

Digital Natives vs Digital Adopters: A Comparative Study of Technology Dependence and Behavioural Outcomes Across Generations, Gen Z and Millennials

Sajeesh T J*

Associate Professor, Department of Commerce S.E.S College Sreekandapuram

Seena P P

Associate Professor, Department of Commerce S.E.S College Sreekandapuram

*Corresponding Author Email: sajeeshthadathil@gmail.com

Abstract: *The behaviour of every person is developed by the social, economic, cultural, and technological environment factors where they are born and grow. They exhibit similar patterns shaped by formative environmental factors. Millennials have witnessed technological and economic advancements, especially the impact of globalisation. They are digital adopters because they have gradually adapted to emerging technologies such as the Internet, mobile phones, online trade, and social media. Generation Z comprises digital natives born in a world of digital and technological advancements, and a social environment. These environmental factors may influence the behaviour, lifestyle, social involvement, and economic, financial, and career decisions of both generations. This study is quantitative research to compare the technological dependence and behaviour of Millennials and Generation Z by collecting data from 112 respondents from each generation randomly through a structured questionnaire. Data were analysed using descriptive statistics and an independent t-test. The study found that both generations are involved in the adoption of technologies; Gen Z is more confident, adaptable, and open to technological advancements than millennials. By considering psychological and motivational factors, millennials consider personal attitude and peers, and analyse the options before making decisions. Gen Z is more focused on self-expression and recognition, and more concentrated on trends and influencers while making decisions. A comparison of the variable life stage and economic orientation showed that millennials prioritise financial and career stability and are ready to take risks when necessary. Gen Z focuses on timing flexibility and is ready to switch careers while getting better options. The result of social influence shows that millennials are more socially influenced, while Gen Z is influenced by online communities and groups. Both are influenced at the same level by family and responsibilities. Social media usage reveals that Gen Z is more used to social media than millennials, while both groups show equal engagement in social media for social and health-related content. The analysis of buying behaviour indicates that millennials give more consideration to price and discount, while Gen Z considers brands and trends while shopping and both prefer online shopping.*

Keywords: Technology Dependence, Digital Natives, Digital Adopters, Millennials, Generation Z

INTRODUCTION

The present world is witnessing drastic changes and advancements in digital and technological fields. The introduction of computers and the Internet to the introduction of artificial intelligence significantly influenced the lifestyle and behaviour of individuals. The widespread use of digital devices, digital platforms, social media, and artificial intelligence influences the people in their social, economic, cultural, technological, and self-behaviour of every individual. These changes may not be uniform in every generation because of their living environment and life experiences.

Millennials (1981–1996), called digital adopters, experienced a transition from the traditional environment to the digital environment. They may be influenced by their environment, family, society, traditional media, and have planned behaviour and critical decisions in their life. Generation Z (1997–2012), called digital natives, was born and grew up in a digital technological environment. They may be dependent on technology and influenced by social media, peer groups, and trends, and digital content focused more on self-expression and social recognition. The present study aims to examine the differences between these two generations in terms of technology dependence and its influence on behavioural outcomes, including psychological factors, life orientation, social influence, consumer behaviour, and media usage behaviour.

REVIEW OF LITERATURE

The behaviour and lifestyle of every individual is shaped by their interaction with their social, technological, and economic factors. Lifestyle behaviours differ among different generations due to the variation in their experiences with their environment. People born in similar time frames (approx 15-20 years) shared characteristics shaped by common formative experiences like social, economic, historical, cultural, political, and technological events in their young adult years (Mannheim, 1952). So the behaviour of different generations will have differences as a result of interaction with social, historical, technological, economic and personal factors moulding their behaviour through their life experiences, timing of events and social experiences (Elder, Jr, 1998). For instance, (Mobasser, 2025) observed that the lifestyle and behaviour of older adults were influenced by social support, psychological, physiological, economical factors. Similarly (Lolokote & Hidru, 2017) identified the significance of environmental factors like

family, media and education in shaping the lifestyle of young people. Lifestyle behaviour is influenced by generational aspects, time of events, and economic, social, and life stage priorities of various generations.

(McLuhan, 1964) has explained that rapid technological advancements and changing digital technologies, especially the media and the medium of message play significant role in the development and alteration in the lifestyle, human behaviour, social structures, and cultural values of individuals. Similarly, (Ryden, 2015) also opined that the development of technology leads to changes in lifestyle and communication patterns among individuals. Their adoption of new ideas, technologies, and innovations was influenced by communication channels, time, and the characteristics of individuals within a social system (Rogers, 2014). He categorised them on the basis of their willingness to embrace new technologies into five groups: innovators, early adopters, early majority, late majority, and laggards. Similarly, (Prensky, 2001) introduced the concept of digital natives and digital migrants to describe the generational differences in technology use and behavioural patterns. According to him, digital natives are individuals born into the digital era (Generation Z) who possess an inherent familiarity with technology, while digital immigrants (older millennials and Generation X) are those who were born before the widespread adoption of digital technologies and have had to adapt to them over time. Supporting this, (Mashitoh & Octafian, 2025) found that Generation Z shows a strong preference for digital payment systems due to convenience, speed, and integration with digital lifestyles, indicating their position as early adopters of technology. Likewise, (Azhar, 2025) highlighted how technological products such as smartphones influence lifestyle, identity, and purchasing decisions among Gen Z consumers. These studies confirm that digital technologies play a central role in shaping modern lifestyles, particularly among younger generations, although comparative insights between digital natives and digital adopters remain limited.

The decisions taken by an individual in his life situation are influenced by his observation, peer groups, family members, and media exposure. According to (Bandura, 1977) learning does not depend solely on direct experiences but they acquire behaviours, attitudes, and skills through observing the actions of others and the consequences of those actions, imitation, and interaction with others. (Francis, Nirmala, & Jose, 2025) revealed that social media significantly influences career aspirations among college students, encouraging a shift towards digital and influencer-based careers. Similarly, (Fomina & Timokhina, 2021) found that changing socio-economic conditions and media exposure are transforming the value systems of younger generations. (Curtis, 2005) further observed that modernisation, tourism, and mass media contribute to lifestyle and consumption changes in rural populations. These findings indicate that social influence, peer interaction, and media exposure play a crucial role in shaping behavioural outcomes, especially among Generation Z.

As a consumer, the decision of every individual is influenced by psychological, social, and economic factors on purchasing decisions. According to (Kotler & Keller, 2016) consumer behaviour is shaped by a combination of personal factors (age, occupation, lifestyle), psychological factors (beliefs, attitudes, motivation), and social influences

(family, peer groups, and culture). Similarly, (Gupta & Gurnani, 2024) identified multiple determinants such as cultural, technological, and demographic factors influencing consumer preferences in the fashion industry, with increasing reliance on online shopping platforms. Similarly, (Gazzola, Pavione, Pezzetti, & Greechi, 2020) found that younger generations demonstrate stronger awareness and preference for sustainable and ethical consumption patterns. Similarly, (Imelia, Aulia, Ingtyas, & Laurena, 2024) observed that millennial consumption behaviour is driven by convenience, lifestyle changes, and psychological factors, reflecting the influence of modern digital lifestyles.

Unlike traditional usage of Media, the view of audience changed in to active participants who consciously select and use the media based on their specific needs, desires, psychological and social requirements (Katz & et al., 1973). Globalisation and modernisation have a significant impact on the transformation of traditional knowledge systems, especially the important role of media and technology in shaping present lifestyles (Sankan, Anne, & Warwick, 2018). Additionally, (Rameshkkumar, Gope, Santhosh, Santhosh, Gawande, & Vishnu, 2024) found that the lifestyle of young adults is significantly influenced by the media in their housing preferences and modern aspirations affect decision-making. The changing lifestyles of people significantly influence consumption behaviour, especially food habits in India, driven primarily by convenience and urbanisation (Madhvapathy & Dasgupta, 2015). The long-term lifestyle changes also affect the consumption, mobility, socio economic behaviour and housing patterns, linking lifestyle behaviour with broader socio-economic outcomes (Thomas, Edi, & Nadia, 2018). Similarly, (Sarris, 2014) observed that the life style factors such as physical activity, diet, and social interaction in influencing mental health.

The individual's behaviour, lifestyle, and needs in their life are based on their stages in life and context (Maslow, 1943). Further, studies such as (Betlej, 2023) and (Lolokote & Hidru, 2017) found that the psychological motivation, personal experience and expectations play vital role in shaping the behaviour, aligning with Maslow's framework of self-actualization and esteem needs. Similarly, (O, OM, & Mehra, 2025) emphasise the role of technological and economic factors influencing purchasing decisions, highlighting how affordability, digital platforms, and consumer awareness influence individual decision-making.

OBJECTIVES

1. To analyse and compare the level of technological adoption among Millennials and Generation-Z.
2. To analyse and compare the influence of psychological and motivational factors between Millennials and Generation Z.
3. To analyse and compare life stage and economic orientation among the two generations.
4. To analyse and compare the social influence among Millennials and Generation Z.
5. To analyse and compare the media usage among Millennials and Generation Z.
6. To analyse and compare the buying behavioural outcomes between Millennials and Generation Z.

METHODOLOGY

The study on 'A Comparative Study of Technology Dependence and Behavioural Outcomes Across Generations, Gen Z, and Millennials' is descriptive research. Analyse the difference by collecting 112 primary data from each category in Kannur district using a questionnaire. Collected data were analysed using descriptive statistics and an independent t-test.

RESULTS

The results of the analysis of agreement of millennials and Gen Z members towards digital adoption, psychological and motivation factors, life stage and economic orientation, social influence, media usage, and buying behavioural outcomes are presented below.

Table 1: Profile of the respondents

	Variables	Frequency (n)	Percentage (%)
Sex	Male	100	45
	Female	124	55
Occupation	Employed	110	49
	Unemployed	24	11
	Students	74	33
	Others	16	7
Generation Group	Millennial	112	50
	Gen Z	112	50

Source: Primary data

Table 1 describes the profile of the respondents. Gender-wise classification showed 45 percent male and 124 percent female; the majority of respondents were females. By considering occupation-wise classification, the majority of respondents are employed (49%); secondly, students (33%); it is followed by unemployed (11%), and 7 percent of respondents constitute the category of others. For a better understanding of the topic, consider an equal number of millennials and Gen Z members (112).

Table 2: Level of agreement on Technological Adoption

Variables	Millennial		Gen Z		t	Sig
	M	SD	M	SD		
I spend a lot of time using digital devices every day	3.35	0.917	3.43	1.002	-0.626	0.207
I prefer using digital platforms over traditional methods	3.21	1.108	3.55	1.021	-2.446	0.409
I am able to use new technologies very easily	2.49	1.022	3.76	0.786	-10.408	0
I am curious about new technological changes	3.04	1.338	3.84	1.095	-4.864	0

Source: Primary data

The results for the level of agreement on technological adoption among millennials and Gen Z members are presented in Table 2, using an independent t-test. Analysis of everyday technology use revealed that both millennials (3.35) and Gen Z (3.43) reported similar levels of daily digital device use, with the difference not statistically significant ($p > 0.05$). Preference for the traditional method over the digital platform also showed no significant

difference ($p > 0.05$). However, differences were found in their technological competence and curiosity. The result showed Gen Z has a significantly higher ability to use new technologies (Mean = 3.76) than millennials (Mean = 2.49). Curiosity towards new technological changes is also higher for Gen Z (Mean = 3.84) than for millennials (Mean = 3.04), with both differences being statistically significant ($p < 0.05$). This indicates that although both generations are involved in the adoption of technologies, Gen Z is more confident, adaptable, and open to technological advancements than millennials.

Table 3: Level of agreement on Psychological & Motivational Factors

Variables	Millennial		Gen Z		t	Sig
	M	SD	M	SD		
My personal attitude and peer group strongly influence my decisions	3.3	1.199	3	1.057	2.01	0.013
My decisions are influenced by the trends and influencers	3.52	1.099	3.79	0.81	-2.077	0
I value self-expression and social recognitions	3.33	1.085	3.48	0.849	-1.166	0.011
I carefully evaluate options before making decisions	3.89	0.702	3.5	1.048	-1.166	0

Source: Primary data

Table 3 shows the results of the level of agreement of millennials and Gen Z on psychological and motivational factors. Millennials' (M=3.30) decisions were more influenced by personal attitude and peer group than Gen Z (Mean=3), and Millennials (Mean = 3.89) carefully evaluated options before making decisions than Gen Z (Mean=3.5). The differences were statistically significant ($p < 0.05$). At the same time, Gen Z (Mean=3.79) decisions are more influenced by trends and influencers and Gen Z (mean=3.48) gave more importance to self-expressions and social recognition, but millennials (Mean=3.52) gave comparatively less importance to trends and influencers in their decision making and, as compared to Gen Z, less value self-expression and social recognition, with a significant p value ($p < 0.05$). The result reveals that millennials consider personal attitude and peers and analyse the options before making decisions. Gen Z is more focused on self-expression and recognition, and more concentrated on trends and influencers while making decisions.

Table 4: Level of agreement on Life Stage & Economic Orientation

Variables	Millennial		Gen Z		t	Sig
	M	SD	M	SD		
Financial and career stability is important to me	3.3	1.199	3	1.057	2.01	0.013
Like work or study options that give flexible timings or choices	3.52	1.099	3.79	0.81	-2.077	0
I am ready to switch careers if I get a better opportunity	3.33	1.085	3.48	0.849	-1.166	0.011
I take financial and career risks when necessary	3.89	0.702	3.5	1.048	3.295	0

Source: Primary data

Table 4 reveals the results of an independent sample t-test on the level of agreement of millennials and Gen Z members on life stage and economic orientation. Millennials (mean = 3.30) gave priority to financial and career stability significantly more than Gen Z (mean = 3.00). The results also showed that millennials (Mean=3.89) were also ready to take career and financial risks whenever necessary, but Gen Z (Mean=3.5) was comparatively more reluctant to take financial and career risks than millennials. Both variations were statistically significant ($p < 0.05$). On the other hand, Gen Z (Mean=3.79) placed more stress on the choice of flexible time option for work or study than the millennials (Mean=3.52), and Gen Z (Mean=3.48) were ready to switch careers while getting better opportunities than the millennials (Mean=3.33) with a significant P value. The result indicates that millennials prioritise financial and career stability and are ready to take risks when necessary. While Gen Z focuses on timing flexibility and is ready to switch career while getting better option

Table 5: Level of agreement on Social Influence

Variables	Millennial		Gen Z		t	Sig
	M	SD	M	SD		
I am willing to accept new ideas and changes in society	3.79	0.784	3.51	1.004	2.373	0.001
My family and responsibilities have a strong influence on the decisions I make	3.67	0.981	2.99	1	5.127	0.921
I take part in social or community - related activities	3.75	0.664	3.15	0.922	5.57	0
Online communities and groups influence my opinions and knowledge	3.19	1.053	3.67	0.842	-3.784	0.003

Source: Primary data

The result of the agreement on social influence revealed that millennials (mean = 3.79) were significantly more willing to accept new ideas and changes than Gen Z (mean = 3.51). Similarly, millennials (mean = 3.75) were also more interested in being a part of social or community-related activities compared to Gen Z (mean = 3.15). Variations in both agreements were statistically significant ($p < 0.05$). At the same time, there was no significant difference between millennials and Gen Z on the level of agreement regarding the influence of family and responsibilities while making a decision, with a P value ($p > 0.05$). On the other hand, Gen Z's (mean = 3.67) opinion and knowledge were significantly more influenced by online communities and groups than by millennials (mean = 3.19), with a significant P value ($p = 0.003$). The results show that millennials are more socially influenced, while Gen Z members are influenced by online communities and groups. Both are influenced at the same level by family and responsibilities.

Table 6: Level of agreement on social media usage

Variables	Millennial		Gen Z		t	Sig
	M	SD	M	SD		
Social media is mainly used for information sharing and acquiring knowledge	3.38	1.049	3.63	0.881	-1.93	0.05
I prefer to spend my leisure time on social media for entertainment	3.8	1.064	4.05	0.745	-2.036	0.011
I use media for social interaction and self-expression	3.18	1.172	3.84	0.8	-4.927	0
I actively engage with social and health content online	3.93	0.887	4.14	0.696	-2.011	0.95

The result in Table 6 indicates that Gen Z shows a higher level of agreement on social media usage than that of millennials about most of the variables. Gen Z (mean = 3.63) used social media at a higher level for sharing information and attaining knowledge than millennials, with a significant P value ($p = 0.050$). Similarly, Gen Z (Mean=4.05) more preferred social media for spending their leisure time more than millennials (Mean=3.8). Likewise, the use of social media for social interaction and self-expression was significantly higher among Gen Z ($p = 0.000$). However, both millennials and Gen Z equally followed social media to engage in social and health content; here, the P value was not statistically significant ($p = 0.950$). Overall, the results on social media usage reveal that Gen Z members are more used to social media as compared to millennials, while both groups show equal engagement in social media for social and health-related content.

Table 7: Level of agreement on Consumer buying behaviour

Variables	Millennial		Gen Z		t	Sig
	M	SD	M	SD		
I like shopping online more than shopping in stores	3.09	1.174	3.5	1.123	-2.675	0.778
I prefer well-known brands when purchasing products	3.18	1.217	4.17	0.967	-6.747	0.001
I check prices and discounts before buying something	3.74	0.928	3.01	1.119	5.331	0.033
I buy products based on trends rather than quality and usage	2.86	1.202	3.51	0.974	-4.374	0

Source: Primary data

The result of consumer buying behaviour depicts that both Millennials (Mean=3.09) and Gen Z (Mean=3.5) were equally preferred online shopping rather than traditional shopping, because the difference in mean value is not statistically significant ($p = 0.778$). Millennials gave significantly more consideration to checking prices and discounts before buying the product than Gen Z members did ($p = 0.03$). On the other hand, Gen Z preferred branded products (mean = 4.17) and followed trends (mean = 3.51) while purchasing the product, compared to Gen Z. Both differences were statistically significant ($p < 0.05$). The result indicates that millennials give more consideration to price and discount, while Gen Z considers brands and trends while shopping. However, both consumers prefer online shopping to traditional shopping.

DISCUSSION & CONCLUSION

The comparative study between Millennials and Gen Z regarding Technology Dependence and Behavioural Outcomes reveals a significant difference. From the perspective of technological adoption, both generations are involved in the adoption of technologies. Gen Z is more confident, adaptable, and ready to accept technological advancements than Millennials. These findings align with the beliefs of Gen Z, who are fundamentally exposed to technology from an early age, helping them be more adaptable and confident in living in the digital era. Millennials are capable of using technology. By comparing the psychological and motivational factors, we further differentiated the two groups. Millennials are more influenced by personal attitudes and peers and consider every option carefully before making decisions. In contrast,

Gen Z is more focused on self-expression and recognition, and more concentrated on trends and influencers while making decisions. This shows the internally guided decision-making potential of millennials, whereas Gen Z members are externally influenced by social media and influencers. In terms of life stage and economic orientation, millennials depict a stronger decision towards financial and career stability and show a greater willingness to take risks when necessary. Conversely, Gen Z prioritises flexibility in work or study arrangements and shows a higher tendency to switch careers for better opportunities. This reflects a dynamic opportunity-driven mindset. The analysis of social influence reveals that millennials are more involved in community-related activities and more willing to accept societal changes, showing stronger social commitment. Meanwhile, Gen Z is more influenced by online communities and digital networks, indicating a shift from physical to virtual social spaces. The highlighting factor is that both generations are equally influenced by family and responsibilities, revealing that traditional social structures are still highly important in the era of digitalisation.

Social media usage patterns indicate the stronger digital involvement of Gen Z. They mainly use social media for entertainment, interaction, and self-expression. Both groups, however, equally engage with social and health-related content, suggesting shared awareness and utilisation of digital platforms for information sharing and knowledge acquisition. Consumer buying behaviour analysis also reveals generational differences. While both generations show an equal interest in online shopping, millennials are more price-conscious and ready to check discounts before making purchases. Gen Z, on the other hand, prioritise brand and trend, indicating the influence of digital marketing, branding strategies, and social media trends. The study concludes that the difference between digital natives (Gen Z) and digital adopters (millennials) significantly influences their technology dependence and behavioural outcomes. In the era of digitalisation, understanding generational distinctions is crucial for effectively addressing the needs, expectations, and behaviours of both Millennials and Gen Z.

REFERENCES

- Betlej, A. (2023). Social Networks, New Technologies, and Wellbeing: An Interview Study on Factors Influencing Older Adults' Successful Aging. *International Journal of Environmental Research and Public Health*.
- Elder Jr., G. (1998). The life course as developmental theory. *Child Development*.
- Lolokote, S., & Hidru, T. H. (2017). Do socio-cultural factors influence college students' self-rated health status and health-promoting lifestyles? A cross-sectional multicenter study in Dalian, China. *BMC Public Health*.
- Ryden, L. (2015). Technological Development and Lifestyle Changes. In *Sustainable Development, Knowledge Society and Smart Future Manufacturing Technologies*, 113-124.
- Saitkulovich, A. M. (2025). Social factors influencing the lifestyle of young people. *Western European Journal of Historical Events and Social Science*.
- Azhar, A. (2025). The influence of homo iphone on trends, lifestyle and buying decisions in case study on gen z. *Pedagogic Research-Applied Literacy Journal*, 198-208.
- Bandura, A. (1977). Social learning theory.
- Curtis, T. K. (2005). Changing living conditions, lifestyle, and health. *sid.ir*.
- Fomina, A., & Timokhina, T. (2021). Trends in changing the value system of the young generation in modern conditions.
- Francis, E. V., Nirmala, T., & Jose, E. J. (2025). The Role of Media in Shaping Career Choices: A Content Analysis of Social Media's Influence on College Students' Preference for Influencing Over Traditional Employment in Kerala. In *International Congress on Information and Communication Technology* (pp. 159-167). Singapore: Springer Nature Singapore.
- Gazzola, P., Pavione, E., Pezzetti, R., & Greechi, D. (2020). The perception of sustainability and circular economy: a gender/generation quantitative approach. *Sustainability*, 2809.
- Gupta, N., & Gurnani, K. (2024). Factors affecting consumer behaviour in Indian fashion retail industry: A study of recent trends and preferences. *International Journal for Multidisciplinary Research*, 58-61.
- Imelia, V. J., A. U., Ingtyas, F. T., & L. G. (2024). Analysis of the impact of lifestyle changes on fast food consumption trends among millennial implication for educational awareness. *journal.jcopublishing.com*, 89-98.
- Jones, I., Ekerdt, D. J., & Higgs, P. (2017). *Consumption and generational change: The rise of consumer lifestyles*. In *Consumption and generational change*, Routledge.
- Katz, E., & et al. (1973). Uses and gratifications research. *Public Opinion Quarterly*.
- Kotler, P., & Keller. (2016). Marketing management.
- Madhvapathy, H., & Dasgupta, A. (2015). Study of Lifestyle Trends on Changing Food Habits of Indian. *IOSR Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT)*, 16-22.
- Mannheim, K. (1952). Essays on the sociology of knowledge.
- Mashitoh, I., & Octafian, R. (2025). The Trend of Payment Method Shifts Among Gen Z from Traditional to Modern. *international Journal of Applied Economics, Accounting and Management (IJAEAM)*, 181-192.
- Maslow, A. (1943). A theory of human motivation. *Psychological Review*.
- McLuhan, M. (1964). Understanding media: The extensions of man.
- Mobasser, K. (2025). Factors Influencing Healthy Lifestyle Among Older Adults: A Qualitative Study. *Activities, Adaptation & Aging*, 136-160.
- O, K., OM, J., & Mehra, P. (2025). Factors affecting the demand of lab-grown diamonds: A case of India. *Building business knowledge for complex modern business environments*, 443-466.
- Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*.
- Rameshkkumar, S., Gope, P., Santhosh, R., Santhosh, R., Gawande, N., & Vishnu, M. (2024). Exploring the severity of factors influencing lifestyle on housing preference of young adults: a thematic analysis. *Migration Letters*, 1013-1023.
- Rogers, E. M. (2014). *Diffusion of innovations An integrated approach to communication theory and research*. Routledge.
- S, G., M, K., R, H. R., & P, R. (2024). Impact of modern life style, environment and age on female fertility. *World Journal of Pharmaceutical Research*, 176-201.
- S. A., A. L., & W. H. (2018). Global trends of local ecological knowledge and future implications. *PLOS*, 13(4).
- Sarris, J. e. (2014). Lifestyle medicine for depression. *BMC Psychiatry*, 14(1), 107.
- T. I., E. A., & N. M. (2018). Investing long term lifestyle changes: a methodological proposal based on statistical model. *Wiley Online Library*, 159-171.