



NEXT-GEN SUSTAINABILITY: ANALYSING ATTITUDES AND ACTIONS OF GEN Z TOWARDS CIRCULAR ECONOMY AND ECO-FRIENDLY PRACTICES

MEHAR RIZWANA^{1*}, THANGAMUTHU MOHANASUNDARAM¹, PADMALINI SINGH², KUPPUSAMY MUTHUKUMAR³, THANGAMANI DHEEPA⁴ AND NIHARIKA MISHRA⁵

¹M.S. Ramaiah Institute of Technology, 560054 Bengaluru, Karnataka, India. ²Department of Management Studies, BNM Institute of Technology, Banashankari, 560070 Bengaluru, Karnataka, India. ³Shri Nehru Maha Vidyalaya College of Arts & Science, 641059 Coimbatore, Tamil Nadu, India. ⁴School of Business and Management, Christ University, Hosur Road, 560029 Bengaluru, Karnataka, India. ⁵M.S. Ramaiah Institute of Management, 560054 Bengaluru, Karnataka, India.

*Corresponding author: drmrizwana@gmail.com

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ABSTRACT

Generation Z's (Gen Z) role in the creation in maintenance of the circular economy is very important, as they have the potential to shape sustainable practices for future generations. This study aims to comprehend Gen Z's role in promoting environmental sustainability within the framework of the circular economy. An explanatory sequential research design has been adopted in order to achieve the objectives of this research article. The researchers have initially collected quantitative data from 941 respondents using a questionnaire. The respondents were selected based on a stratified random sampling approach. Following the quantitative analysis, qualitative data was collected via interviews with 18 Gen Z participants. Based on the quantitative data analysis, the study found that Gen Z exhibits a strong commitment to promoting circular economy. The results of the Structural Equation Modelling (SEM) shows that "recycling activity" has the highest impact on achieving the principles of circular economy. Based on the qualitative analysis, this study discovered four main themes. The first theme was centred on "Awareness of Circular Economy". The second theme explored the "Integration of the Circular Economy on Personal Life". The third theme, probed into the "Impact of the Circular Economy on People's Lives". While the final theme addressed "Steps Towards Building an Active Circular Economy".

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Introduction

India is one of 12 nations, including China, Brazil, Indonesia, Thailand, Russia, Mexico, the United States, Saudi Arabia, the Democratic Republic of Congo, Iran, and Kazakhstan, that collectively account for 52% of the global mismanagement of plastic garbage (Hishan, 2023). It is anticipated that by 2025, India may generate 0.7 kg of waste per capita a day which is nearly six times higher than in 1999 (Kumar *et al.*, 2017). Given the increasing population, urbanisation, environmental concerns, and international obligations, it has become crucial for India to transition towards a circular

economy (Lal, 2016). Thus, India needs to stick to the principles of the circular economy which necessitate the extermination of pollution and waste. To enhance economic value and to retain, and or maintain its natural environment a special emphasis must be made for the circulation of goods and services (Kakwani & Kalbar, 2020). The circular economy is an economic activity that helps minimise waste and promote the efficient use or total reuse of resources (Ghisellini *et al.*, 2016).

This statement emphasises the necessity of adopting a comprehensive circular economy

perspective for both goods and services. To improve industrial productivity, competitiveness, and resource efficiency, India needs to adopt methods that are in line with the principles of the circular economy (Sánchez-Ortiz *et al.*, 2020). Considering its high resource consumption and substantial population growth, India has the potential to emerge as a global leader in terms of circular economy adoption (Rani Yaduvanshi *et al.*, 2016). The implementation of a circular economy will provide India with substantial environmental benefits and help it control its pollution levels. India's Nationally Determined Contribution (NDC) objectives of minimising greenhouse gas emissions meeting the promises for the Sustainable Development Goals (SDGs), addressing responsible consumption and production (Goal 12), make it essential to shift from a linear economy to a circular economy (Sawhney, 2021). Further, by adopting a circular economy, India can reap several benefits and significant potential for enhancing industrial competitiveness and fostering economic growth. According to Morseletto (2020), India's circular economy is expected to achieve a value of USD 2 trillion by 2050.

The implementation of a circular economy necessitates a comprehensive strategic planning at the macroeconomic level and proactive involvement of many stakeholders, including government, industry, and public (Araujo-Morera *et al.*, 2021). By establishing a stable and supportive legislative setting for a circular economy, India can become a forerunner in manufacturing and meet its commitment to combat climate change. In light of the present administration adhering to principles of circular economy is imperative, and it encourages the implementation of the seven R's framework, including Reduce, Reuse, Recycle, Redesign, Remanufacture, and Refurbish (Campbell-Johnston *et al.*, 2020).

The circular economy plays an important role in accomplishment of SDGs, particularly Goal 6 (clean water), Goal 7 (clean energy), Goal 11 (sustainable cities), Goal 12 (sustainable consumption and production), Goal

14 (conserving oceans), and Goal 15 (restoring life on land) (Zhuang *et al.*, 2023). Active participation of the nation's youth especially the Generation Z (Gen Z), aged between 12 and 27 years old is obligatory, as they are the stakeholders who are directly related to and will be impacted by all the initiatives implemented as part of the circular economy (Aedrienne *et al.*, 2022). Gen Z, born between 1997 and 2012, possess unique characteristics that differentiate them from other generations (Wood, 2013). Gen Z stands out for their better understanding of environmental issues and for directly embracing eco-friendly products (Adnan *et al.*, 2017). Gen Z are known for their innovation and a dedication to change. Gen Z prefers clear and actionable development that include comprehensive environmental policies and strategic climate investments (Van den Bergh & Pallini, 2018). Gen Z should take the lead since they can be the most innovative and enthusiastic in creating a positive impact on nature (Nikolić *et al.*, 2022).

Additionally, Gen Z can educate their families and friends on the importance of the adopting a circular economy, making everyone more eco-conscious about the products and services used, which will in turn, reduce waste and cut down GHG emissions (Paolo, 2022). If Gen Z does not actively participate in and bring about change, the consequences of the environmental degradation will likely be beyond repair (Hamadeh, 2022). There is a noticeable shift among academicians and researchers towards embracing and building a circular economy. But critics argue that its meaning can vary depending on individual perspective (Morseletto, 2020).

Current research affirms that major studies concerning circular economy focus on reusing and recycling rather than placing special emphasis on circular economy (Pesce *et al.*, 2020; Sverko Grdic *et al.*, 2020). The significance of a circular economy lies in the opportunity to eliminate waste, balance resource consumption, and decrease the impact on the environment (Sulich & Sołoducho-Pelc, 2022). As the circular economy necessitates reuse,

repair, and recycling it contributes to save natural resources (Bradley & Persson, 2022). Sustainable practices that reduce, recycle, reuse, and recover are integrated in the conventional economic model to build a circular economic model. Beyond recycling extracting usable energy from waste materials contributes to the achievements of circular economy by optimising resources (Olushola Babatunde Ayorinde *et al.*, 2023).

Further, it aids in generating new development opportunities, creates jobs, and promotes economic growth which is a critical approach for long-term sustainability and resilience of society (Corvellec *et al.*, 2022). The active engagement of individuals in sustainable practices also plays a key role in building a circular economy (Valencia *et al.*, 2023). By following these practices, destructive environmental impact can be minimised, contributing to a sustainable future. The circular practices lead to saving money, increasing efficiency, and boosting satisfaction on both sides: For people and the planet's well-being. It is critical to implement the practices of reuse, recycling and reduction to create a sustainable and secure society for upcoming generations (Ajwani-Ramchandani *et al.*, 2021).

Younger generations are progressively more involved in adopting the principles of a circular economy. They are considered as the key contributors for transforming from linear to circular models. They also demonstrate a greater potential for sustainability compared to previous generations (Krajnc *et al.*, 2022).

One of the main obstacles to the adoption of the circular economy is the lack of awareness and knowledge of the concept or business model in general (Iacovidou *et al.*, 2021). Much of the effort needs to be done to familiarise the public with the positive sides of circular economy (Klein *et al.*, 2020). There is a necessity to introduce changes in the laws and offer incentives to businesses for integrating circular economy practices until these practices become more efficient. Hence, the cooperation between

the government, businesses, and consumers is crucial for successful implementation of the circular economy approach aimed at promoting sustainability (Ivankova *et al.*, 2006; Iacovidou *et al.*, 2021), transitioning to a circular economy requires systematic changes, enhanced awareness, and economic incentives.

Additionally, greater cooperation between the government, businesses, and consumers is essential to fully realise the circular economy's long-term economic, social, and environmental benefits. With this background, the current study aims to understand Gen Z's perception and participation in adopting a circular economy through environmental sustainability. Specifically, the study will examine how Gen Z understands and values the principles of a circular economy and their readiness to engage in behaviours that support a sustainable future. The study further analysed the impact of circular economic activities on achieving sustainability goals.

Research Gap and Theoretical Framework

Although the concept of a circular economy has gained traction among research scholars and policymakers, the existing body of literature is primarily focused on solid and waste management practices, industrial policies, policy-level interventions, and practices related to reuse, recycle, and repair (Pesce *et al.*, 2020; Sverko Grdic *et al.*, 2020). Inadequate scholarly focus has been paid on behavioural and perceptual dimensions of circular economy practices, particularly among individuals and communities. Majority of the studies have overlooked the role of human behaviour and the level of human involvement in circular economic practices. Within this context, there exists a significant research gap concerning the awareness, attitude, and behavioural engagement of Gen Z in the adoption and implementation of circular economy principles.

Despite the fact that Gen Z is known for their prosocial behaviour and preference for sustainable consumption (Adnan *et al.*, 2017;

Van den Bergh & Pallini, 2018), research articles have been unable to provide evidence of their interest in circular economic practices, especially in the context of the Indian demographic. Moreover, given that India holds the largest Gen Z population globally, understanding their role in the transition to a circular economic model is critical.

The theoretical framework for the study is built upon several interrelated theories that explore the motivators, challenges, and activities characterising the shift toward the circular economy. Specifically, the study variables are identified based on the Norm Activation Theory (Schwartz, 1977), which focuses on the role of awareness and an individual's sense of moral obligation in influencing their norms regarding specific social or environmental issues. Further, the study variables are also adopted from the Theory of Planned Behaviour (Ajzen, 1991), a widely recognised model for understanding individual behaviour. This theory explains how Gen Z's eco-friendly behaviour is shaped by their attitudes, perceived social norms, and perceived behavioural controls. Additionally, the Environmental Identity Theory (Clayton, 2003) has been applied to explore how strongly individuals within Gen Z associate their personal identity with environmental conservation, thereby influencing their likelihood to adopt and maintain sustainable lifestyles. Moreover, to assess how modern individuals construct their identities through lifestyle choices, the Lifestyle Theory (Giddens, 1991) is incorporated. Hence, by adopting the aforesaid theories, the study adopts a multi-theoretical lens to comprehensively examine Gen Z's engagement with sustainability.

Materials and Methods

Research Design

The current study has employed explanatory sequential research design. Explanatory sequential research design is a mixed method

approach that helps to conduct a comprehensive analysis of both quantitative and qualitative research (Ivankova *et al.*, 2006). To adopt explanatory sequential research design, the researchers have collected quantitative data from Gen Z respondents. After analysing quantitative data, qualitative data was collected by selecting Gen Z participants who have exhibited the maximum variance of mean scores under the investigation.

Sampling Methodology and Geographic Scope

The geographical scope of the study focused on the capital cities of South Indian states. 45 questionnaires were distributed to 5 colleges each in Bangalore, Chennai, Hyderabad, Thiruvananthapuram, and Amravati. The colleges were selected at random using a lottery method. Therefore, the current study is based on a stratified random sampling method. The final sample consisted of 190 Gen Z respondents from Bangalore, 182 from Chennai, 187 from Hyderabad, 176 from Thiruvananthapuram, and 179 from Amravati.

The Gen Z population in India consists of 472 million people, making it the largest cohort in the world (Nanjundeswaraswamy & Divakar, 2021). For quantitative study purposes, Cochran formula of the known population was used to determine that a sample of 783 respondents with a 3.5% margin of error was good enough for the study. To account for non-responses, the sample size was increased by 30% resulting in 1,125 questionnaires being distributed across the study area. 1,021 responses were received, and after removing the outliers, 941 responses were deemed suitable for the purposes of this study. The research instruments were prepared by adapting them to the study by Korsunova *et al.* (2021). The questions were carefully worded to ensure clarity and avoid bias, allowing participants to provide true responses. Additionally, experts in the field reviewed the questionnaire to ensure its validity and reliability.

Interview Methodology

For the qualitative study, 10 participants with extreme variations—5 respondents with lowest mean scores and 5 respondents with the highest mean scores for the Determinants of Circular economy—were selected from each state. Of the 50 participants selected, only 18 participants agreed to participate in the interview as a result, the participants were evenly distributed between the two score categories, to with 9 with the lowest mean scores and 9 with the highest mean scores. The interview sample involved 5 Gen Z interviewees from Bangalore, 4 from Chennai, 3 from Hyderabad, 3 from Thiruvananthapuram, and 3 from Amaravati.

The four questions asked during the interview were: (i) What is the respondents’ understanding of the concept of the circular economy? (ii) How does circular economy impact the respondents’ personal life? (iii) How does circular economy influence others’ life? (iv) How can the government, educational institutions, non-government organisations (NGO), and corporate social responsibility (CSR) support in achieving the goals of circular economy? For qualitative analysis, the data obtained was transcribed and analysed using the NVivo 14 software. Major themes were identified and the analysis showcased child nodes as subthemes.

Results and Discussions

Demographic Profile of the Gen Z Respondents

Gen Z ‘s role in circular economy is very important, as they have the potential to forefront the sustainable practices for the future generation. To gain better insight into their perspectives, researchers have investigated their demographic details, awareness of circular economy principles, circular consumption patterns, and the initiatives that motivate their involvement in shifting towards a circular economy.

The demographic profile of Gen Z (Table 1) revealed that the gender distribution of the respondents is well-balanced with 54.4% being male and 45.6% being female. In terms of education, 49.3% of respondents were undergraduate and 50.7% were postgraduate students. Age-wise, 60.3% if the respondents were between 18 and 23 years old and 39.7% were between 23 and 27 years old. Gen Z are generally characterised as being well-cultured, tech-savvy, independent, and socially active.

Determinants to Achieve Circular Economy

By conducting a thorough examination of the existing body of literature, the researchers have identified the vital propositions required for achieving circular economy principles. These include several practices like recycling,

Table 1: Demographic profile of Gen Z respondents

Demographic	Frequency	Percentage (%)
Gender		
Male	512	54.4
Female	429	45.6
Total	941	100.0
Qualification		
Undergraduate	464	49.3
Postgraduate	477	50.7
Total	941	100.0
Age		
18–23	567	60.3
23–27	374	39.7
Total	941	100

reducing, reusing materials, rejecting unnecessary consumption, and promoting sustainable consumption. Table 2 shows the descriptive statistics specifying Gen Z respondents' perspectives on determinants for achieving a circular economy, including mean, standard deviation, skewness, and kurtosis.

Gen Z, as depicted in Table 2, exhibits a strong commitment to promoting circular economy principles through their attitudes and behaviours. Gen Z respondents showed positive attitudes towards recycling-related activities, including sorting various waste materials, being aware of recycling points in the city, preferring recyclable items, and recycling rubbish at home.

Mean scores for these activities ranged between 3.50 and 3.70, suggesting that Gen Z generally accepts recycling as a significant factor in achieving a circular economy, with responses falling within the "neutral" to "agree" range. Furthermore, Gen Z respondents place specific emphasis on the reduction of non-biodegradable product usage as crucial to realise the circular economy. This involves giving up single-use items, cutting back on fast fashion, conserving water, cutting down on food waste, and cutting back on electricity use. Mean scores exceeding 4.00 indicates that Gen Z recognises that to avoiding using non-eco-friendly products is an important step towards creating a sustainable circular economy.

Table 2: Opinion of Gen Z respondents on determinants to achieve circular economy

	Mean	Std. Deviation	Skewness	Kurtosis
• I sort energy waste, plastics, cardboard, glass jars, etc.	3.62	1.417	-0.580	-1.076
• I am aware of various recycling points in the city	3.57	1.400	-0.532	-1.081
• I prefer to buy recyclable things	3.60	1.394	-0.553	-1.060
• I recycle rubbish at home	3.57	1.384	-0.522	-1.063
• I try giving up single-use products	3.73	1.412	-0.762	-0.849
• I try to minimise buying fast-fashion and short-lived products (e.g., fast-dodging, easily-breakable gadgets, fast-fashion clothes)	4.30	0.737	-0.977	1.426
• I do not use water in vain	4.27	0.713	-1.027	2.160
• I try to reduce my food waste	4.34	0.738	-0.798	-0.119
• I do not waste electricity	4.22	0.856	-1.217	1.960
• I avoid purchasing items that cannot be recycled	4.28	0.785	-0.979	0.965
• I consider buying products-based longevity and value to avoid them becoming waste	4.25	0.796	-0.892	0.677
• I refuse to buy stuff that is not necessary	4.36	0.719	-0.656	-0.816
• I try to reduce my consumption more, for example in clothes and impulse purchases	3.14	0.884	-0.020	-1.018
• I always try to repair broken things	2.03	0.916	0.169	-1.140
• I prefer buying second-hand books	2.12	0.896	0.003	-1.082
• I buy refurbished electronic products	2.14	0.864	0.001	-0.898
• If clothes are not fitting for use, I either sell it or donate it	2.10	0.869	0.064	-0.909
• I sell unnecessary stuff at the flea market	2.14	0.826	-0.209	-1.376
• Instead of buying and discarding things, I would focus on borrowing or renting or sharing	2.64	1.387	0.404	-1.164

• I borrow single-use items from my friends	2.50	1.426	0.514	-1.133
• I use cloth bags for groceries	2.51	1.348	0.476	-0.997
• I use a steel water bottle	2.55	1.413	0.551	-1.021
• I prefer to reduce my carbon footprint by avoiding car transportation	2.60	1.439	0.433	-1.195
• I prefer green modes of transportation like walking, cycling, or usage of public transport	2.47	1.422	0.595	-1.001
• I prefer carpooling	2.35	1.394	0.718	-0.820
• I buy wooden pens for college and work	3.13	0.873	-0.716	0.218
• I buy good-quality and durable items	3.86	0.877	0.013	-0.979
• When purchasing products, I prioritise the production process and durability	2.72	0.776	-0.139	0.414
• I refrain from consuming meat products and buy organic products	3.27	0.831	-0.850	0.110
• I try to avoid eating cheese and eggs	3.22	0.780	-0.776	0.528
• I consider an ecotourism destination for vacations	3.85	1.200	-1.155	0.692
• I plant a sapling in my house	2.88	1.129	-1.027	0.498
• I resort to organic gifting	2.79	1.236	-0.842	-0.321

Although Gen Z exhibits a significant orientation towards sustainable consumption, there is still much room for improvement. Areas that can be improved upon include sustainable practices such as opting for organic and eco-friendly choices in gifting, prioritising sustainable tourism, and inculcating dietary habits. However, their inclination towards repairing used items, purchasing second-hand goods, and embracing sharing economies signifies a shift towards more responsible consumption patterns. Additionally, the study revealed that Gen Z respondents had a strong commitment to sustainable consumption practices, as indicated by mean score that exceeded 4.00 for actions such as refusing to purchase items that cannot be recycled and avoiding unnecessary purchases.

However, the study also found that Gen Z expressed reluctance towards certain sustainable practices, as evidenced by mean scores below 3.00 for activities like repairing broken items, purchasing pre-owned books, buying refurbished electronics, and participating in

borrowing, lending, renting, or sharing items. This highlights areas where attitudes towards circular economic practices may require more encouragement or education. The standard deviation for determinants of circular economy is below 1.500, indicating minimal variation in responses among Gen Z participants. Additionally, the skewness and kurtosis values, which assess the normal distribution of data and are prerequisites for Structural Equation Modelling (SEM), fell within the acceptable range of between -3.00 and +3.00. These findings suggest that the data collected is suitable for conducting advanced analytical techniques like SEM, providing a robust basis for deeper exploration of relationships among variables related to circular economy behaviours.

Table 3 shows that Kaiser-Meyer-Olkin (KMO) measure of 0.776 indicates that the sample size is adequate for conducting factor analysis. As the Bartlett's significant value is less than 0.05, it suggests that the dataset is suitable for factor analysis.

Hypothesis 1: The factors such as reuse, refusal, recycling, reduction, and sustainable practices are determinants to achieve circular economy.

Table 3: KMO Bartlett’s statistics

KMO and Bartlett’s Test		
Kaiser-Meyer-Olkin measure of sampling adequacy		0.776
Bartlett’s test of sphericity	Approx. Chi-square	19579.318
	df	703
	Sig.	0.000

Rotated Component Matrix

A set of 33 items were grouped into five unique categories of factors based on the characteristic linked to the sustainable habits of Gen Z in working towards a circular economy. These categories comprises 11 sustainability factors that demonstrate Gen Z’s commitment to sustainable practices and behaviours, seven reuse factors that demonstrate their preference for reusing items to conserve resources, four recycling factors that specify their participation in recycling materials and determination to reduce waste and recover materials, four reduce factors that capture actions aimed at reducing consumption and waste, present Gen Z’s proactive approach to minimising environmental impact, and finally, six refuse factors that represent behaviours focused on refusing or dodging products or practices perceived as harmful to the environment.

Confirmatory Factor Analysis

The measurement model has a goodness of fit index of 0.916 which demonstrates a very strong fit as it is considered an acceptable value. The Root Mean Residuals (RMR) should be below 0.050, the Root Mean Square Error of Approximation (RMSEA) should be below 0.08, the statistics of the current model are affirmed with the acceptable criteria.

Unstandardised and Standardised Estimates

The key determinants of circular economy encompass factors like reusing, refusing, recycling, reducing, and sustainable practices.

Considering the essential role of these factors in the study, SEM has been employed to comprehend the interrelationships among these factors in achieving a circular economy.

The results of the SEM analysis (Table 4 and Figure 1) show that “recycling” has the highest impact in achieving the principles of circular economy with beta value = 0.132 followed by reducing the use of non-biodegradables product with beta value = 0.111. According to the results, recycling has a significant positive influence in fostering circular economic practices. Moreover, the reduction in the use of non-biodegradable products appears as a vital aspect in respondents’ transition towards a circular economy. Therefore, it can be inferred that removal and reduction strategies are the most effective approaches for embracing circular economy.

These practices will reduce adverse environmental impact and promote sustainable consumption. By focusing on these strategies, Gen Z can play a leading role in shifting society towards sustainability. The results also highlight the importance of continuous education to improve the adoption of circular economy practices.

Further, reuse and sustainable practices exhibit beta value = 0.041 and 0.043, respectively, indicating a considerable impact on achieving circular economy. Implementation of these practices not only benefits the environment but enhances long-run economic efficiency. Based on the analysis, it can be inferred that

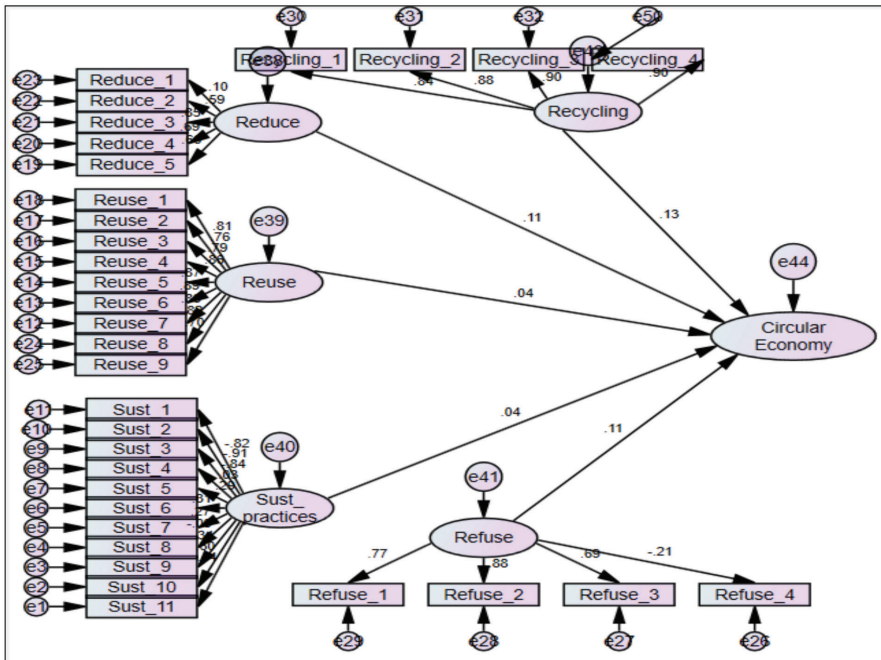


Figure 1: Pictorial representation of estimates for the structural equation model measuring the impact of reuse, refuse, recycle, reduce, and sustainable practices in achieving circular economy

Table 4: Estimates for the SEM measuring the impact of reuse, refuse, recycle, reduce, and sustainable practices in achieving circular economy

			Unstandardised Estimates	Standardised Estimates	p-values
Circular economy	<---	Recycling	0.653	0.132	***
Circular economy	<---	Reduce	0.453	0.111	***
Circular economy	<---	Reuse	0.111	0.041	***
Circular economy	<---	Sustainable practices	0.281	0.043	***
Circular economy	<---	Refuse	0.111	0.106	***

the variables reuse, refuse, recycle, reduce, and sustainable practices are determinant factors to achieve circular economy objectives and hence the proposed hypothesis has been accepted.

Qualitative Analysis

Demographic Profile of the Gen Z Interviewees

The interviews were conducted with 18 participants who had extreme responses to the questions on the principles of a circular economy. Of the 18 respondents, 9 were male and 9 were

female. 8 participants were between 18 and 22 years old, and 10 participants were between 22 and 27 years of age. In terms of educational qualifications, 10 participants were pursuing undergraduate studies, while 8 participants had completed postgraduate degrees.

Themes Identified

This research article discovered four main themes. The first theme centred on “Awareness of Circular Economy” in which the meaning

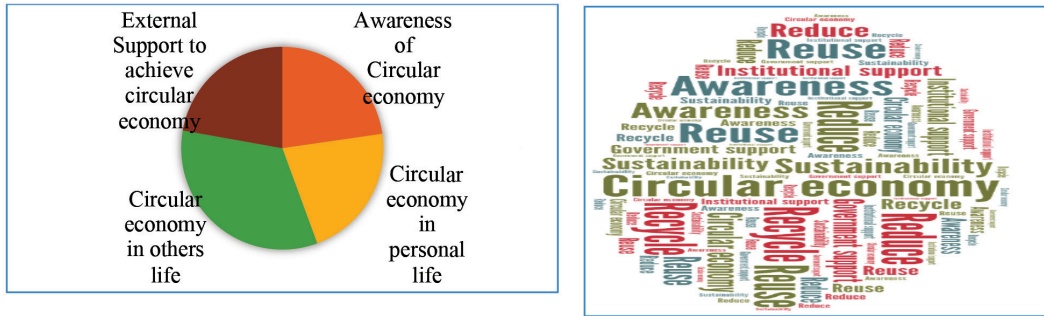


Figure 2: Themes identified and word frequency chart

and awareness of circular economy among the Gen Z was identified through 18 files with 85 references. The second theme explored is “Integration of Circular Economy in Personal Life”. This theme was supported using 18 files with 81 references. The third theme, which congregated the highest attention with 125

references in 18 files, probed into the “Impact of Circular Economy on People’s Life”. The final theme, “Steps Towards Building Active Circular Economy” had 18 files with 83 references discussing the external support to achieve a circular economy.

Discussion on Themes Identified

Table 5: Themes and subthemes identified from the interviews conducted with the Gen Z

Codes	Description	Files	References
Awareness	Meaning and awareness of the circular economy	18	85
Unaware	Extremely unaware of this concept, heard about reducing the carbon footprint	12	24
Not interested	I have heard about the circular economy, but I am not really interested	13	32
Aware	Circular economy is the need of the hour and needs to take ahead	7	12
Highly active	I am very clear on circular economy and its impact on the future sustainability of the Earth	5	17
		Files	References
Relate in personal life	Circular economy relates to your life	18	81
Not related	I do not consider anything related to sustainability in my life	9	18
Rarely	I sometimes do things which help in achieving sustainability and circular economy	16	28
Sceptical about usage	Achieving circular economy is not immediately possible, but I do my little bit	8	16
Need support	I feel that achieving circular economy is not possible with my single effort	9	19

		Files	References
Related to others' life	Circular economy relates to people's life	18	125
Unaware and not interested	Few people are aware and want to take up this in their lives	16	38
Taboo	Reuse, repair, recycle all these things are a taboo in society	12	36
Entrepreneurs contribution	Some entrepreneurs are taking this seriously	13	29
Family and friends	Some of my friends and family are very keen on using on green products	10	22

		Files	References
External support	More active in circular economy	18	83
Government support	Government support is essential in achieving circular economy	14	26
NGO, CSR, institutional support	Through the support of NGO and CSR people can be educated and circular economy can be achieved	15	28
Educational institution support	Educational institutions can disseminate information and enable the Gen Z to adopt practices leading to circular economy	16	29

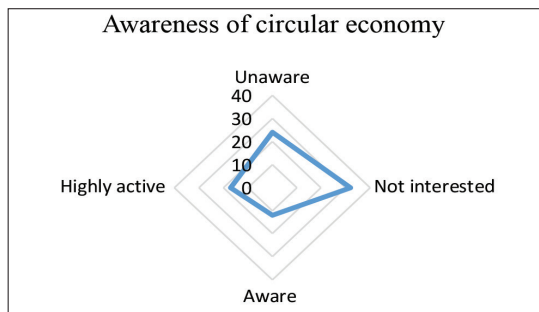


Figure 3: Opinion of Gen Z on awareness of circular economy

The initial theme identified was “Awareness of Circular Economy”. The results showed that Gen Z exhibits an extreme level of unawareness about the circular economy concept, while some have heard about reducing carbon footprints. A few interviewees expressed that they had heard about a circular economy but are not really interested in taking it forward. In contrast, few Gen Z also felt that circular economy was the need of the hour and expressed their willingness to contribute. Some interviewees expressed that they are very clear about the concept of circular economy and its impact on future sustainability.

However, a few Gen Z members saw the circular economy as a positive development and expressed their interest in discovering how they might contribute to a better, more sustainable future. They hinted at their openness in investigating ways to reduce their waste and its impact on the environment. Though mindfulness of the circular economy among Gen Z may be comparatively low, there exist enough potential for its uptake given the desire for further education and engagement on the topic. Gen Z appreciates the collective responsibility of companies and individuals in promoting the

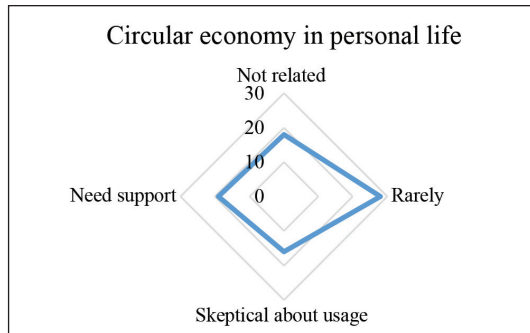


Figure. 4: Opinion of Gen Z on circular economy in personal life

circular economy. Despite their youth, Gen Z is ready to find solutions to challenges that mitigate the adoption of circular economy practices.

The second theme identified was the “Integration of Circular Economy on Personal Life”. Some Gen Z respondents expressed that they did not consider anything related to sustainability in their lives. However, for most of them, this process began when

they started to realise the critical role their activities play in determining the future of the planet. This realisation marked the beginning of their journey towards getting involved in environmentally friendly activities. It is evident that Gen Z interviewees enthusiastically promote circular economy by getting involved in recycling, minimising waste, and supporting local producers.

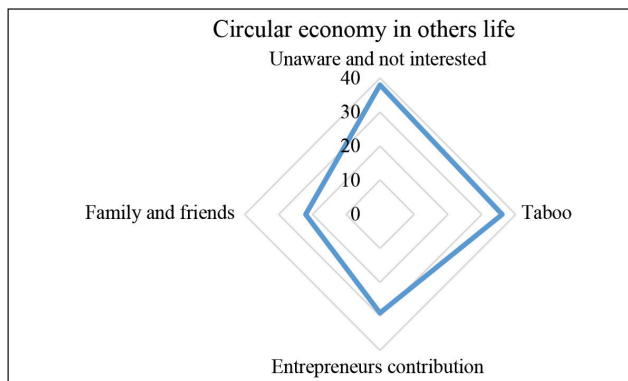


Figure. 5: Opinion of Gen Z on circular economy in others life

The third theme was on perception of Gen Z towards the role of circular economy in others’ lives. A few Gen Z respondents observed a lack of awareness about the circular economy among others. They believed that the reason for poor awareness is due to the lack of education and knowledge about the benefits of a circular economy. They have also opined that the lack of widespread practice is the main reason for lack of awareness about the benefits of a circular

economy. One of the interviewees said, “Circular economy is the future, but I think people might have more concern about their finance now. Maybe if people are more educated, more may want to adopt it.” Overall, the perception of Gen Z towards circular economy was mixed with different viewpoints, but there was a consensus that education and awareness were still needed.

Another interviewee noted that “Reuse, repair, recycle are a taboo in society.” They

perceived that there is a strong preference among the people for convenience and buying new products. Some interviewees noted the dedication and commitment of entrepreneurs towards the circular economy, while others said that their friends and family were enthusiastic

about using green products. Despite these varying opinions, there was a predominant sense of positivity and hope for the future, along with a shared commitment to building a sustainable society.

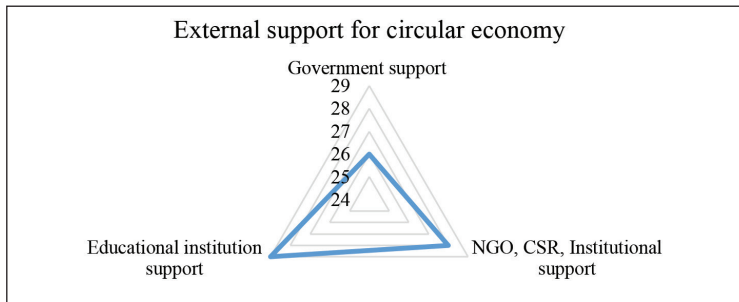


Figure 6: Opinion of Gen Z on external support to achieve circular economy

The subsequent theme emphasised the importance of external support specifically government initiatives to achieve circular economy. Gen Z highlighted the significance of government policy and regulation that promotes sustainable consumption that discourages waste. Furthermore, they have also stressed the funding support for the businesses that adopted sustainable practices. According to Gen Z, a healthy collaboration between the government, businesses, and individuals is a crucial step towards a leaving circular economy principles and objectives.

A few interviewees also highlighted the potential of NGO and educational institutions in edifying and motivating people to embrace circular economic principles. Finally, the Gen Z respondents stressed the necessity to have more hands-on learning experiences on sustainable consumption to understand first-hand insights into how their actions affect the environment.

Conclusions

The results of quantitative analysis reveal that recycling practices exert high influence on fostering the circular economy, specifically in the context of Gen Z. Furthermore, this transition

also requires a significant reduction in the consumption of non-biodegradable materials. The study also affirms that, apart from recycling practices, reuse and sustainability behaviours are also equally crucial for building circular economy.

The results from the qualitative interviews indicate that Gen Z possess a basic understanding about circular economy and have an average level of knowledge about the circular economy. However, most of the Gen Z participants are uncertain about the benefits of circular economy practices over linear economy. The Gen Z participants have also shared that though they have some level of awareness about recycling and upcycling activities, they do not possess a comprehensive knowledge about its benefits.

To fill this knowledge gap, it is mandatory to implement educational initiatives focused on the core principles of the circular economy: Reduce, reuse, recycle, refuse, and sustainable production. With the comprehensive education and training, Gen Z respondents exhibited a strong commitment that significantly contributes to the advancement of the adoption of circular economy.

Limitations and Scope for Further Research

The current study focuses on Gen Z, assessing their awareness and adoption of sustainable practices in daily life. For instance, individuals who belong to marginalised communities and are not involved in traditional education systems may not be adequately represented in the sample. Future research can be performed for other generations like millennials or baby boomers. Specifically, future studies could explore how industries can acclimatise to meet the needs and preferences of Gen Z, particularly in implementing sustainable practices. Moreover, researchers can conduct studies to find new ways that engage Gen Z in sustainability efforts. Studies can also be performed to examine the educational institutions, NGOs, CSR, and the government in achieving the principles of circular economy.

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Conflict of Interest Statement

The authors declare that they have no conflict of interest.

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