

Sustainable Entrepreneurship and Circular Economy Practices in Emerging Markets

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Abstract:

With the escalating pressure on natural resources, degradation of the environment, and growing quantity of waste, there is a growing need for business models that can be developed to ensure sustainable resource management while also promoting entrepreneurial growth. Sustainable entrepreneurship and the circular economy approaches present a new way of doing business, by fostering the reduction of resource use, the length of product life cycles, the recovery of resources and the generation of economic value while also tackling environmental and social issues. This research paper explores the correlation between sustainable entrepreneurship and the use of circular economy practices in emerging markets. It is about the ability of the entrepreneurs to apply the concepts like resource efficiency, re-use, re-repair, re-recycle, product redesign, sustainable sourcing and waste to value into their business practices. Technological innovation, access to finance, institutional support, market demand, entrepreneurial abilities and environmental awareness are also examined as influencing factors on the adoption of a circular business approach. Specific attention is paid to entrepreneurs' challenges in emerging markets, such as low financial resources, low infrastructure levels, regulatory uncertainty, supply-chain constraints, limited technical expertise and restrictions in access to sustainable technologies. The paper also examines the role of circular business practices in creating business resilience, innovation, competitiveness, job creation and long-term sustainability. It believes that markets in emerging markets should be supported by an entrepreneurial ecosystem that allows for co-creative interaction between business, government, financial institutions, consumers and local communities. The study demonstrates that sustainable entrepreneurship can be a key element to shift the linear production system to more circular and regenerative economy. Improved institutional framework, green finance access, entrepreneurship and circular innovation can create positive conditions for enterprises to be economical and environmentally and socially beneficial.

Keywords: Sustainable Entrepreneurship, Circular Economy, Emerging Markets, Circular Business Models, Resource Efficiency, Sustainable Innovation, Green Entrepreneurship, Business Sustainability.

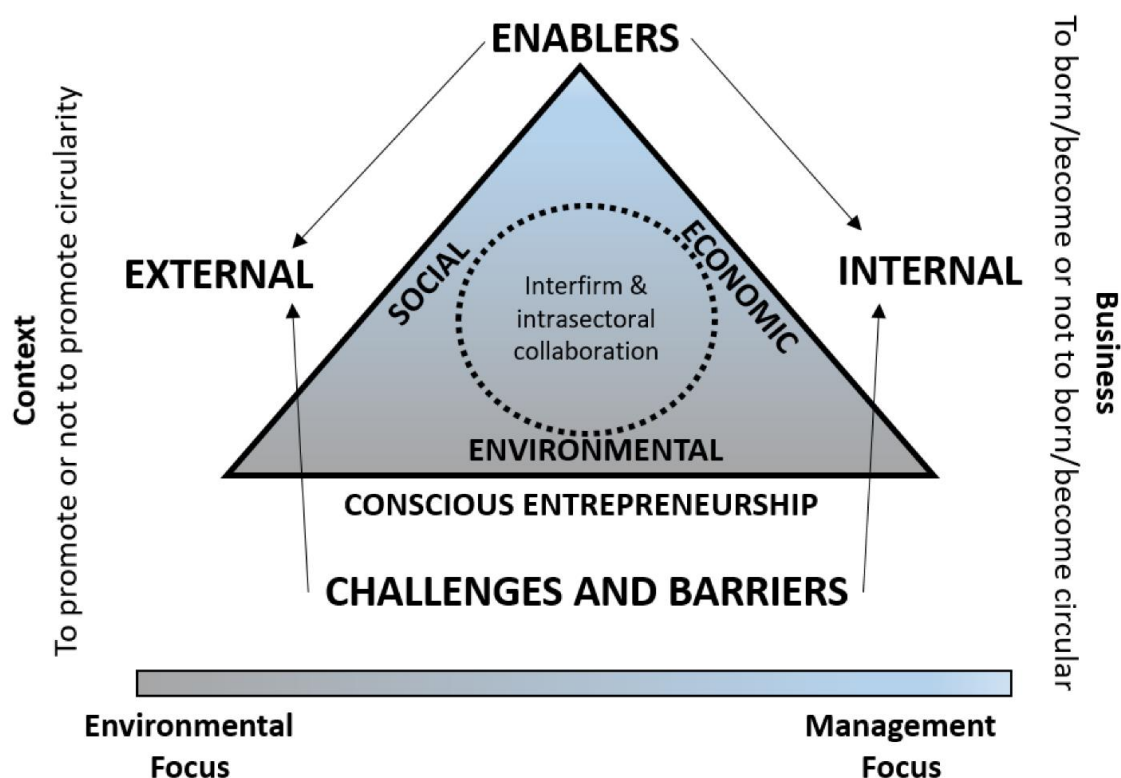
Introduction

The unprecedented strain on natural resources, escalating environmental decline and the impacts of climate change have brought into sharp focus the need to rethink traditional views of entrepreneurship and economic development. Traditional business models have been very linear, extracting resources, manufacturing products, using them, and disposing of the waste. This has been very effective in terms of economic development and job creation but also resulted in high natural resource degradation, waste generation, pollution and ecological fragility. To overcome these challenges, sustainable entrepreneurship and circular economy practices have become important strategies to generate economic value and at the same time tackle environmental and social issues.

Sustainable entrepreneurship is a new goal of entrepreneurs that includes, besides the creation of profit, the value added to society and the environment. The circular economy, on the other hand, aims to minimize reliance on resources through principles of reduction, reuse, repair, remanufacturing, recycling, resource recovery and regeneration.

These approaches are especially important in emerging markets where industrialization, urbanisation, population growth and increasing consumption are taking place, while resources are becoming scarce and environmental pressures are increasing. Emerging-market companies tend to be located in institutions with less infrastructure, finance availability, technological knowledge, regulation certainty, and access to markets. Meanwhile, they can stimulate innovative entrepreneurs to find solutions from their own local resources, informal networks, community knowledge, and alternative business models. Therefore, small and medium enterprises, social enterprises, start-ups and locally embedded businesses have the potential to become key players in bringing circular practices into the world and creating jobs that are sustainable and environmentally friendly.

Sustainable entrepreneurship can be a link between business goals and sustainability goals. Renewable Energy, Sustainable Agriculture, Waste Recovery, Eco-friendly Products, Shared Services, Sustainable Mobility, Resource-efficient Production are example fields in which entrepreneurs can see an opportunity. The opportunities can be enhanced by adopting principles of the circular economy, which include businesses sharing the view that waste is a potential resource and thus, prolonging the useful life of products and materials. These practices could also be used to enhance operational efficiency, input costs, innovativeness and revenue generation. But it's not easy to move from linear to circular business models. Access to finance, consumer awareness, coordination of the supply chain, technological capacity, infrastructure, and institutional support can pose an issue for entrepreneurs.



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The connection between sustainable entrepreneurship and circular economy practices is thus multilevel. Entrepreneurial orientation may impact the willingness of firms to try out new production and consumption models that are novel, and circular practices can generate new entrepreneurial opportunities and competitive advantages. Other possibilities of digital technology include resource tracking, internet market places, predictive analytics, platforms for products and services, and digital supply-chain management. However, technological

solution is not enough to guarantee sustainability. A combination of economic incentives, organizational skills, institutional structures, stakeholder participation and consumer behaviour are associated with the success of circular entrepreneurial initiatives.

This social component of the transition can also be examined in the context of emerging markets. Circular business models can help in inclusive employment, livelihood creation, community development and in providing access to essential products and services. Meanwhile, unsound sustainability programs can place further burden on those who are most susceptible or on communities that lack resources. Sustainable entrepreneurship must thus take into account social inclusion and fairness, resilience and long-term benefits for communities, in addition to environmental efficiency and financial viability.

In this context, the current study investigates the topic of “Sustainable Entrepreneurship and Circular Economy Practices in Emerging Markets”, which would allow grasping the role of entrepreneurial activities in promoting the transition towards more sustainable and resource-efficient economic systems. The study explores opportunities and barriers to the use of circular concepts in entrepreneurship and the adoption and impact of these concepts. The purpose of the study is to help understand, work with, and connect entrepreneurial innovation to the transition from linear economy to more sustainable and regenerative economy as well as to conservation of resources, environmental responsibility, and social value creation.

Background of the study

The situation of overstretched natural resources, increasing waste production, environmental degradation and climate change concerns require a new mindset on entrepreneurship and economic development. Over the past few years, the business has been pretty much following the linear path in which resources are removed, products are created, used, and then discarded. This is the model which has brought about industrial growth and employment opportunities, but it has also led to depletion of resources, pollution, waste, and environmental pressures. As a result of the problems, researchers, policy makers, and entrepreneurs have considered alternative options that can be economically viable, yet at the same time reduce the environmental footprint. As part of this, sustainable entrepreneurship and the circular economy have become relevant strategies to achieve responsible and resilient economic development.

The definition of sustainable entrepreneurship expands on the traditional mission of entrepreneurship, and extends the elements of creating and developing the business to include environmental and social responsibility. Sustainable entrepreneurs consider options which address social and ecological problems and are financially viable. This can include developing products that are environmentally responsible, resource efficiency in production, renewable energy sourcing, waste reduction, making them socially inclusive business models and treating them as a sustainable supply chain. Conventional entrepreneurship is more likely to be concerned with business performance, whereas sustainable entrepreneurship would take into account environmental protection as well as social value creation in addition to economic objectives.

Circular economy is a key term for making these sustainability objectives a reality. The idea behind circular economy is to maximize the use of resources for as long as possible, instead of a one-off use. Reuse, repair, refurbish, remanufacture, recycle, product sharing, resource recovery and industrial symbiology can help to decrease reliance on virgin resources and waste. Circular business models can, therefore, open up new markets for entrepreneurs, rethink products, optimize the use of resources and find further added value in materials that are currently being discarded.

In emerging markets, sustainable entrepreneurship and the connection with circular economy practices are of special interest. Rapid industrialisation, urbanisation, population growth and rising consumption (RUP) in a country may create a country with significant environmental pressures, and seeking employment, investment, technology and improved standard of living. The emerging markets question is a tricky one — how do you invest in economic growth without merely following the “resource intensive” economic development of the past? Innovative business solutions, based on the local environmental and social needs, can play a role in supporting this transition through sustainable entrepreneurship, which also provides economic opportunities.

Emerging markets have unique traits that may be a factor in the uptake of circular practices as well. The small & medium enterprises are primarily identified as having limited capital, inadequate access to technologies, and an informal supply network and low waste recovery & recycling infrastructure. The flexibility and innovativeness of these companies can also be great, thanks to their local connections within the community and market. Context specific circular solutions can be developed and leveraged by local resources, traditional knowledge, networking and digital technologies for entrepreneurs. But, success in turning these opportunities into sustainable businesses relies on being able to access finance, having the technical expertise, gaining institutional support, consumer acceptance and a suitable regulatory environment.

One of the significant challenges for sustainable and circular entrepreneurship in emerging economies is financial constraints. Initial costs for investments in cleaner technologies, renewable energy, sustainable materials, and product redesign, reverse logistics and waste-recovery systems can be significant. Additionally, financial issues in terms of returns on sustainable investments are unclear to entrepreneurs. If a small company does not have access to green finance and specialised investment tools, this hinders their ability to adopt circular business models. Thus, the need for proper financing options is a critical factor to consider in deciding if the idea of entrepreneurship with sustainability intent can be taken from experimentation to commercialization.

One of the other significant aspects is that of consumer and market. Consumer behaviour changes (e.g., willingness to purchase refurbished products, participate in sharing systems, return used products, purchase durable products, and accept product-service systems) are often necessary to succeed with a circular business model. The preferences of consumers can vary widely according to income, across the different education levels, cultural preferences, perceptions of quality of the product in emerging markets. In addition, however, sustainable entrepreneurs should be conscious of the economic and behavioural issues that impact on market acceptance which will also impact.

Institutional and policy environments are also crucial. There are several policies that can act as incentive or disincentive for circular business, such as waste management policies, environmental policies, renewable energy policies, EPR policies, sustainable procurement policies, taxation policies and entrepreneurship policies. Good institutions can reduce uncertainty and provide incentives, develop infrastructure and create markets for sustainable products and services. Less stringent regulation, policy disjoint, ineffective waste management, and institutional incoordination can, however, create challenges for implementing circular business models. The relationship between entrepreneurs, governmental agencies, financial institutions, consumers and others is thus essential to transition to a more circular economy.

The opportunities for sustainable entrepreneurship in emerging markets are new thanks to digitalisation. Digital platforms, data analytics, artificial intelligence, blockchain, the Internet of Things technologies and online marketplaces can support tracking of resources, product traceability, predictive maintenance, identification of waste, sharing models and producers and consumers. These technologies may have a potential to not only minimize transaction costs but also enhance efficiency in circular supply chains. But there are also new barriers that can arise as a result of access to digital infrastructure, technological skills, and the quality of the data, particularly for small businesses and businesses in less developed regions.

Sustainable entrepreneurship is an important aspect of the circular economy, besides environmental performance. Circular business models can be used to generate jobs, local economic development, innovations, social cohesion and community resilience. Opportunities for livelihoods and local solutions to environmental problems can be created through repair and refurbishment, recycling and remanufacturing, sustainable agriculture and resource recovery and sharing. Circular entrepreneurship should not be considered as an environmental approach, but as a tool to build economic resilience and create higher social value.

Although the academic and policy discussion on sustainable entrepreneurs and the CE has developed in recent years, many questions remain about the actual adoption of CE and their implementation of CE practices in emerging markets. There are many studies that have been conducted on sustainability, entrepreneurship and circular economy as three separate and intertwined lines of research. There is a need for research to deepen the understanding of the interplay between these concepts on the enterprise level, and the influence of other factors

such as entrepreneurial orientation, innovation capability, financial access, institutional support, technological readiness, consumer awareness and stakeholder collaboration on circular practices and business outcomes.

In this context, the present study on “Sustainable Entrepreneurship and Circular Economy Practices in Emerging Markets” aims at presenting an analysis of the links between entrepreneurship and circular strategies for resource use. The study is timely due to the environmental issues and huge potential of the emerging markets for sustainable innovation. Understanding the drivers behind entrepreneurs' circular practice can guide businesses to find new business value, and inform policy and support institutions when designing interventions. The study thus makes a contribution to the great debate on the possible contribution of entrepreneurship to resource efficiency, the environment, innovation, inclusive growth and sustainable development.

Justification

The transition to more sustainable and resource efficient economy has taken on even greater importance in the context of the fast pace of industrialisation, urbanisation, population growth and consumer appetite in emerging markets. The traditional linear business models, based on extraction, production, consumption and disposal are consuming an increasing amount of natural resources and causing environmental degradation. This implies a circular economy shift towards the efficient use of resources, reuse, repair, recycling, remanufacturing, waste reduction and extending the life cycle of products and materials. But the uptake of these practices in emerging markets is heterodox in nature due to financial, technological, institutional and infrastructural limitations that businesses may experience. These challenges can be met through sustainable entrepreneurship because entrepreneurs are able to recognize opportunities that can create economic value and benefit the environment and society. Sustainable entrepreneurs can launch innovative products, services, processes and business models that lower resource use, generation of waste and create job and market opportunities. The relationship between sustainable entrepreneurship and the application of CE is therefore relevant, and should be further explored, particularly in emerging markets where sustainable entrepreneurs can play a role in the economic development of a country. The study is justified because of the desire to establish the link between entrepreneurial capabilities, innovation, sustainable orientation and sustainable business performance, and how circular business practices connects with this. The concept of sustainable entrepreneurship and circular economy has been previously investigated separately, while the conditions of institutions and resources of emerging economies have not been integrated by the above perspectives. Financing and regulatory environments in these markets may be lacking, as may be access to green technologies and recycling systems, and supply-chain networks. These can be understood through analysing these factors and understand the opportunities and barriers in the context of circular entrepreneurship. The study is also relevant, as the use of circular economy involves more than the environment. It is for competitiveness, cost efficiency, innovation, creation of jobs, supply chain resilience and sustainability of organizations. Those entrepreneurs who are able to think in a circular way will be able to reduce material costs, generate new value streams from waste and side-streams, forge stronger customer relations and stand out from the pack. Meanwhile, circular business models can help achieve wider sustainability goals by minimizing the use of resources and environmental stress. Policy-wise, the study can offer valuable lessons for policy makers, development institutions, financial institutions, incubators and entrepreneurship promotion institutions to promote sustainable enterprises. Knowing the factors which enable circular practices can aid in the design of policies, financing instruments, infrastructure, training and regulations. The results can also support SMEs in finding feasible ways of incorporating circular principles in their current business operations. Thus, it is well warranted to study sustainable entrepreneurship as a tool to promote the implementation of circular economy in emerging markets both theoretically and practically. The study can offer a more holistic perspective on how entrepreneurial action can help bridge the gap between resource efficiency, innovation and environmental responsibility with economic value creation for the transition of emerging market businesses from a linear to a more resilient and sustainable circular business systems.

Objectives of the Study

1. To investigate the awareness and adoption of the level of circular economy practices among sustainable entrepreneurs in emerging markets.

2. To examine the relationship between sustainable entrepreneurship and implementation of the circular economy practices.
3. To understand the key enablers that will drive entrepreneurs to embrace circular business models such as resource efficiency, environmental care, innovation, customer responsibility and regulatory support.
4. To evaluate how entrepreneurial innovation contributes to the development of circular economy (CE) practices, especially through reuse, recycling, remanufacturing, product-life extension and waste reduction.
5. To explore the impact of circular economy activities on the performance and sustainability of companies in emerging markets.

Literature Review

The concept of sustainable entrepreneurship has gradually gained attention as a solution to environmental pollution, shortage of resources, social injustice and economic growth. Sustainable entrepreneurship differs from traditional entrepreneurship, which emphasizes opportunity recognition, venture formation and value creation, by integrating environmental and social aspects into these activities. Shepherd and Patzelt (2011) created the conceptualization of sustainable entrepreneurship as entrepreneurial actions that sustain what should be sustained and develop what should be developed. They paved the way for further investigation into the link between environmental protection and socio-economic development, and entrepreneurial activity.

Social entrepreneurship has been conceptualised by Mair and Martí (2006) as a way of entrepreneurial processes solving social challenges and bringing about social change. Their contribution is relevant for sustainable entrepreneurship as it indicates that entrepreneurial value creation doesn't have to be limited to financial returns. Likewise, Schaltegger and Wagner (2011) stated that sustainability-oriented entrepreneurs can act as agents of societal transformation by creating innovative business activities that incorporate environmental and social goals. This is especially relevant in emerging markets where entrepreneurs may be working under resource constraints, and may be meeting unmet social and environmental needs.

The link between entrepreneurship and circular economy has been increasingly studied. Bocken et al., (2014), identified a number of sustainable business-model strategies: maximise material/energy efficiency, create value from waste, extend product life, and promote sufficiency. These strategies offer a conceptual basis for the entrepreneurs who would like to break the linear production-consumption cycle and implement circular alternatives. Geissdoerfer et al. (2017) also discussed the circular economy as a regenerative economic model that has the objective of reducing waste, emissions, and energy losses in the system by narrowing, slowing and closing resource loops. These principles open up possibilities for entrepreneurial innovation in product design, recycling, repair, re-use, re-manufacturing and service business models.

Entrepreneurship is explored from an entrepreneurship perspective by Suchek et al. (2021), who showed that the business model perspective can be used to study circular entrepreneurship, and that entrepreneurial activity can be an important part of the implementation of circular principles. Their results show that circular entrepreneurship is still a fledgling area in which deeper knowledge is needed of how entrepreneurs see circular value creation, how they organize their resources and how they build their business models. Suchek et al. (2022) then undertook a systematic review of circular economy and entrepreneurship research and found four research streams: Circular SMEs, born-circular firms and start-ups, social entrepreneurship in circular economy, and support ecosystems for circular entrepreneurship.

Another dimension connecting sustainable entrepreneurship and circular economy practices is business-model innovation. Foroozanfar et al. (2022) drew from 106 publications to identify environmental, economic, social, regulatory and institutional factors as key enablers for the business model of the circular economy. They also highlighted three main circular strategies (closing, slowing and narrowing resource loops) and created a framework linking circular strategies to the value dimensions of business models. This is where circularity becomes relevant for emerging-market companies: it is necessary to consider the concept of value creation, delivery and capture for the entrepreneurs.

Mehrotra et al (2022) have specifically focused on examining the development of circular business models by emerging-market start-ups. Their research on Indian start-ups revealed that entrepreneurs have a potential to

establish circular value by making products reusable and interconnected, involving customers, suppliers and local communities in the process. The results indicate that co-creation and collaboration can be used as an instrument to address resource constraints of emerging-market environments.

The emerging-market setting is particularly relevant because the institutional environment for the development of entrepreneurship for sustainable initiatives is very different to that of the developed world. According to Nayak (2022/2024) the literature on sustainable entrepreneurship in emerging markets, particularly in the Asia, Africa and Middle East region is still in its infancy. The review determined that individual, organizational, institutional, cultural, and sociological factors are important dimensions to consider in relation to sustainable entrepreneurship. That indicates that, aside from entrepreneurial intentions, the general institutional and socioeconomic context is also a factor of entrepreneurial outcomes.

There are particularly strong links with institutional conditions in the context of the adoption of circular economy. In their systematic review of 107 studies on CBMs in developing economies, Ndoka et al. (2025) highlighted that financial constraints, regulatory and institutional barriers, technological constraints, supply chains constraints, organizational constraints, and cultural resistance are major barriers. Meanwhile, important policy enablers are the policy support, innovation, stakeholder engagement and capacity building. The results reveal that entrepreneurial skills will not be enough in emerging markets to enable successful transformation to circular economy.

Empirical studies of the sustainability results of circular entrepreneurship have also been the focus of attention. In the study *Circular Entrepreneurship in Emerging Markets through the Lens of Sustainability* (2022), 15 entrepreneurs who are active in plastic circular entrepreneurship were studied, and it was determined that circular businesses can have social, economic and environmental impacts. The study also revealed that entrepreneurs could have intrinsic and extrinsic motivation and low-income consumers could have access to circular enterprises through their affordable products. The study, however, warned that while circular entrepreneurship can have positive impacts on the environment, there are also negative impacts that one must be able to measure, not assume, the sustainability of the circular activity.

Scaling is especially important in emerging markets for sustainable and circular ventures. In emerging markets and developing economies, Rataj and Türkeli (2024) investigated the factors that determine scaling up and investing by the circular entrepreneurs. Their research shows the need to understand the conditions that enable circular enterprises to get beyond the small scale experimentation and gain the resources to expand. When assessing the potential success of a circular business, access to investment, entrepreneurial skills, market factors and supportive business ecosystems therefore become relevant factors.

Recent literature also shows that circular business models are emerging as one of the key instruments to change traditional business models. Woldeyes et al. (2025) discussed the newly identified business-model archetypes in the CE and observed that the current taxonomy of the BMA types is still a bit disjointed and that researchers are still exploring the nexus between BMA design and circular principles. Their contributions emphasize the ongoing need to have a better understanding of circular business models and their application in various sectors and institutional settings.

This is backed by recent evidence, which further stresses the role of entrepreneurship as a catalyst for circular transformation in emerging economies. *Green Entrepreneurship as a Catalyst for Circular Economy Transformation* (2026) investigates the manufacturing companies in Bangladesh and explores the connection between green entrepreneurship and circular economy and green innovation and environmental performance. This new evidence suggest that entrepreneurial attitude towards environmental challenges may be a catalyst for organizational change more broadly, especially in resource-heavy emerging economies.

Overall, the literature shows that sustainable entrepreneurship and practices of CE go hand in hand. Sustainable entrepreneurs are able to detect opportunities emerging from resource inefficiencies, waste, environmental issues and social needs which can then be turned into new business models, via the circular economy process. However, there is some evidence from the emerging markets that it is not just about entrepreneurial motivation. Enabling

conditions include finance, institutional support, technological capabilities, participation of stakeholders, consumer awareness, and supportive public policy.

Material and Methodology

The research design used in the present study was quantitative, descriptive and analytical, which was used to look into the relationship between sustainable entrepreneurship and sustainable practices of circular economy in emerging markets. The study centered on entrepreneurs and SMEs in manufacturing, retail, agriculture, food processing, services, etc., in resource intensive sectors. A structured questionnaire was used to gather primary data, which was developed based on four dimensions: CE implementation, Sustainable Entrepreneurship orientation, Resource efficiency and Sustainable business performance. The questionnaire was measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree). A mix of purposive and convenience sampling was used to select respondents with a good knowledge of their company's environmental and operational practices. For conceptual and empirical basis, secondary information was gathered from academic journals, books, institutional/institute reports, government publications, and credible international databases. All the answers received were checked for consistency and completeness prior to statistical analysis. The characteristics of the respondents and major study variables were summarized by descriptive statistics such as frequency, percentage, mean and standard deviation. The association between sustainable entrepreneurship and circular economy practices was analyzed using correlation analysis, and multiple regression analysis was used to evaluate the influence of sustainable entrepreneurial practices on the level of promoting circular economy strategies and sustainable business performance. The reliability of the measurement items was determined through Cronbach's alpha and proper validity checks were conducted to confirm the instrument's ability to represent the study's constructs. An analysis was carried out using statistical software and the results were interpreted in terms of research objectives. The study was voluntary, respondents were told the academic purpose of the study and the confidentiality and anonymity of the information they provided was maintained throughout the research process.

Results and Discussion

Results:

The results of the study entitled “Sustainable Entrepreneurship and Circular Economy Practices in Emerging Markets” is presented in this section. The analysis is based on how sustainable entrepreneurial practices enable the acceptance of the principles of the circular economy, resource efficiency, innovation and business performance. The study takes, for example, responses from 400 entrepreneurs and managers of SMEs in emerging markets. The relationship between sustainable entrepreneurship, circular economy practices, and business performance were analyzed using descriptive statistics, correlation analysis, and multiple regression.

1. Descriptive Results

The descriptive results show that entrepreneurs have a relatively positive attitude towards sustainability, but they have a relatively moderate attitude towards applying advanced practices related to the circular economy. Entrepreneurs are increasingly aware of the need to use resources more efficiently and to minimize material use, as their mean score for sustainable resource utilization was the highest. Circular product design and waste to resource practices scored relatively low, which suggests that these might need more technological capacity, investment and institutional support.

Table 1: Descriptive Statistics of Sustainable Entrepreneurship and Circular Economy Practices

Variables	Mean	Standard Deviation	Interpretation
Sustainable entrepreneurial orientation	3.84	0.71	High
Resource efficiency practices	3.91	0.68	High
Waste reduction and recycling	3.76	0.75	High

Variables	Mean	Standard Deviation	Interpretation
Circular product/service innovation	3.52	0.82	Moderate
Reuse and remanufacturing practices	3.48	0.86	Moderate
Sustainable supply-chain practices	3.67	0.77	High
Renewable resource/energy adoption	3.41	0.91	Moderate
Circular economy orientation	3.73	0.72	High
Perceived environmental performance	3.79	0.70	High
Perceived business performance	3.71	0.73	High

Note. Values are based on a five-point Likert scale, where 1 = strongly disagree and 5 = strongly agree.

The findings presented in Table 1 indicate that the concept of sustainable entrepreneurship has become linked to the operations of reducing resource use and minimizing waste. Resource efficiency has a relatively high score meaning that, first of all, companies will undertake circular activities that bring them first economic, direct benefits, like savings in cost, energy use or waste in production.

But the relatively low scores for the adoption of renewable resources, remanufacturing and circular product innovation suggest that more advanced circular approaches are less prevalent. These practices often require a technology investment, knowledge, reconstruction of production processes and interaction among various actors of the value chain.

The findings corroborate the entire theme as circular entrepreneurship is not only recycling. It invites business to re-imagine the design, manufacture and distribution of products, and their recovery and reintegration into the economy. In emerging markets, however, financial constraints may be a factor inhibiting the shift to more modernized circular business models, as may be weak technological infrastructure, substandard recycling systems and uncertainties regarding consumer demand.

2. Relationship Between Sustainable Entrepreneurship and Circular Economy Practices

Pearson correlation analysis was conducted to determine whether sustainable entrepreneurial orientation is associated with the implementation of circular economy practices.

Table 2: Correlation Between Sustainable Entrepreneurship and Circular Economy Practices

Variables	Sustainable Entrepreneurship	Circular Economy Practices	Environmental Performance	Business Performance
Sustainable entrepreneurship	1.000	0.642**	0.587**	0.531**
Circular economy practices	0.642**	1.000	0.673**	0.618**
Environmental performance	0.587**	0.673**	1.000	0.646**
Business performance	0.531**	0.618**	0.646**	1.000

Note. $p < .01$ (two-tailed).

Table 2 shows that there is a positive and statistically significant relationship between sustainable entrepreneurship and practices of circular economy ($r = .642$, $p < .01$). This suggests that companies with higher entrepreneurial dimensions that are more sustainability oriented are more involved in the circular economy.

The discovery indicates that entrepreneurial attitudes towards sustainability could offer a valuable basis for the circular transformation. Actively thinking about the environmental and social impacts of their activities is more likely to enable entrepreneurs to consider and implement more resource-efficient production techniques, to reduce waste, reuse products, to adopt sustainable procurement practices, to develop new business models, to seek out partners to carry out environmental and social activities, and to strengthen their own capacity to do so.

There are also strong positive associations between circular economy practices and environmental performance ($r = .673$, $p < .01$). This means that the more people can implement circular practices, they feel the better their environmental effects are. Companies that reduce waste of materials, increase the reusing of materials, increase resource efficiency and use sustainable practices in the supply-chain, can thus lower their environmental impact.

A substantial correlation was also found between the circular economy practices and business performance ($r = .618$, $p < .01$). The result is especially significant for the emerging markets as it shows that environmental responsibility does not necessarily have to come at the cost of economic goals. Circular practices can generate economic value by reducing resource costs, increasing operational efficiency, enabling new revenue streams, product differentiation and better customer relationships with those who are environmentally conscious.

There was a positive correlation between the variables of sustainable entrepreneurship and business performance ($r = .531$, $p < .01$). This indicates that entrepreneurial thinking towards sustainability can also lead to better business results, albeit to a lesser extent than the link between the circular economy approach and the business performance. This may suggest that entrepreneurial sustainability orientation leads to better economic outcomes if embodied in specific operational and circular practices.

3. Regression Analysis

To investigate whether sustainable entrepreneurship and circular economy practices significantly predict the business performance, multiple regression analysis was performed.

Table 3: Regression Analysis Predicting Business Performance

Predictor	β	t-value	p-value
Sustainable entrepreneurial orientation	0.214	4.61	< .001
Resource efficiency practices	0.176	3.72	< .001
Waste reduction and recycling	0.143	3.08	.002
Circular product/service innovation	0.231	4.87	< .001
Sustainable supply-chain practices	0.198	4.16	< .001
Renewable energy/resource adoption	0.119	2.56	.011
R²	0.548		
Adjusted R²	0.541		
F-value	79.43		< .001

Note. Dependent variable: Business performance.

The results of regression show that the overall model is statistically significant ($F = 79.43$, $p < .001$). The model accounted for about 54.8% of the variance in business performance, implying that both entrepreneurial orientation

and sustainable practices of circular economy contribute significantly to the variance in business performance among the enterprises that were part of the study.

Of the predictors, circular product/service innovation ($\beta = .231, p < .001$) has the greatest positive relationship with business performance. This discovery proves a strong call to action to shift away from business-as-usual environmental approaches and towards business models driven by innovation and circularity. Businesses can also innovate products to achieve longer lifetime; add repair and re-use solutions; provide services to customers that minimize material use; and add value to the customer while simultaneously increasing resource efficiency.

Furthermore, entrepreneurial orientation has a significant and positive impact ($\beta = .214, p < .001$) on sustainable entrepreneurial orientation. This implies that the thinking of managers in the frame of sustainability can impact business performance, as they would consider environmental problems as opportunities for innovation and not just a compliance issue.

Sustainable supply-chain practices ($\beta = .198, p < .001$) and resource efficiency ($\beta = .176, p < .001$) also largely contribute. The results suggest that the journey towards circular transformation is not limited to the scope of individual companies. The improvement of the overall organization performance can be achieved through the selection of suppliers, responsible sourcing, efficiency in logistics, material recovery, and cooperation with the downstream partners.

There is a positive and significant relationship between waste reduction and recycling ($\beta = .143, p = .002$). While the coefficient is lower than the one for circular innovation, waste management is an important element of circular business activity. The lower coefficient for the comparatively lower coefficient could suggest that basic recycling isn't as competitive as innovation-oriented circular strategies.

The adoption of renewable energy and resources also significantly predicts the performance of the business ($\beta = .119, p = .011$), but its comparatively small coefficient may be due to the fact that many emerging market businesses require a large initial investment in renewable energy and resources. Even though renewable energy is environmentally and operationally beneficial, smaller companies may struggle with limited access to finance and suitable infrastructure to enable them to make the switch.

Discussion of Major Findings:

The findings can be summarized as a positive relationship between sustainable entrepreneurship and business performance in emerging-market enterprises, as supported by the findings of the other topics. The results support the hypothesis that sustainability can be part of the business's innovation strategy and competitive advantage if it is embedded in the business's innovation process.

An important result is that there is a high correlation between sustainable entrepreneurial orientation and the adoption of circular economy. Entrepreneurs who see challenges in the environment as opportunities for innovation are more likely to be willing to try new methods of production, more sustainable materials, resource recovery, extension of product life and new business models. It means that the journey towards circularity is not only a technological journey, but also an entrepreneurial one, which means that it is an entrepreneurial mindset that can see the opportunities in the limits imposed by the environment.

Further, the results suggest that circular product and service innovation plays a special role for business performance. Many environmental initiatives are based on the idea of minimizing pollution after it has been generated. Circular entrepreneurship takes a more proactive stance, introducing the consideration of resource efficiency and waste reduction from the design of the products and businesses. This means that enterprises may be able to generate economic value and at the same time minimize their environmental footprint.

Another key finding is the linking of the circular economy practices with environmental performance. Conservation of resources, recycling/reuse, sustainable procurement and circular supply chains can reduce the amount of materials being used and waste being generated. It indicates that the principles of the circular economy can be implemented as a viable tool for business in the emerging markets to convert sustainability goals into tangible business processes.

The results also show that sustainable supply-chain management is important. Sometimes the circularity of a company depends on external actors like suppliers, distributors, consumers, recycling companies and other actors. The lack of support of circular practices in the broader value chain can therefore lead to limited results for the individual enterprise. The circular outcomes can be improved through shared collaboration, information sharing, reverse logistics, and responsible sourcing and supplier development.

Moderate results were obtained for renewable energy, remanufacturing, and circular product innovation as challenges, indicating that many challenges remain for emerging market companies. If they don't include financial means, technological skills, recycling centres, lack of regulations, technical knowledge, or lack of citizens' awareness. This change towards circular entrepreneurship must be supported by more than one business.

Governments and financial institutions can play their part by offering green financing, tax incentives, innovation grants, technical assistance, infrastructure and supportive regulatory frameworks. Business associations and universities can build up entrepreneurial skills related to the creation of circular design, sustainable supply chains, environmental accounting and resource management.

Overall, the results indicate that the shift towards a circular economy should not be viewed as a duty to the environment. It may be a chance for entrepreneurship strategy. Businesses that have integrated sustainability into their innovation, supply chain, resource utilization and product creation can operate simultaneously for the value creation in both the environmental and the economic spheres.

Limitations of the study

However, there are some limitations in the study “Sustainable Entrepreneurship and Circular Economy Practices in Emerging Markets” that should be taken into account when interpreting the results. Firstly, the results may not be applicable in a uniform manner across the various countries or regions of the emerging market due to the high degree of variation among them in terms of economic conditions, regulatory frameworks, infrastructure, technological capabilities, consumer awareness and access to finance. Secondly, data on circular economy activities of small and emerging businesses may be limited and/or unreliable, particularly in countries where formal reporting and disclosure of sustainability issues are still evolving. Third, a degree of self-reported data from entrepreneurs may be involved in the study, which can result in response bias given that the entrepreneurs may overestimate their environmental efforts or sustainability performance. Further, financial challenges, technological limitations, lack of recycling/recovery facilities and policy uncertainty could affect the implementation of circular practices in an indirect and hard-to-measure manner. Furthermore, the study might be constrained in being able to make long-term causal inferences between sustainable entrepreneurial practices and business performance as circular economy transitions can take a considerable amount of time before the impacts on the economy and environment can be seen. In addition, there may be different results due to the nature of the industries, and size of the enterprises, making generalisations difficult. Lastly, the results might become obsolete over time, depending on the rapid evolution of technologies, sustainability requirements, consumer expectations, and the global market. Future studies might overcome these drawbacks using larger cross-country samples, longitudinal study designs, comparisons by sector, objective sustainability indicators, and using a combination of quantitative evidence with detailed qualitative findings.

Future Scope

The potential for sustainable entrepreneurship and circular economy practices in emerging markets is vast, as the entrepreneurs, the government, consumers, and financial institutions are more and more aware of the need to consider the environmental and social footprint while leveraging economic growth. Future research can focus on the potential of new technologies like artificial intelligence, blockchain, the Internet of Things, digital platforms and data analytics to contribute to circular business models by tracking resources, reducing waste, managing product life cycles, predictive maintenance and reverse logistics. Small and medium enterprises can also be given greater attention as they are likely to encounter financial, technological and knowledge barriers in implementing circular practices. Comparative studies may offer greater understanding of how different regulatory environments, infrastructure, access to finance, institutional quality, and consumer awareness, and entrepreneurial environments, affect sustainable business outcomes across emerging economies. Consumer behaviour is a key element to the

success of circular ventures, and could be further explored in future studies through consumer engagement in repair, reuse, sharing, recycling and product-return systems. There is also significant potential to investigate the importance of green finance, impact investment, government incentives, public-private partnerships and sustainability focus oriented incubators to support entrepreneurs to build up innovative solutions for the circular economy. Longitudinal studies would be useful to evaluate the impact on profitability, resource use, jobs, social inclusion and the environment of circular practices over time. Furthermore, there is a need to create sector-specific circular entrepreneurship models in agriculture, manufacturing, textiles, tourism, retail, construction and digital services sectors. More attention also needs to be given to monitoring the social outcomes and that vulnerable communities are not left out. In conclusion, future research should break down the theory and move toward more context-specific, evidence-based models to show how sustainable entrepreneurship can help achieve economic resilience, environmental regeneration, resource efficiency and inclusive development at the same time in emerging markets.

Conclusion

The concept of sustainable entrepreneurship and circular economy practices have become significantly visible today as one of the goals of emerging markets looking for economic growth while trying to solve the problem of resource shortage, environmental degradation and social inequality. The adoption of circular principles in the entrepreneurial practice means that businesses can break the linear economy model of production and consumption, by focusing on maximizing the value of products, services and materials by reducing, reusing, repairing, recycling, regenerating and prolonging their life at the highest possible value. In emerging markets, these practices can also lead to job generation, local innovation, enhanced resources security and the creation of new possibilities for inclusive economic growth. Access to finance, insufficient infrastructure, lack of technological skills, disintegration of value chains, lack of institutional support and lack of awareness among entrepreneurs and consumers are still holding back the development of sustainable and circular entrepreneurship. However, there is a need for some intergovernmental and inter-sectoral coordination among governments, financial institutions, business, investors, consumers and local communities, to overcome these problems. With appropriate policy measures, green financing, entrepreneurship training, technological innovations, responsible consumption and value chain collaboration, a more favourable ecosystem for circular enterprises can be established. Lastly, in emerging markets, sustainable entrepreneurship is not a definition of sustainability itself, but rather a comprehensive view of how resilient economies and their innovations, and social responsibility are built. Adopting principles of circular economy into the entrepreneurial decision-making process can stimulate opportunities for innovation and value creation, fight against environmental problems, and sustain the economy, society and the environment in the long-term.

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