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Article

Circular Entrepreneurship in Emerging Markets through the Lens of Sustainability

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Abstract: The purpose of this research paper is to explore the antecedents and consequences of circular entrepreneurship in emerging markets. The consequences of circular entrepreneurship will be explored through the lens of three dimensions of sustainability: social, economic, and environmental. This study used a multi-case approach, which is frequently applied in circular business literature. The study used convenient and purposeful sampling techniques to identify circular entrepreneurs starting a business by recognizing opportunities in CE. We interviewed the 15 entrepreneurs (all participants engage in plastic circular entrepreneurship) with more than 8 years of experience. We employed a semi-structured interview method because respondents explored important information during the interview. Atlas.ti, a prominent qualitative software package, was used for analysis. This study portrays the antecedents and consequences of circular entrepreneurship identified when circular entrepreneurs take the initiative to serve low-income customers. This study points out that circular entrepreneurs can be motivated both intrinsically and extrinsically. The consequences of circular entrepreneurship show how such enterprises impact on society, sustainability, and the economy. The study points out that circular entrepreneurship can have both positive and negative impacts on the environment. By investigating the determinants and consequences of circular entrepreneurship in emerging markets, the authors make a significant contribution to the field of circular economy and entrepreneurship. We have limited logistics and resources, thus we did not collect data from stakeholders, who might provide a richer picture and insights into how circular products affect their lifestyle. Policymakers can get a better understanding of such enterprises from the findings of this study. They should reassess policies regarding circular entrepreneurship and suggest ways to promote open innovation within circular entrepreneurship. Circular enterprises serve low-income customers by offering an affordable product with attractive features. The government should develop an open innovation action-packed forum to find, design, and create prototypes, as well as introduce more comprehensive sustainable solutions for wastable plastic products.



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1. Introduction

In the last quarter of the twentieth century, ecological environmental disasters and shortages of resources have been increasing worldwide [1]. The one-way method, linear economy, of production has ruled for many years [2]. Empirical evidence warns that with high urbanization, faster growth in the population, more consumption of resources, and a harmful impact on the environment, a linear economy is not an appropriate model for a sustainable future. For this reason, management scholars and practitioners pay more attention to environmentally sustainable methods of production in the present century [3–5].

Hence, the circular economy (CE) has gained massive fame among policymakers, academicians, and practitioners in the present decade to overcome sustainability issues, such as climate change, material scarcity, and depletion of resources [5,6]. In the CE, commercial organizations can fulfil end-user needs without exhausting natural resources, [7] which is a resource-efficient model [8].

Over the last few years, entrepreneurship has been treated as a significant force to enhance product quality [9], economic growth [10], innovative products [11], changes in societies [12], and sustainable entrepreneurship [13]. Entrepreneurship is the ability to grab an attractive and desirable opportunity in the market or add value through introducing novel combinations within the present product/service [14]; but Masaro [15] stated that a new combination is not a necessary element of entrepreneurship. Entrepreneurship is a process of opportunity identification and idea generation [16,17], product development [18], and opportunity exploitation [19]. In this paper, circular entrepreneurship is defined as a process of opportunity recognition, product development, and opportunity exploitation within CE. Therefore, we define a circular entrepreneur as an individual who starts a business by recognizing an opportunity in CE.

Plastic products gained popularity in the home and workplace because they are flexible, versatile, and cost-effective, the last of which is the most important element associated with them [20]. More than 92 billion tons of raw material, including food, textiles, plastics, and electronics, were used for the first time in the production process¹. In Pakistan, 3.3 million tons of plastic are wasted annually, generating a dump taller than the K2 mountains [21]. Many entrepreneurs engaged in CE have found opportunities in the recycling of plastic [22]. To the best of the researcher's knowledge, no empirical evidence exists on why entrepreneurs engage in circular entrepreneurship and on how it contributes to the sustainable development triangle. As a result, we need to understand why entrepreneurs engage in circular enterprises and how to contribute to sustainability. By providing answers to the following questions, this study seeks to achieve its intended goal. The following research questions were addressed in this paper: Why do entrepreneurs engage in the circular economy? What are the major consequences of circular enterprises through the lens of the three dimensions of sustainability? Is open innovation assisting circular businesses in the development of new products? The purpose of this research paper is to explore the antecedents and consequences of circular entrepreneurship in emerging markets. The consequences of circular entrepreneurship will be explored through the lens of three dimensions of sustainability: social, economic, and environmental.

2. Theoretical Background

This research paper lies at the intersection of different literature flows, namely circular economy, entrepreneurship, open innovation, sustainability, and emerging markets. In emerging markets, there is no doubt that the circular economy participates in sustainability significantly. The literature on the above-mentioned themes is discussed in the following section.

2.1. Circular Economy/Circular Entrepreneurship

According to hypotheses from experts, four planets like Earth would be required in 2050 to meet the needs of the population due to its rapid growth and the depletion of natural reserves [23]. As a result, the Circular Economy (CE) subject has gained popularity among practitioners, policymakers, and governments since the late 1970s. CE refers to many previously well-known ideas, theories, and views, such as ecological efficiency, cleaner production, industrial ecology, zero emissions, and regenerative design [24]. No university accepted a singular definition of CE [25], but the famous definition chosen by the Ellen MacArthur Foundation is "an industrial economy that is restorative or regenerative by intention and design" [26]. Furthermore, the European Commission defined CE as "the value of products and materials is maintained for as long as possible. Waste and resource use are minimized. This brings economic benefits, contributing to innovation, growth

and job creation” [27,28]. Business activities usually use 3R/4R principles: reduce, reuse, recycle, and renew in CE as compared to linear production.

The subject of recycling is becoming supreme due to the wastage of natural resources [29,30]. CE is the opposite system to the linear model (take, make, and dispose of) that encourages the minimization of waste, pollution, and consumption of resources [31,32]. To keep the environment safe and protect natural resources, countries have switched from the linear economy to CE (e.g., Sweden, Denmark, France, Netherlands, UK) [33,34], where materials are reused. CE, in general, promotes reuse and offers extensive facilities with repair options. CE is normally an economic system that is progressively promoted among practitioners, civil society, and politicians [35], and it aims to recycle or reduce waste, introduce a better waste management system, reuse resources, re-manufacture, upgrade, etc. [34,36–38].

2.2. Circular Economy in Emerging Markets

The circular economy plays an important role in sustainability in both developed and emerging markets. This section represents the literature on the circular economy and emerging markets. Generally, emerging economies are considered a favourable ecosystem for CE [39]. Both multinational and national firms have been pressured to gain a competitive edge and to produce sustainable products [40]. In CE in emerging economies, local firms produce basic and affordable products for low-income consumers [41–43]. Therefore, supplying suitable products to low-income end-users in emerging economies is a major challenge for all enterprises [44].

There are plenty of challenges in emerging economies, such as rapidly altering government strategies, programs, and policies; unpredictable customer tastes and behaviour; and a deficiency of resources [39]. Emerging economies have a number of opportunities in the circular economy [45], e.g., an entrepreneurial career in producing useable products from waste material. Therefore, the researchers deliberately selected case studies from Pakistan in this paper to explore the antecedents and consequences of circular entrepreneurship.

2.3. Open Innovation Promotes Circular Entrepreneurship

Open innovation (OI) is defined by Chesbrough as “the new imperative for creating and profiting from technology” [46]. This means that firms can use internal and external ideas, as well as external and internal paths to the market, as they explore new technologies. Firms can benefit from both inside and outside sources. Evidence of best practices in Europe shows that OI is an important factor or tool for the switch from linear to circular entrepreneurship [47]. As cited in the previous section, waste can be recycled to develop new products and create new revenue streams for firms. The stakeholders of the company propose co-creations to introduce circular solutions with the assistance of research bodies, designers, recyclers, experts, and government and nongovernmental departments [48–50]. Open innovation dynamics are frequently studied from the perspective of circular enterprises and circular products [51,52], circular ecosystems [53], and circular business models [54]. The link between open innovation and circular entrepreneurship is witnessed through good practices in different fields [48,55]. For example, in the plastics industry, many small businesses collect waste plastic and then convert it into plastic pieces. Afterward, many manufacturers make plastic products, such as furniture, toys, kitchen pots, bottles, PET sheets, and flower pots. Therefore, the final objective is to recycle waste into new products, generate profit, and decrease the negative impact on the environment. These products are durable and low-cost compared to products made of new plastics. Many firms are adopting and employing OI to obtain advanced outcomes in their CE enterprises [55]. It is clear that OI promotes circular entrepreneurship.

2.4. Circular Entrepreneurship and Sustainability

The term “sustainability” is unclear; hence, researchers consider it in numerous ways. However, we adopt the perspective of those scholars who suggest three interconnected

pillars of sustainability: social, environmental, and economic [56–59]. The core purpose of sustainability, according to the U.S. National Environmental Policy Act, is to generate conditions that meet the social, economic, and environmental requirements of present and future ages [60]. Circular enterprise is considered a good model that helps to achieve sustainability [5,61]. From an economic standpoint, circular enterprises can be more profitable than their linear economy competitors [62]. The World Economic Forum pointed out that firms can make an extra profit by using the concept of circular economy [63]. The European Commission also provides similar statements, such as simultaneously 30% growth in production, creating job opportunities in the European Union, and influencing GDP [64,65]. Every society faces different challenges, such as rapid climate change and biological diversity [66]. Circular business, on the other hand, introduces and promotes new ways of consumption [67–69] in order to reduce waste, facilitate recycling, reduce energy content, and offer flexible products [70,71]. Businesses that produce circular material have the least impact on the environment [72,73].

3. Materials and Methods

The entrepreneurship research domain is complex and needs an appropriate methodology [74]. Qualitative research methods are more suitable for exploring contemporary phenomena [75] and obtaining a comprehensive understanding of the situation [76] than quantitative methodology. This study used qualitative methods frequently applied in the circular business literature [4,77]. Additionally, Merino et al. [78] recommend the qualitative technique to study a new phenomenon [79,80] or fewer studies already conducted on a particular phenomenon. We used a multi-case approach in this study, in which the findings have low risk because they are based on common attitudes.

In order to fulfil the study's goal and respond to the research questions, we used convenient and purposeful sampling techniques to identify circular entrepreneurs who started a business by recognizing opportunities in CE. We began by gathering different circular entrepreneur cases from Gujranwala and Lahore cities. From 30 cases, we selected the most experienced entrepreneurs who were accessible, available, and agreed to contribute to this research. Triangulation is suitable for the case study [80]; we also follow this approach for data collection, including interviews, observation, and documents. We interviewed the 15 entrepreneurs with more than 8 years of experience, all of whom engage in plastic circular entrepreneurship. A summary of all participants is given in Table 1.

Table 1. Summary of cases.

Case	Founded in (Year)	Employees (How Many)	Items Manufactured (e.g., Plastic Furniture)	Main Market (e.g., Punjab, Sindh, KPK)
Asif	2010	20	Plastic outdoor furniture	Punjab, Sindh and KPK
Ali	2007	3	Plastic toys and kitchen pots	Punjab
Ashraf	2008	5	Plastic bottles	Punjab
Basheer	2008	35	Plastic outdoor furniture	Punjab
Akram	2011	4	Plastic bottles	Punjab
Zain	2003	4	Plastic toys and kitchen pots	Punjab and Kashmir
Yaseen	1999	40	Plastic outdoor furniture	Punjab, Sindh and KPK
Jamal	2007	6	Plastic bottles	Punjab
Meer	2008	5	Plastic bottles	Punjab
Majeed	2005	26	Plastic outdoor furniture	Punjab, Sindh and KPK
Yasir	2006	6	Plastic toys and kitchen pots	Punjab and Sindh
Umair	2009	25	Plastic outdoor furniture	Punjab and KPK
Faiz	2011	8	PET sheets	Punjab and Sindh
Khurram	2010	15	Plastic outdoor furniture	Punjab, Sindh and KPK
Anser	2012	2	Flower pots	Punjab

We employed a semi-structured interview method because respondents explored important information during the interview [80]. We pursued an ethical process to get

permission for the interview recording. The workplace site is best for interviews. We used pseudo (fake) names for publication rather than the real names of all participants to ensure confidentiality. Before or after the interview, the researcher arranged a tour to visit the participant's business in order to observe their activities. The interviewer reviewed many documents to validate that participants' business activities usually used 3R/4R principles (reduce, reuse, recycle, and renew). The interviewer also became an active member of the business community under observation. As an interview guide is required for qualitative interviewing [81,82], the researchers developed an interview guide on the bases of the research question above to increase reliability [76].

The researchers of this study attempted to acquire results from specific observation to wider generalization using the inductive approach. When scholars generate data inductively, codes, categories, and themes generate from data [83]. Atlas.ti, a prominent qualitative software package, was used for analysis. Data analysis is the process that follows data collection, transforming the data into meaningful findings [84]. With qualitative data, analysis does not follow a linear format, but rather reflects a spiral image that is not fixed. The primary focus of thematic analysis is on themes throughout the entire data set rather than the depth of a single participants' interview [85].

The researchers followed the six stages of Braun and Clarke to conduct thematic analysis [86]. First, the researchers of this study took field notes during observation in order to collect additional evidence. At this stage, a researcher read the interview transcriptions multiple times to familiarize himself with the data. Furthermore, extracts and themes were identified during the reading of interview transcriptions to help increase understanding of the data for subsequent interpretation of the data [86,87]. The familiarization procedure of the thesis started with the transcription of the data from the interview and observation by reviewing the interviews of participants. The researchers generated different codes when transcribing the interview. Moreover, this stage provided an opportunity to think about common, usual, and general ideas in the thesis' objectives.

The second stage of this process is generating initial codes. Researchers of this thesis transferred fifteen transcripts into the qualitative software Atlas.ti after the fifteen interviews were transcribed. Each interview was read systematically and thoroughly, line by line, and codes were provided to each line, along with chunks. This ongoing process could create limitless codes. Sometimes, researchers of this study were given more than one code, and they also had to ensure that each extract was notated identically by checking the assigned codes multiple times. After completion of the initial coding of the transcripts, the researchers began expressing the codes and connecting them in groups. As a result of this process, the researchers developed mind maps from the fifteen transcripts that permitted them to study the relationship between themes, sub-themes, codes, and key themes.

The third stage is searching for potential themes among different codes with the help of software, thereby developing themes from the coding groups and also associating them to the literature review and research questions. The researchers of this study created possible themes after reading, re-reading, reviewing and re-reviewing of the codes and data in this study. Moreover, researchers tried to identify the different codes that are linked to other codes in order to develop an overarching theme.

After developing the themes, researchers generated the initial stage of the thematic 'map'. There is no standard rule of thumb for the number of themes [86]. Braun and Clarke mentioned in their study that this stage is about studying and refining themes [87]. Themes were refined after reviewing in the preceding stage. The researchers classified the text sections that communicated the ideas represented by individual codes. Thus, the researchers stopped coding data when ideas were repeated and no additional themes appeared.

In the fifth stage, researchers modified the sub-themes from the theme and divided them into sub-themes. Therefore, researchers found that recording field notes from observations was very helpful for easily identifying emerging codes and themes within the data. We looked over all of the transcripts and literature again to make sure we did not use jargon, codes, or themes that did not cover the most important parts of the research topic.

4. Results (Determinants, Diffusion, and Consequences)

The determinants of circular entrepreneurship are numerous. Figure 1 shows the general determinants, which are classified into three subgroups: motivation, causes, and initiatives. After the determinants, we analyzed the outcomes of circular entrepreneurship.

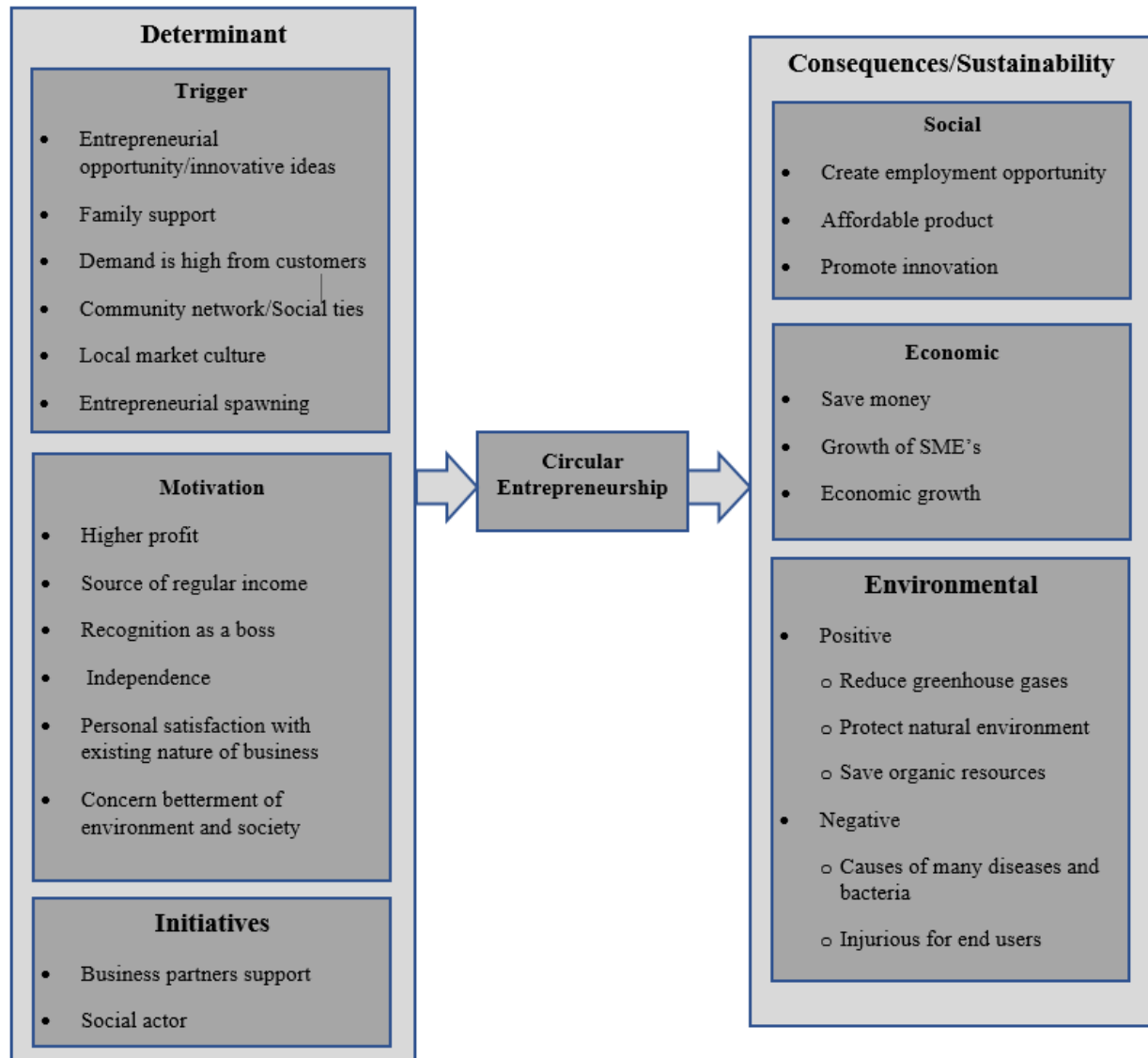


Figure 1. Determinants and outcomes of circular entrepreneurship.

4.1. Determinants

Undoubtedly, entrepreneurs constantly explore and capture opportunities in different fields. The circular economy is a widespread, persistent, and growing economy in both developed and developing nations. Thus, some entrepreneurs deliberately explore opportunities in the circular economy to generate maximum profit and employment opportunities for others. Circular entrepreneurial practices are more acceptable in a few business communities than others. Evidence shows that entrepreneurs engage in circular businesses due to having family members already engaged in such practices. Consequently, they teach all the tricks of this field on how to perform in a better way and handle all issues regarding getting used material, cheap labour, or quality production. In developing countries, the majority of people are price conscious, and they do not spend on costly items. They prefer to buy low-cost products rather than premium quality products. Therefore, the demand for recycled items is too high. Entrepreneurs use second-hand raw materials to produce these

kinds of low-cost products for this particular sector. Social ties play a significant role in the development of circular enterprise culture. However, individuals learn these practices from their family, colleagues, neighbors, friends, classmates, acquaintances, and relatives regarding how to start, run, and grow their enterprises in the circular economy. Moreover, local market cultural practices also boost such kinds of enterprises. A highly competitive local market encourages linear production businesses to pursue circular practices to meet the customer's needs. The importance of market culture in the development of circular entrepreneurship is as high as that of family tradition. Price-conscious customers seeking low-price products encourage entrepreneurs to practice CE. Furthermore, entrepreneurial spawning (knowledge & prior experience of a specific sector) also plays an important role in enabling individuals to take the initiative in circular entrepreneurship. Thus, our research shows how entrepreneurs receive experience in a particular section that might help them to become entrepreneurs shortly.

The following excerpts from the interviews provide insights into the determinants of circular entrepreneurship.

"One day my uncle offered me a job in bank as a credit officer with handsome salary, but me and my father simultaneously spoke NO because we had good option in form of this business than that job . . . " (Yaseen, 55 yrs, Plastic outdoor furniture)

" . . . opinions vary from person to person, and according to my opinion business is better than job. In this sector you get more chances to expand your business and maximize your profitability. My reason for success is learning from failures, persistence and working hard. I dreamt big and I planned for my success and now I am a biggest supplier with highest market share in this market . . . " (Majeed, 50 yrs, Plastic outdoor furniture)

" . . . everything learnt from my family members who were already engaged in similar nature of business . . . learnt all techniques from them of how to deal with customers, suppliers, and dealers . . . " (Faiz, 45 yrs, PET sheets)

" . . . our business community is like a book and I learn many things from this book specially starting and managing your business . . . " (Ali, 35 yrs, Plastic toys and kitchen pots)

" . . . without experience, it was not easy to start such business because majority of suppliers gave supplies on credit to those persons who have already networking with suppliers. I spent first eight years in this market as a worker in different businesses. Newly entrepreneurs do not know the culture and values of the market but old persons have sufficient knowledge about the market reaction in particular situation" (Anser, 42 yrs, Flower pots)

" . . . five years I was working as a helper without any pay in my uncle's shop. In early months on that period, I was frustrated but with the passage of time I got the knowledge and skills about how to get the raw material, how to start with minimum capital and how to convince your customer. Now my uncle is my competitor and I am owner of my business in same market where my uncle is working" (Basheer, 51 yrs, Plastic outdoor Furniture)

" . . . manufacturing of plastic pots . . . it was not my first or second choice after the completion of graduation. My first job was white color job (office clerical job) in a renowned bank as a cashier but working schedule of bank was very tight with low package . . . this business have enough returns" (Akram, 36 yrs, Plastic Bottles)

The motivations for circular entrepreneurship can be both financial and non-financial. The financial motivations include higher profit and a source of regular income. The non-financial motivations for circular entrepreneurship include recognition as a boss, independence, personal satisfaction with the existing nature of business, and concern for the betterment of the environment and society.

The following excerpts from the interviews provide support to the researchers' claims.

“... profit margin of such businesses is very high because the raw material available on low cost ... such businesses are a regular income generator” (Ali, 35 yrs, Plastic toys and kitchen pots; Umair, 34 yrs, Plastic outdoor furniture)

“I have been working in one reputed company in Gujranwala as accounts manager with handsome salary before this business. One day I faced words of abuse and bullying from my boss that caused the last day on job and first day in this market. After leaving the job, I came to my friend’s toy shop just only for relaxation and minimize the stress. Next ten months I went to that friend’s toy shop daily thus got motivated to start my own manufacturing toy and kitchen pots business. Now, I am working as a boss” (Zain, 42 yrs, Plastic toys and kitchen pots)

“... objective of every business is to gain maximum profit through workers. There is lack formal job description and job specification of any employee. Hence, I gave any task to any worker to achieve the goal. Nobody ask me any question ... that is independence ... ” (Akram, 32 yrs, Plastic bottles)

Entrepreneurs take essential internal initiatives, expand their resources, improve their skills, and spend more effort and time to pursue circular entrepreneurship. Later, circular entrepreneurs find some encouragement, help, assistance, and care from external sources. Every small or large business model requires some kind of financial, physical, or intellectual support to meet the needs of enterprises. Circular entrepreneurs often take and accept the above-mentioned support from their business partners, such as suppliers of plastic raw materials. Some family members are active in similar markets such as fathers, brothers, or uncles. They also provide some technical or intellectual support to operate their business successfully. Circular entrepreneurs often get feedback from their close community networks about their product’s quality, cost, and sustainability. Entrepreneurs who have strong network relations with market stakeholders, such as friends, colleagues, and neighbors, have more knowledge about the circular market. Some entrepreneurs are voluntarily engaged in the circular economy as social actors, meaning they participate for social motives rather than economic motives, such as reducing emissions, saving natural resources, or protecting the environment. This is expressed in the responses of participants.

“Availability of Labour is issue in every industry but the beauty of this market is that workers are easily available at a low salary or wages. Because no technical knowledge required for such tasks. They belong to deprived family and they want daily bases is cash. We meet their needs” (Asif, 28 yrs, Plastic outdoor furniture)

“My father is in this market from 1980 and know all tactics and strategies of all government officials he has formalized his business 18 years before but unable to get any benefit in these years. So, he suggested me not to formalize my business ... ” (Meer, 36 yrs, Plastic bottles)

“... I provide low price products to the increase the standard of living of our customers ... ” (Zain, 42 yrs, Plastic toys and kitchen pots; similar views of Khurram, Majeed, Meer etc.)

4.2. Consequences

Circular entrepreneurship has a variety of significant consequences that traditional products may not have. These consequences will be explored through the lens of three dimensions of sustainability—social, economic, and environmental—in the following section.

Unemployment is a major issue in developing nations. Therefore, circular entrepreneurship could create new jobs for both skilled and non-skilled people. Circular entrepreneurs promote innovation by using new ways of thinking to capture the customer’s needs and convert them into cost-effective enterprises. During data collection, one respondent replied that “the best innovation will not come from the technology side, but come from social changes”. For example, recycled plastic is used to make outdoor furniture, and companies use recycled plastic when producing a new plastic model of furniture in order to reduce

their R&D costs. The cost of conventional products is too high for customers, but some products made with recycled material can become affordable and accessible to consumers who do not have enough money to buy regular or high-priced products. For example, some plastic toys made from recycled plastics are extremely low-priced toys as compared to those made with fresh plastics.

Plastic toys, furniture, and pots are common items in daily life on different occasions and for many purposes. Customers spend more money when they buy new plastic toys, furniture, or bottles, but they save money when they buy recycled items. Circular entrepreneurship has a positive impact on economic growth and the generation of employment opportunities. Recycled items empower many men and women to start their own small trading stores and earn money for their families. Their business model is entirely based on recycling things.

Circular entrepreneurship can have both positive and negative impacts on the environment. The positive impacts include: the level of poisonous greenhouse gases is lower during recycling plastic than when producing from scratch; trash landfills could destroy the natural environment; recycling means less garbage, trash, and waste in landfills; and plastic recycling saves valuable organic resources. The negative impacts, meanwhile, include heaps of plastic trash that are the source of many diseases and bacteria in unsafe areas, as well as toxic chemicals used in the recycling process that could prove harmful to customers, especially when found in toys and plastic furniture for children.

4.3. Open Innovation within Circular Entrepreneurship

The argument has been made that innovation will be crucial in accelerating the shift to a circular economy [88,89]. Innovation happens in consumer standards as well as manufacturing systems, distribution, and the life cycle of products when it comes to the circular economy [90,91]. Circular business models prioritise product and process, and they value innovation as a core component, for example, as evidenced in supply chain behaviour when the creation of new goods adheres to the circular economy's guiding principles [92–94]. In this regard, OI has the ability to lead the shift to CE because it strives to improve information flows, speed up the innovation process, and expand markets for the benefits that invention has on the outside [95]. For instance, Hu et al. found that acquiring outside technologies enables businesses to effectively respond to environmental legislation [96]. Partnerships with outside actors are a crucial component for the adoption of CE, according to recent studies. These instances demonstrate OI's capacity to accelerate the move to CE by lowering technological hurdles to adoption, such as knowledge gaps, lack of technical solutions, and adjustments needed for product projects and manufacturing procedures [88,97]. This allows creative projects focused on CE to be developed, because applying OI principles tends to open organizational boundaries, enabling collaboration and information and technology exchange with others [94,98].

Previous studies show that SMEs do not create innovative products, do not spend on R&D, and do not export [99]. At large, such enterprises do not have sufficient funds and the necessary resources to commercialize and internationalize their products [100–102]. Such firms can develop strong relationships with inter-firms to access necessary resources. With the help of inter-firms, they can access their location, technological resources, and human resources to develop new products at a low cost [103,104]. During observations and interviewing, researchers found that external knowledge is important to all enterprises, which are driven by external stakeholders and information obtained from concerning agencies, raw material suppliers, and other participative stakeholders. Moreover, the analysis of transcripts of the interviews shows that OI is an important element in the creation of new products with certification.

5. Discussion

In this section, we first explain the theoretical and then the managerial implications of our research. The final section provides rationalization for limitations and recommends

some opportunities for future research. This study makes two main contributions: it uncovers the antecedents of circular entrepreneurship and points out the consequences of circular entrepreneurship through the lens of three dimensions of sustainability: social (namely, creating employment opportunities, affordable products, promoting innovation), economic (namely, saving money, growth in SME's, economic growth), and environmental (both positive and negative impact on the environment).

5.1. Theoretical Implications

We theoretically show that triggers, motivation, and initiatives are the main determinants of circular entrepreneurship. This study contributes to the domain of entrepreneurship literature. People have both financial and non-financial motivations for pursuing circular entrepreneurship, but they achieve perfect output when the financial and non-financial motivations match up correctly with their goals.

Social factors, as well as economic factors, play a significant role in the development of circular enterprise culture. The findings reveal that market culture, family support, and community networks play a major role in entrepreneurs' decision-making. For instance, family members can provide financial (e.g., a loan without interest or share their labour) and non-financial support (e.g., feedback on product ideas or the implications of strategic moves) from idea generation to operation of their businesses. Business partners also offer some financial and non-financial support to such kinds of businesses. For instance, suppliers give raw materials on credit or train their employees without any charge on how to operate plants or machinery. As many of the participants put it very thoroughly, market culture is also involved in promoting the circular nature of business culture rather than the linear economy. Our theorizing also adds to the literature on entrepreneurship [105–109] by disclosing the role of family support, market culture, and community networks in the development of circular entrepreneurship by providing technical knowledge, resources, and valuable feedback to entrepreneurs.

The results suggest that circular entrepreneurship contributes to sustainability; therefore, this study validates the results of previous studies indicating the value of circular entrepreneurship for sustainability [109,110]. However, the findings of our study are still in the subjective anecdotal phase. There are a lot of quantitative and qualitative ways to learn more about the nature and relationships of circular entrepreneurship.

5.2. Managerial and Policy-Making Implications

There are several implications for specialists, consultants, and practitioners in this domain. First, the government should develop an open innovation forum that is based on input from industry experts in different areas. They find and introduce more comprehensive, sustainable packing solutions for wasteful plastic products. This forum could also conduct action-packed workshops and seminars to design and create prototypes for chosen plastic items.

Second, this study provides insights for the managers of financial institutions about the potential for current employees to become entrepreneurs in the field of circular entrepreneurship. Therefore, financial institutions could make a feasible policy for the type of people who have technical knowledge and experience in circular entrepreneurship. They learn a variety of skills and form numerous connections with key stakeholders. The study also shows that entrepreneurs' families and communities can boost the particular knowledge and technical skills needed to become entrepreneurial, while providing attention to such community groups and establishing more supportive associations for their betterment. The goal of these groups is to improve social connections so that people can get financial or other technical help [111].

Entrepreneurship is the major source of growth in economic conditions and tackles many economic issues, such as poverty and unemployment. Because the buying power of customers in developing markets is very low, firms can try to produce items at a very low price. Circular enterprises serve low-income customers by offering an affordable

product with attractive features. Policymakers can also get a better understanding of such enterprises from the findings of this study. They should reassess policies regarding circular entrepreneurship and suggest ways to promote circular entrepreneurship.

5.3. Limitations and Avenues for Future Research

In this section, we draw attention to limitations of this study and possible approaches to mitigate these limitations, thus closing this section with possible gaps for research studies. We collected data from plastic-related enterprises, which is one limitation. We could have collected extensive data from different sectors to provide a more holistic portrayal of circular entrepreneurship. We have limited logistics and resources; hence, we did not collect data from other stakeholders, such as consumers or suppliers. They might have provided a more complex picture and insights into how circular products affect their lifestyle. Circular enterprises are not just about low-cost products produced. Many innovative practices are involved in such enterprises. During interviews at the workplace, we found many frugal innovation practices. This paper opens up a possible opportunity for future researchers to explore what types of innovation processes, activities, and ideas are involved in these enterprises and finally identify the constraints that they face.

6. Conclusions

This study synthesizes the determinants of circular entrepreneurship, namely motivation, triggering, and initiatives. We explore the phenomenon of circular entrepreneurship, its determinants, and how circular enterprises manufacture products for low-income customers. Emerging markets are widely perceived as a favourable and promising environment for circular entrepreneurship. The development of circular entrepreneurship is an ever-growing obsession for society, communities, and local businesses. We conclude that circular entrepreneurs can be motivated both intrinsically and extrinsically. In the case of Pakistani entrepreneurs, they voluntarily choose this endeavor rather than lack of other sources of livelihood. The findings of this study show that the majority of participants in circular entrepreneurship embody neo-liberal theory because they voluntarily select this form of business. Their opinion of this endeavor is that CE is a good option for making a good income, as opposed to alternative sources of earning. Therefore, participants represented that they were voluntarily engaged in an entrepreneurial endeavor; most of them had alternative options, but they chose this sector as social actors. This endeavor was conceived in terms of Post-structuralism. Identity and flexibility in the working environment are also major factors for remaining in circular entrepreneurship. The results show that in the developing world, entrepreneurs are engaged in the circular economy as social actors who participate for social motives rather than primarily economic motives, such as autonomy and work-time flexibility. Circular entrepreneurship and emerging markets are widely seen as favourable environments for frugal innovation.

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- ¹ <https://www.weforum.org/projects/circular-economy> accessed on 2 March 2022.

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