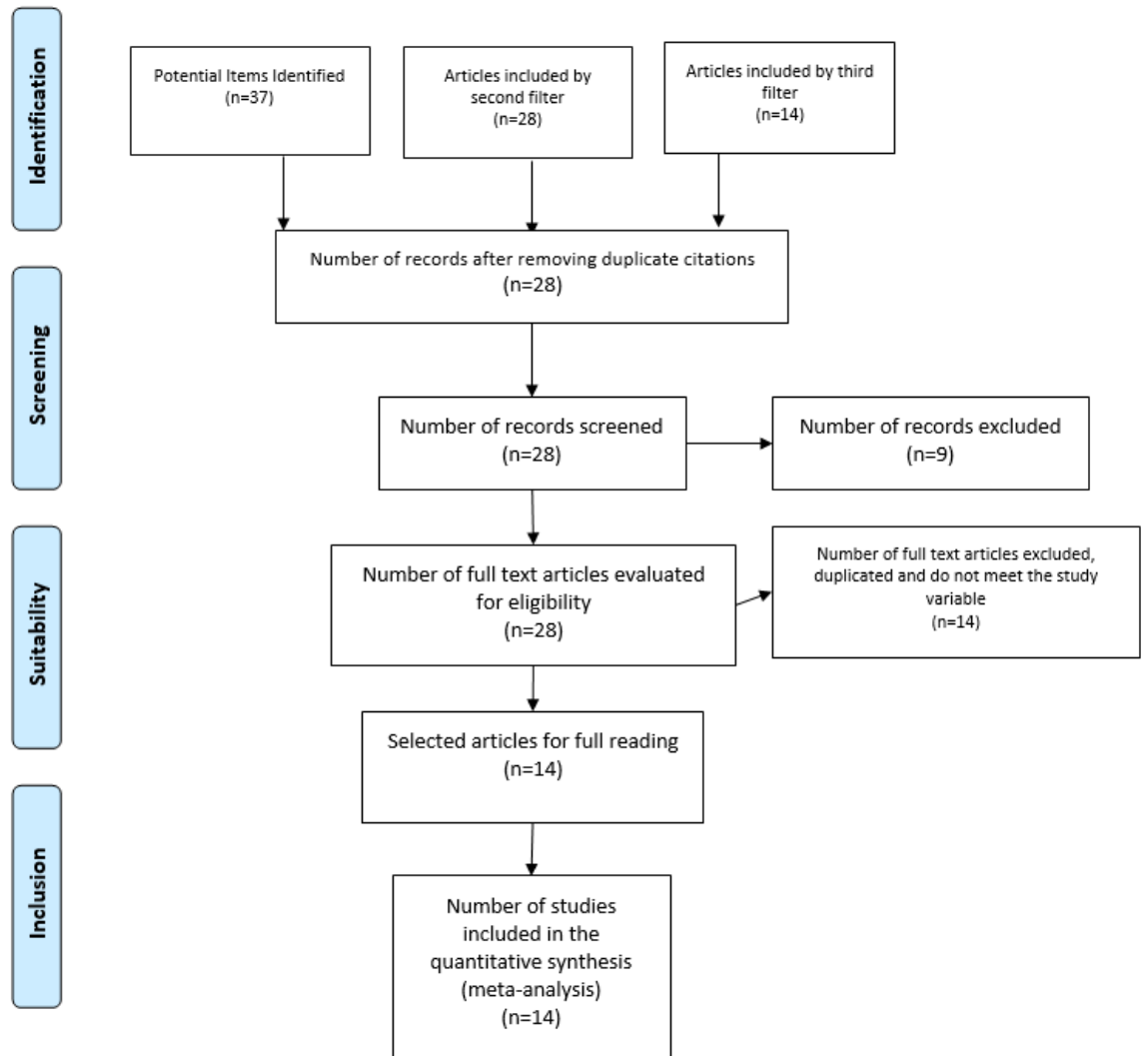


Figure 1. Flowchart of a systematic review carried out under the PRISMA technique (Moher, Liberati, Tetzlaff, Altman, & Group, 2009)

Source: Authors' own creation; Based on the proposal of the Prisma Group (Moher, Liberati, Tetzlaff, Altman, & Group, 2009)

4. Results

Table 1 shows the results after applying the search filters related to the methodology proposed for this research, after recognizing the relevance of each of the referenced works.

Table 1. List of articles analysed

No	RESEARCH TITLE	AUTHOR/YEAR	COUNTRY	TYPE OF STUDY	INDEXING
1	Sustainability assessment of circular economy over time: Modelling of finite and variable loops & impact distribution among related products	Schaubroeck, T., Gibon, T., Igos, E., & Benetto, E. (2021).	LUXEMBOURG	Qualitative	Scopus
2	Application of sharing economy to address shortage of medical equipment in covid-19 pandemic	Ashraf, A. M., & Abdul-Kader, W. (2020).	CANADA	Qualitative	Scopus
3	A Metric for Quantifying Product-Level Circularity	Linder, M., Sarasini, S., & van Loon, P. (2017)	SWEDEN	Quantitative	Scopus
4	The management of Industry 4.0 technologies and environmental assets for optimal performance of industrial firms in Malaysia	Ali, Q., Parveen, S., Yaacob, H., & Zaini, Z. (2022).	MALAYSIA	Quantitative	Scopus
5	Material flow cost accounting (MFCA) for the circular economy: An empirical study of the triadic relationship between MFCA, environmental	Nishitani, K., Kokubu, K., Wu, Q., Kitada, H., Guenther, E., & Guenther, T. (2022).	JAPAN, GERMANY	Quantitative	Scopus

	performance, and the economic performance of Japanese				
6	Environmental sustainability and service quality beyond economic and financial indicators: A performance evaluation of Italian water utilities	D'Inverno, G., Carosi, L., & Romano, G. (2021)	BELGIUM, ITALY	Qualitative	Scopus
7	CIRCULAR ECONOMY IN RELATION TO FINANCIAL DATA	Vlčková, M. (2022).	CZECH REPUBLIC	Qualitative	Scopus
8	The effects of circular economy initiative implementation on business performance: the moderating role of organizational culture	Kwarteng, A., Simpson, S. N. Y., & Agyenim-Boateng, C. (2022).	GHANA	Qualitative	Scopus
9	Circular economy: A review from business models and corporate social responsibility	Melendez, J.R., Delgado, J.L., Chero, V., Franco-Rodríguez, J. (2021)	ECUADOR	Qualitative	Scopus
10	Assessment of Circular Economy within Portuguese Organizations	Fonseca, L. M., Domingues, J. P., Pereira, M. T., Martins, F. F., & Zimon, D. (2018).	PORTUGAL, POLAND	Quantitative	WOS
11	Drivers and barriers to circular economy implementation An explorative	Agyemang, M., Kusi-Sarpong, S., Khan, S. A., Mani, V.,	GHANA, FRANCE, PAKISTAN,	Qualitative	WOS

	study in Pakistan's automobile industry	Rehman, S. T., & Kusi-Sarpong, H. (2019).	UNITED ARAB ISLANDS		
12	Briquettes production from green coconut shells: technical, financial, and environmental aspects	Clasen, A. P., Bonadio, J. C., & Agostinho, F. (2022)	BRAZIL	Quantitative	WOS
13	Noncooperative Game Theory To Ensure the Marketability of Organic Fertilizers within a Sustainable Circular Economy	Cobo, S., Fengqi, Y., Dominguez-Ramos, A., & Irabien, A. (2020).	UNITED STATES, SPAIN	Qualitative	WOS
14	Green product innovation: A means towards achieving global sustainable product within biodegradable plastic industry	Moshood, T. D., Nawanir, G., Mahmud, F., Mohamad, F., Ahmad, M. H., AbdulGhani, A., & Kumar, S. (2022).	MALAYSIA	Quantitative	WOS

Source: Authors' own creation

4.1 Co-occurrence of words

Figure 2 shows the relationship between the keywords used to search for the study material for the systematic analysis proposed for this research.

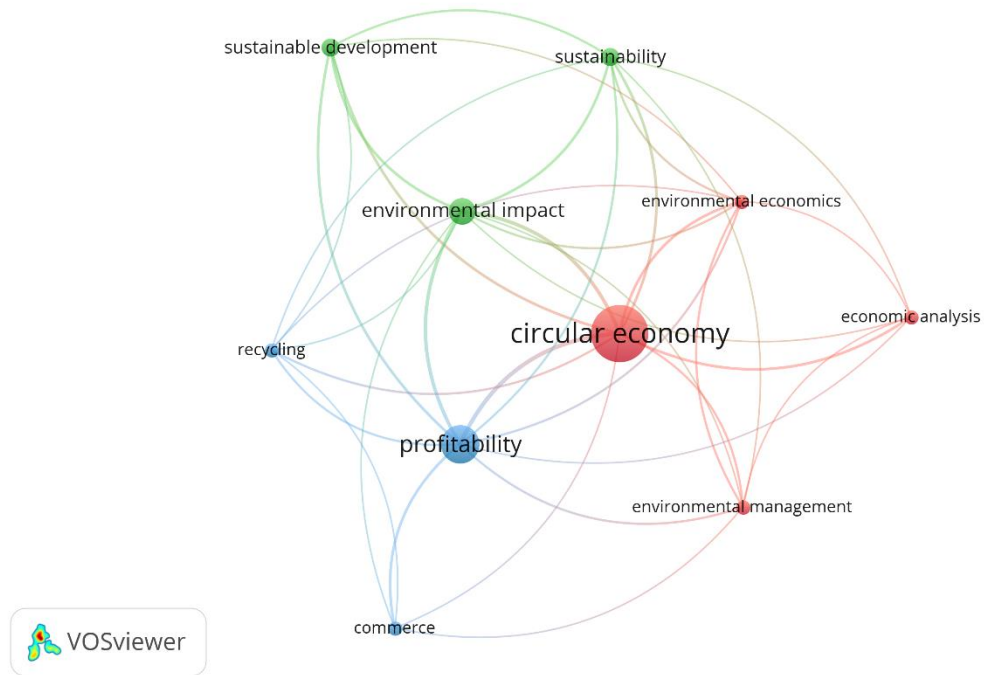


Figure 2. Co-occurrence of keywords.

Source: Authors' own creation

Figure 2 shows the most frequently used keywords and their correlation with research on topics associated with the problems of Financial Profitability Model and Circular Economy. In this way, it is possible to affirm that Circular Economy constitutes the central axis of the research identified for the analysis developed in this article. directly related to research in Environmental Impact, Environmental Economics, Data Analysis, Recycling, Sustainable Development, Sustainability, among others, The circular economy in Latin America has gained relevance as a comprehensive approach to address the economic and environmental challenges facing the region. Governments in the region are beginning to implement policies and regulations that encourage the adoption of circular practices. This includes tax incentives, subsidies, and regulations that promote extended producer responsibility and the recycling economy. Companies that adopt circular principles can improve their competitiveness by reducing operating costs, minimizing risks related to resource scarcity, and responding to growing consumer demand for sustainable products. Although significant progress has been made, challenges remain, such as the need for adequate infrastructure, public education and awareness, and the effective implementation of circular policies. The circular economy in Latin America represents a path towards more sustainable development, where economic prosperity is balanced with environmental conservation.

4.2 Discussion

The purpose of this article was to analyze, from a systematic perspective, the contribution of the authors, through their publications, to the study Financial Profitability Model and Circular Economy, carried out in high-impact journals indexed in Scopus and WoS databases during the period 2018-2021 by authors affiliated with Latin American institutions. In this way, it is possible to affirm that the publications indicated in the body of this document have carried out research at different levels whose findings contribute to the generation of new knowledge regarding the variables proposed for this study, this is how great contributions are identified as contemplated in the article entitled "The management of Industry 4.0 technologies and environmental assets for optimal performance of industrial companies in Malaysia" aimed to explain the role of I4.0 (I4.0Tec) technologies in strengthening the management of environmental assets, as well

as the optimization of financial performance. The data in this research was collected from 738 industrial companies in Malaysia between 2009 and 2018. Analyses of least squares statistics and structural equation modeling outlined three main findings. The individual effect of packaging, robotization and flexibility in production technologies has a marginal impact on sales, exports, and labor productivity indicators. The complements of these variables represent a similar effect on performance indicators. Findings related to gross operating margin clarify that ENVASS and I4.0Tec do not have individual or complementary effects. This was explained by developing a robust model integrating packaging, I4.0tec, expenses and investing in R+D, flexibility in production and human capital management. Our findings have confirmed that the proposed model offers a functional toolkit for firms considering optimizing their profitability. This research also contributes to the development of an ethical business model for the circular economy. Therefore, it is absolutely necessary to know first-hand the real needs of them in order to line strategies that pursue success within their training. Supporting the above idea, the contribution made by the development of the article entitled "The circular economy in relation to financial data" is evidenced, whose objective was based on comparing financial indicators for companies affected by the circular economy and companies that are not affected by the circular economy. These indicators were divided into five groups, namely: the area of indebtedness, liquidity, profitability, the area of employment-related indicators, and the analysis of bankruptcy and solvency models. Statistically significant differences were found in the indicators of indebtedness, liquidity, and employment-related indicators. Companies affected by the circular economy were found to have higher indebtedness. Similarly, these companies have lower liquidity. By personal cost per employee and average monthly salary, the indicators are higher for companies that are not affected by the circular economy. The survey shows that this is likely due to increased investment during the implementation of circular economy elements. Companies affected by the circular economy are more in debt and have higher liabilities, so liquidity is worse. Due to higher depreciation costs, these companies have a lower profit on the employee. The circular economy is an essential topic of this era, and in the coming years, it will become an integral part of many companies. The importance of the circular economy is based on minimizing waste raw materials and maximizing environmental protection. This paper aims to compare financial indicators for companies affected by the circular economy and companies that are not affected by the circular economy. However, like any methodology, it is not without its problems(Qaisar Ali, 2022)(Vlčková, 2022) through their use, as shown in the article entitled "Production of briquettes from green coconut shells: technical, financial and environmental aspects." The United Nations Sustainable Development Goals emphasize the need to better understand and propose solutions to the growing demand for resources and waste generation by anthropogenic systems at any scale and intensity. This work proposes a "circular" model by using the biomass of green coconut shells generated by the cities of the Baixada Santista region as raw material for the production of briquettes. Technical-operational, environmental and financial aspects are considered to evaluate the proposed "circular" model in comparison with the existing "linear" model. The results show that the technical-operational aspects of the "circular" model are feasible due to the technologies already existing on the market that can be easily adapted for the purposes of converting green coconut shells into briquettes.(Clasen, 2022)

5. Conclusions

This review article concludes by highlighting the importance of knowing the updated status of the bibliography published in databases such as Scopus or Wos, referring to the study of usability problems Financial Profitability Model and Latin American Circular Economy during the period between 2018 and 2021, It can be concluded that at the intersection of financial profitability and sustainability within the circular economies of

Latin America It aims for this region to intensify the benefits and economic advances offered by these economic and environmental models. Likewise, while at the international level each nation faces multiple environmental challenges, Latin America is not exempt from these hardships as this region deals with resource limitations, waste management and climate change, taking into account these challenges it is of vital importance that these Latin economies manage to effectively adopt circular economic principles which these models have the potential to offer many benefits that achieve countering the challenges of these economies. The circular economy's emphasis on reducing, reusing, and recycling aligns with the urgent need to implement good sustainable practices in Latin America. By being able to adopt this circular model, financial profitability only seeks to contribute to environmental conversations, based on these benefits offered by this circular model, it is based on the idea that not only companies increase their revenues in a sustainable way and improve cost savings opportunities, but also that these practices are much friendlier to the ecosystems and limited resources that this region has.

In addition, financial institutions and investors are increasingly recognizing the value of sustainable practices, providing incentives and support to companies that prioritize circularity. This recognition has the potential to attract more capital to the region, further fueling the growth of circular economy initiatives. However, these sustainable practices need the help of regulatory frameworks that encourage the business sector to adopt these circular practices, as well as the improvement of the infrastructure with which it seeks to support the management and efficiency of resources and thus improve recycling systems. The collaborations that governments, companies and communities must have is crucial for decision-making that seeks to create an optimal environment and dynamism that helps the circular economy prosper

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