

Generational Cohort Shifts in Post-COVID-19 Purchasing Patterns: Anxiety-driver Consumption

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ABSTRACT

This study aims to deepen the understanding of post-COVID-19 consumer purchasing behaviour by analysing trends and the impact of pandemic-induced anxiety across different generational cohorts in Malaysia. The study focuses on multiple generations to examine how shared crisis experiences, socio-economic positions, and collective anxieties shaped distinct patterns of consumption behaviour during the COVID-19 pandemic and endemic phases. The research investigates behavioural shifts observed during two key periods: the pandemic phase (March 2020-March 2022) and the endemic phase (from April 2022 onwards). A quantitative survey involving 883 respondents was conducted across selected regions in Malaysia, targeting the Silent Generation, Baby Boomers, Generation X, Generation Y, and Generation C (Corona Generation). One-way ANOVA and multiple regression analyses were employed to assess the influence of anxiety-related stimuli, specifically health anxiety and economic anxiety, on consumer behaviour. The findings indicate both significant differences and notable similarities across generations in purchasing patterns, reflecting broader social and behavioural changes resulting from the COVID-19 crisis. Younger generations demonstrated stronger adaptation toward digital and anxiety-driven consumption, while older generations exhibited greater health-related concerns and essential purchasing behaviour. The study contributes empirical evidence to Generational Cohort Theory and provides sociological insights into how collective crises influence generational behaviour, consumption

practices, and social adaptation in post-pandemic society. The findings offer important implications for researchers, policymakers, and businesses in understanding evolving consumer and social dynamics in the post-COVID-19 era.

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INTRODUCTION

The COVID-19 pandemic has altered global cultures and economies, causing disruptions across various areas. Since the pandemic turned into a global health matter, it exerted a deep influence on consumer behaviour via the transformation of shopping habits, spending priorities, and decision-making processes. As the world shifts from crisis management toward economic recuperation, multiple pivotal patterns materialise. Telecommuting elevates, digitisation expedites, online commerce broadens, wellness vigilance escalates, voyaging undergoes alteration, provision networks acclimate, psychological well-being recognition heightens, and administrations engage further. These shifts have had a prominent impact upon consumer habits because organisations and individuals must navigate a transforming commercial landscape (Donthu & Gustafsson, 2020; Pantano et al., 2020).

More than any other recent disruption, COVID-19 has changed the way people communicate, shop, and work (Despin, 2020). According to a Nielsen Company analysis, consumer behaviour is globally shifting. More focus is put on basic needs like cleaning supplies, hygiene, and food. Consumers strongly preferred to purchase necessities, and they preferred health plus safety products like protective gear and sanitisation products (Esposti et al., 2021). Furthermore, research also shows that economic uncertainty and job insecurity during that pandemic increased consumer anxiety because it altered purchase habits at that time (Chirumbolo et al., 2021).

Understanding consumer purchasing behaviour is vital because it eases prosperous market segmentation. Because attitudes, tastes, and consumption patterns are shared, generational cohort theory represents a valuable model for evaluating consumer behaviour because they're formed by formative experiences (Marjanen et al., 2019; Parment, 2013). Earlier investigations evince that generational cohorts mould dispositions, preferences, and purchasing habits, and such sway renders these cohorts a valuable instrument of division when scrutinising consumeristic patterns emergent after the pandemic (Chaney et al., 2017). This investigation employs the generational cohort perspective to scrutinise shifts in consumer conduct. These changes are examined across five meaningful generations: Generation Corona (Gen C), Generation Y, Generation X, Baby Boomers, and the Silent Generation.

The major goal of this research is to probe into the impact of COVID-19 upon consumer buying behaviour among differing generational cohorts during two critical phases that include the pandemic phase (March 2020-March 2022) and the endemic phase (April 2022 onwards). Aspiring to furnish perceptions into consumer behavioural adaptations, this investigation concentrates on the Malaysian population given pandemic-related apprehension. Companies, advertisers, and lawmakers should comprehend these variations to formulate tactics. They must retain existing consumers, coupled with the acquisition of fresh ones within a post-pandemic economy.

This study augments the broader discourse on consumer behaviour, notably amid periods of worldwide disruption, for it furnishes information about how disparate age cohorts react to crises and transform their purchasing habits.

LITERATURE REVIEW

Generational Cohort Theory

Generational cohorts refer to groups having mutual, formative experiences shaped by pivotal historical events, individuals born during a similar timeframe (Ryder, 1985). Generational Cohort Theory (GCT) posits an assertion. Distinct values arise from collective experiences. Furthermore, predilections and operations linking collectives are configured through those situations (Schewe & Noble, 2000; Ting & de Run, 2015). These “cohort effects” influence consumer choices and existence. These effects are caused by socio-economic transformations, technological innovations, or political disruptions (Sessa et al., 2007). GCT has been extensively employed within consumer behaviour inquiries since it illuminates generational differences concerning brand outlook, buying customs, and media usage (Carpenter et al., 2012; Shulga et al., 2018).

GCT advises research within education, politics, and social sciences, exceeding marketing. It further yields perspectives into learning preferences, activism, as well as generational engagement (Davis, 2004; Oblinger, 2003). Since this inquiry is contingent on such preparatory analysis, it utilises GCT to examine the origins of

Generation Corona, a demographic which experienced a shaping of their consumer behaviour amid the COVID-19 pandemic. This investigation yields perceptions into shopping behaviours after the pandemic, with marketing ramifications envisioned thereby. This happens via contrasting this demographic against former groupings like Generations Y, X, Boomers, and the Silent Generation and policymaking in parallel with commercial acclimation.

The Change in Consumer Behaviour and the Theory of Anxiety

Behavioural economics and consumer psychology investigations have determined disparate influences act upon consumer behaviour, influences derived from diverse psychological elements (Di Crosta et al., 2021). Specific, economic, cognitive, environmental, and social aspects shape consumer actions through an elaborate convergence (Di Crosta et al., 2021). The investigation of consumer behaviour is defined as the study of individuals or of groups as they procure, utilise, and assess goods and services. It also examines how they discard those items to satisfy their requirements.

Nonetheless, during instances where volatility arises, or precariousness takes hold, like when pandemics emerge, when economies decline, or when environmental disasters transpire, psychological components, especially trepidation and unease, might mould consumer decisions with amplification. The Theory of Anxiety finds its origins within psychological and behavioural economics literature.

Elevated apprehension degrees do generate hazard-avoidant actions since consumers stress security, soundness, and important requirements instead of optional consumption (Di Crosta et al., 2021). This modification manifests in various ways, including heightened accretion behaviour, brand devotion lessening, and sensitivity concerning price and promotions increasing.

For example, shared uncertainty coupled with dread spurred panic buying and stockpiling vital goods amid the COVID-19 pandemic. Consumers acted for the mitigation of impending future perils. Further exigencies have manifested analogous conduct modifications. As an example, economic downturns depict the way that trepidation motivates options, resulting in individuals reducing lavish spending and favouring frugal, important purchases.

Customer responses remain deeply shaped by trepidation, and Anxiety Theory gets incorporated into this consumer behaviour examination. Customer preferences, purchasing actions, and brand interactions throughout the post-pandemic marketplace are shaped through options compelled by uncertainty.

Sociological Perspectives on Consumer Behaviour During Crisis

Consumer behaviour during periods of crisis can be understood through the sociology of consumerism and economic behaviour. From a sociological perspective, consumption reflects broader social practices shaped by cultural values, collective identities, and

social anxieties rather than purely economic decisions (Bauman, 2007; Slater, 1997). The sociology of economic behaviour further explains that purchasing actions are socially embedded and influenced by social structures, collective experiences, and economic uncertainty (Granovetter, 1985). During the COVID-19 pandemic, consumer behaviour was strongly shaped by fear, uncertainty, and changing social norms, resulting in increased digital consumption, health-oriented purchasing, and precautionary spending across generations (Eger et al., 2021; Laato et al., 2020). Therefore, examining post-pandemic consumer behaviour through a sociological lens provides a deeper understanding of how crises reshape social behaviour and generational adaptation within society.

Consumers' Behaviour During the COVID-19 Pandemic

Consumer behaviour has transformed greatly. This modification was brought about by the COVID-19 pandemic in conjunction with containment measures. Rajagopal (2020) depicted the consumer behaviour process in this manner. Need fulfilment involves individuals or collectives that obtain, utilise, and discard merchandise and amenities. Economic, psychological, and social influences shape consumer behaviour due to this process. Global pandemics typically increase these determinants, thereby initiating prompt modifications to consumer behaviours (Leach, 1994).

Since 2020, consumers have manifested greater circumspection, and they prioritise

important commodities, virtual commerce, and domestic provisions (Eger et al., 2021). Firms should overhaul consumer interactions and value tenets because this attitudinal alteration accentuates (East et al., 2016). Lockdowns and mobility restrictions prompted expanded utilisation of online platforms because digital tools presented secure contactless substitutes (Laato et al., 2020; Pantano et al., 2020).

Ferraresi (2020) stressed alterations to social customs and temporal awareness, and Sheth (2020) observed realistic acquisitions spurred by extended constraint. Heightened anxiety, economic spending, and patronage of local brands were reported by McKinsey and Company (2020). To stay competitive, businesses must embrace digital transformation, remote models, and data-driven adaptability (Lehmann & Beckmann, 2024). They should orient themselves toward reacting to changing consumer expectations and impending disruptions.

Cross-cultural Evidence on Generational Consumer Behaviour During COVID-19

Empirical studies across various cultural and regional contexts consistently demonstrate that the COVID-19 pandemic significantly altered consumer behaviour across generational cohorts. In Europe, Eger et al. (2021) found that Generation Y and Generation Z accelerated their adoption of e-commerce, online food delivery, and digital payment systems during lockdowns, while older cohorts displayed more cautious and necessity-driven purchasing behaviour.

Similarly, studies in the United States reported that Millennials and younger consumers prioritised hygiene products, home essentials, and online subscriptions due to uncertainty and lifestyle disruptions (McKinsey & Company, 2020). These findings indicate that crisis-induced anxiety influenced both purchasing frequency and consumption channels across generations.

In Asian contexts, studies from China and South Korea revealed that health anxiety, uncertainty, and perceived vulnerability strongly shaped consumer behaviour during the pandemic. Laato et al. (2020) and Hesham et al. (2021) reported increased panic buying, stockpiling, and health-oriented consumption, particularly among younger consumers who relied heavily on online shopping platforms. Older generations, meanwhile, prioritised protective equipment, medicines, and essential goods due to heightened health concerns. Studies in Southeast Asia further identified growing preferences for local products, contactless services, and neighbourhood shopping practices during mobility restrictions.

Collectively, these findings suggest that although consumer responses varied across socio-economic and cultural contexts, common behavioural patterns emerged globally. Health risks, economic uncertainty, and social disruption consistently influenced purchasing behaviour across generations, supporting the relevance of Generational Cohort Theory in explaining crisis-driven consumer adaptations. At the same time, regional variations highlight the importance

of contextualising generational consumption patterns within specific socio-economic environments, including the Malaysian context.

Level of Anxiety and the Change in Consumer Behaviour

Earlier studies suggest unpleasant feelings, such as anxiety and fear, greatly impact consumer behaviour. These sentiments impede deliberate acquisitions and spontaneous ones (Yuen et al., 2020). Ahmed et al. (2020) and Leverin & Liljander (2006) find these behaviours are moulded through hedonic (emotional) motivations. Practical motivations do indeed also mould these behaviours. During crises like pandemics, survival instincts strengthen, and consumption is emotionally driven (Dodgson, 2020; Fairfield, 2015). Perceived menaces to individual security precipitate adaptive strategies, according to Terror Management Theory. These mechanisms are frequently manifested through pleasure-based acquisitions (Arndt et al., 2004; Greenberg et al., 1997).

Decisions born of anxiety can precipitate stress-related conduct. Such behaviours extend between disengagement toward imprudent expenditure (Duhachek, 2005; Hesham et al., 2021). Throughout COVID-19, ambiguity with forfeiture of dominion engendered strengthened psychological suffering, with such suffering shaping both magnitudes and essence regarding expenditure (Arafat et al., 2020 ; Sneath et al., 2009). Maslow's hierarchy of

needs postulates that we stress physiological requirements since it elucidates the increase in important commodities during lockdowns (Accenture, 2020; Maslow, 1970).

While the post-pandemic era persists, key motivational aspects stay as people perceive and question (Sheth., 2020). Per emerging revelations, elderly persons exhibit heightened anxiety (Chen, 2020). Therefore, establishments with legislators do require strategies that are focused on responding to these transforming consumer behaviours.

Generation Differences and Shopping Behaviour

The collective memory of each generation, shaped by past events, influences values, attitudes, and consumer behaviour according to the generational differences theory. As generational cohort theory suggests, each cohort develops distinct perspectives regarding existence since it experiences salient external events during its formative period (Ting & de Run, 2015). Economic transformations, political doctrines, disputes, and technological innovations are important elements since they mould consumer inclinations and procurement choices (Noble & Schewe, 2000).

Distinct behavioural patterns and decision-making inclinations are presented by generational cohorts due to disparities within historical contexts (Ignatius & Hechanova, 2014). Influences wielded and experiences assimilated inside a generation mould behaviours more powerfully than simple age (Jones et al., 2018).

Collective recollections flourish among groups encountering analogous initial episodes in addition to impacting models in consumption and outlooks (Alwin & McCammon, 2003). Age-related identity greatly affects shopping behaviour, for each cohort possesses purchasing motivations along with preferences. Per research, inclusive of Lissitsa & Kol (2016) plus Parment (2013), these cohorts also possess usage behaviours.

Silent Generation (1925-1944)

The Silent Generation, commonly identified as traditionalists, weathered economic hardship plus they socially acquiesced. They experienced the Great Depression and World War II. These incidents imparted a sense of resolution and frugality in them. They were additionally feeling cautious (Wallenfeldt, 2023). This cohort, valuing assurance and reliability, prefers instrumental acquisitions with utility above indulgence in elevated commodities. As opposed to subsequent generations that amuse themselves while employing technology as necessities, the Silent Generation requires items more than desires them since they underwent paucity and economic precariousness early in life.

Baby Boomers (1945-1964)

Assiduous work habits and fiscal stability define Baby Boomers. Self-actualisation is additionally sought by them. This generation is markedly individualistic, competitive, and also regards economic success. These characteristics result in large consumer influence (Jackson et al., 2011).

Revolutionary merchandise and technical developments improving existence and comfort are frequently desired by Baby Boomers who value kin, wellness, and monetary security (Brosdahl & Carpenter, 2011). They are devoted to brands coupled with a preference for tenured firms. They favour procurement via conventional commercial establishments during a progressive assimilation of virtual interfaces (Williams & Page, 2011).

Generation X (1965-1982)

Economic transition, technological innovation, and changing family structures defined the upbringing of Generation X; accordingly, shopping behaviours that are realistic and independent are exhibited. Individuals generally prize merit and utility beyond trademark reputation while endeavouring to harmonise cost with product advantages. In contrast to Baby Boomers, Gen X consumers favour brands echoing their individual principles and display heightened doubt toward advertisements. Conventional along with digital shopping methods remain comfortable for them, frequently depending upon peer recommendations plus online reviews before purchases (Lissitsa & Kol, 2016).

Generation Y (1983-2000)

Recognised also as Millennials, perhaps digital natives, Generation Y exhibits a strong connection to technology and accesses information without obstruction (Eger et al., 2021). This cohort assuredly

performs, navigates toward objectives, and diligently investigates when they resolve to procure. Often selecting digital payment methods plus online commerce, they value efficiency and convenience. Firms displaying authenticity, coupled with social responsibility, are favoured among brand-conscious Millennials. Evaluations from contemporaries and marketing by prominent figures remain vital aspects impacting consumer conduct. Prevailing social media fads additionally impact it (Lissitsa & Kol, 2016).

Generation Corona (2020 onwards)

Generation Corona includes Generation Z as well as Generation Alpha. Investigators are continuing to scrutinise this nascent cohort since they assess the protracted repercussions of the COVID-19 crisis upon their consumption patterns (USA Today, 2020). The pandemic's salient influence has moulded their perspectives, principles, and electronic media utilisation patterns. This generation is exceptionally knowledgeable. They perform a wide-ranging investigation before their purchase decision. They exhibit price sensitivity and assiduously pursue optimal offers. They favour interacting alongside brands on social media platforms. Instead of customary retail, their shopping predilections incline toward e-commerce, mobile apps, coupled with influencer-driven marketing (IMARC Services Private Limited Perception Report, 2023).

Grasping such generational distinctions is vital for enterprises, advertisers, and legislators since they formulate strong

approaches that address each group's singular demands and anticipations. For sustained competitiveness as consumer conduct changes, enterprises should acclimate to generational transformations inside the post-pandemic market.

METHODS

Study Design and Data Collection

A quantitative survey was conducted between September and December 2022, during the endemic phase of COVID-19. Respondents were asked to recall their anxiety levels and purchasing behaviours during the pandemic (March 2020-March 2022) and the endemic phase (April 2022 onwards). Data were collected via online platforms (WhatsApp, Facebook, Instagram) and face-to-face interviews to ensure inclusivity, particularly among senior citizens who required assistance.

Sampling Procedure

A total of 883 respondents aged 18 and above participated in the study. Using the Raosoft sample size calculator, the minimum required sample was 384. A clustered sampling strategy was applied across five regions in Malaysia—North (Penang), South (Johor), East (Terengganu), West (Kuala Lumpur & Selangor), and East Malaysia (Sarawak). Within each region, purposive sampling was used to recruit respondents across twelve age cohorts (ranging from 18 to 71+ years).

The inclusion of multiple generational cohorts in this study was essential to examine how shared crisis experiences,

socio-economic positions, and life-stage differences influenced consumer behaviour during the COVID-19 pandemic and endemic phases. Based on Generational Cohort Theory, individuals from different generations develop distinct values, attitudes, and behavioural responses shaped by collective historical experiences. By incorporating the Silent Generation, Baby Boomers, Generation X, Generation Y, and Generation C, this study enables a broader sociological understanding of how pandemic-induced anxiety and uncertainty influenced consumption patterns across diverse age groups. The comparison across cohorts also strengthens the study's analytical depth by identifying both generational differences and behavioural similarities within the Malaysian post-pandemic context.

Research Instrument

The questionnaire comprised four sections: (1) anxiety levels (personal and societal), (2) changes in purchasing habits, (3) brand/category preferences and purchase convenience, and (4) alignment with personal values and lifestyle. Items were adapted from validated instruments and previous studies (Accenture, 2020; Edelman, 2020; Egeret al., 2021 ; Pantano et al., 2020).

Ethical Considerations

Informed verbal and written consent were obtained prior to participation. Participation was voluntary, and respondents were assured of data confidentiality. All consents were securely documented by the research team.

RESULTS

Table 1 shows the distribution of respondents by generation. As can be seen, a total of 883 respondents were gathered from the Malaysian population for this research study. Respondents were categorised according to generations, which include Generation Corona, Y, X, Baby Boomers and Silent.

In this study, we focus on respondents' anxiety factors, which include their health, the health of others, job security, the general economic situation in Malaysia and educational disruption, factors that impact their purchasing behaviour as a result of the COVID-19 outbreak. We focus on two phases of the COVID-19 outbreak, pandemic (T1: March 2020 - March 2022) and endemic (T2: April 2022 onwards), and we used a five-point Likert scale (1 - very low anxiety, 5 - very high anxiety) to measure the instruments.

Table 2 presents the levels of anxiety across generational cohorts—Generation C, Y, X, Baby Boomers (B), and the Silent Generation (S)—in relation to health, job security, economic conditions, and educational disruption during the pandemic (T1) and endemic (T2) phases.

Table 1
Distributions of respondents based on generations

	Frequency	Percent (%)
Generation Corona	146	16.5
Generation Y	311	35.2
Generation X	186	21.1
Baby Boomers	215	24.3
Silent Generation	25	2.8
Total	883	100

Across all cohorts, anxiety concerning the health of others consistently exceeded concern for one’s own health (T1: 4.24 vs. 4.04; T2: 3.86 vs. 3.51), aligning with findings by Accenture (2020). Generation S reported the highest anxiety regarding others’ health, followed by Generations C and B.

Similarly, anxiety over others’ job security was greater than anxiety over one’s own (T1: 3.78 vs. 3.26; T2: 3.43 vs. 3.11), with Generation C showing heightened concern, possibly due to increased social awareness and exposure to peers’ employment struggles. Economic anxiety remained elevated across generations, with Generation C and B expressing comparable concern (T1: 4.06, T2: 3.75), reflecting their respective vulnerabilities—entry-level job insecurity and retirement instability.

Anxiety over educational disruption was most pronounced among Generations C, Y, and X, who were directly affected by the abrupt transition in learning modes. Overall, the findings highlight intergenerational variations in anxiety responses, shaped by differing life stages, socio-economic

roles, and exposure to pandemic-induced challenges.

In subsequent studies, we use two variables: AnxietyH, which represents health anxiety, and AnxietyE, which represents economic anxiety. AnxietyH was calculated by averaging the items anxiety for own health and anxiety for the health of others, whereas AnxietyE was calculated by averaging the items anxiety for job loss (one’s own and others) and anxiety for the economic situation. AnxietyH and AnxietyE are two key variables in our study that have the most influence on the Malaysian community because of the COVID-19 outbreak.

Table 3 shows the average mean values of these two anxiety variables according to generations, namely Generation C, Y, X, B and S, taken in phases T1 and T2. According to the ANOVA F-test, a statistically significant result was found in T2 for both variables: AnxietyH, $F(4, 712) = 3.007, p=0.018$ and AnxietyE, $F(4, 712) = 2.472, p=0.008$. Apart from this, post hoc analysis based on Tukey’s method, with p-values adjusted for multiple

Table 2
The level of health anxiety (own and others), job security (own and others), overall economic situation in Malaysia and education disruption by generation: average mean levels

Characteristic Need/Generation	Average Mean Level											
	C		Y		X		B		S		TOTAL	
	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Own health	3.92	3.33	3.92	3.31	3.93	3.50	4.13	3.66	4.32	3.73	4.04	3.51
Health of others	4.26	3.81	4.19	3.75	4.16	3.82	4.22	3.81	4.36	4.09	4.24	3.86
Job security for others	2.86	2.83	3.12	2.95	3.20	3.08	3.41	3.24	3.73	3.45	3.26	3.11
Overall economic situation in Malaysia	3.72	3.38	3.70	3.26	3.89	3.47	3.82	3.51	3.73	3.55	3.78	3.43
Education disruption	4.06	3.75	4.14	3.46	4.08	3.70	4.06	3.75	4.05	3.73	4.08	3.68

Table 3
Generational Differences level of anxiety related to the COVID-19 era: one-way ANOVA

Anxiety Variable	Mean Estimates										ANOVA F	ANOVA P	Padj.					
	C	Y	X	B	S	C-Y	C-X	C-B	C-S	Y-X				Y-B	Y-S	X-S	B-X	B-S
AnxietyH	T1	4.09	4.05	4.04	4.17	4.10	1.078	0.366	0.100	0.100	0.093	0.074	0.100	0.063	0.059	0.056	0.063	0.092
	T2	3.57	3.53	3.66	3.74	3.91	3.007	0.018	0.100	0.087	0.035	0.029	0.045	0.004	0.015	0.058	0.088	0.084
AnxietyE	T1	3.54	3.65	3.72	3.76	3.83	2.104	0.079	0.063	0.026	0.008	0.003	0.090	0.054	0.078	0.095	0.054	0.099
	T2	3.32	3.22	3.41	3.49	3.58	3.474	0.008	0.086	0.088	0.038	0.068	0.017	0.000	0.032	0.091	0.088	0.099

comparisons, identified the differences between generations for health anxiety and anxiety for economic situation.

Shopping behaviour was measured using 14 items on a 5-point Likert scale, with data collected during both the pandemic (T1) and endemic (T2) phases. Summary statistics and one-way ANOVA results are presented in Table 4. Significant generational differences were found in three behavioural

items across both time phases: purchasing for others (Item 11; T1: $F(4,719) = 7.225, p < .001$; T2: $F(4,714) = 4.039, p = .003$), buying cheaper products (Item 12; T1: $F(4,719) = 4.368, p = .002$; T2: $F(4,713) = 3.057, p = .016$), and minimizing food waste (Item 13; T1: $F(4,719) = 6.952, p < .001$; T2: $F(4,712) = 3.290, p = .011$). These trends reflect a shift toward frugality and sustainable consumption in response to pandemic-related disruptions.

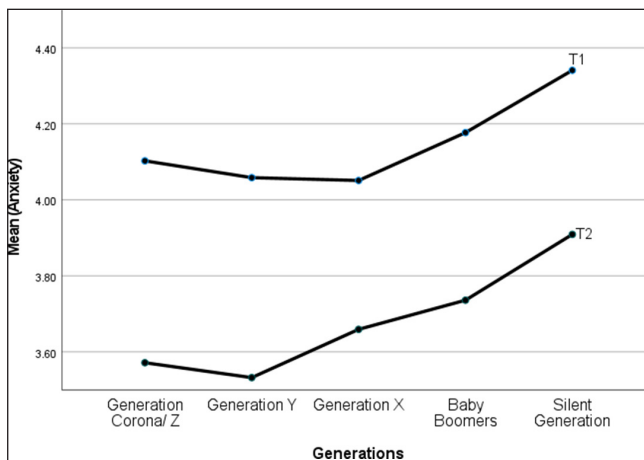


Figure 1. Level of health anxiety (in mean) according to the generations during COVID-19 pandemic (T1) and endemic (T2)

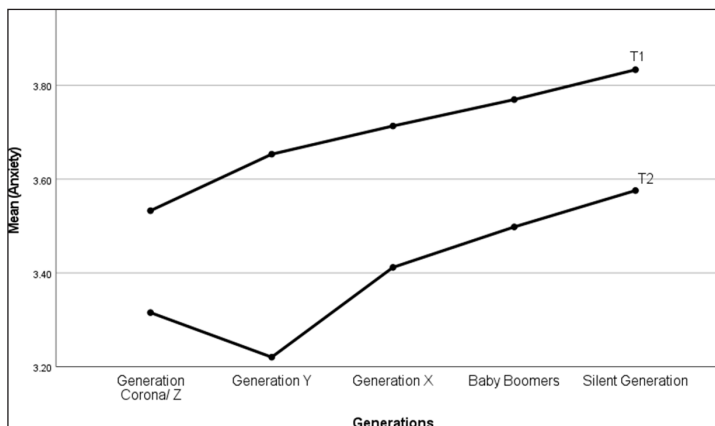


Figure 2. Level of anxiety on overall economic situation (in mean) according to the generations during COVID-19 pandemic (T1) and endemic (T2)

Table 4
Changes in shopping behaviour by generation: one-way ANOVA

Characteristic Item/Generation	ANOVA		Average Mean Level						
	F	P	C	Y	X	B	S	Total	
1: I buy health products	T1	7.844	0.000	4.05	4.28	4.18	3.88	3.54	3.99
	T2	0.317	0.867	3.18	3.16	3.27	3.21	3.09	3.18
2: I buy necessities.	T1	0.321	0.864	3.46	3.48	3.49	3.49	3.47	3.48
	T2	1.271	0.280	3.48	3.50	3.37	3.35	3.42	3.42
3: I think first before deciding to buy any product.	T1	4.983	0.001	3.71	3.89	3.73	3.60	3.73	3.73
	T2	2.017	0.090	3.66	3.64	3.65	3.53	3.60	3.62
4: I buy Malaysian products	T1	1.914	0.106	3.25	3.33	3.43	3.34	2.91	3.25
	T2	1.141	0.336	3.54	3.55	3.52	3.46	3.18	3.45
5: I shop in the neighborhood stores	T1	2.217	0.066	3.13	3.32	3.38	3.23	2.68	3.15
	T2	1.709	0.146	3.24	3.22	3.35	3.20	2.82	3.17
6: I shop for green products.	T1	0.872	0.480	2.88	2.82	2.86	2.96	2.64	2.83
	T2	0.828	0.507	3.12	2.92	3.01	3.01	2.86	2.98
7: I buy products from known brands.	T1	1.213	0.304	2.21	2.25	2.25	2.44	2.27	2.28
	T2	0.316	0.867	2.63	2.51	2.49	2.53	2.45	2.52

Table 4 (continued)

Characteristic	ANOVA		Gen		Average Mean Level					
	F	P	C	P	Y	X	B	S	Total	
8: I do brand search before buying the product.	T1	0.778	0.539	2.53	2.63	2.68	2.70	2.36	2.58	
	T2	0.307	0.874	2.80	2.80	2.78	2.75	2.55	2.74	
9: I buy products consciously.	T1	2.658	0.032	3.41	3.58	3.44	3.33	2.91	3.33	
	T2	0.562	0.690	3.43	3.38	3.39	3.35	3.05	3.32	
10: I buy products in bulk.	T1	1.409	0.229	2.66	2.69	2.68	2.60	2.23	2.57	
	T2	2.332	0.054	2.86	2.80	2.71	2.63	2.32	2.66	
11: I buy products for family members, friends, etc.	T1	7.225	0.000	3.27	3.50	3.29	2.98	2.68	3.14	
	T2	4.039	0.003	3.23	3.32	3.26	2.99	2.50	3.06	
12: I buy cheaper products to save.	T1	4.368	0.002	3.79	3.95	3.71	3.72	3.27	3.69	
	T2	3.057	0.016	3.86	3.85	3.74	3.68	3.14	3.58	
13: I try to minimise food waste.	T1	6.952	0.000	3.83	3.96	3.86	3.64	3.05	3.67	
	T2	3.290	0.011	3.77	3.77	3.70	3.58	3.14	3.59	
14: I buy products through e-commerce platforms such as Shopee, Lazada etc.	T1	5.046	0.001	3.71	3.66	3.62	3.25	2.86	3.42	
	T2	2.297	0.058	3.41	3.27	3.33	3.13	2.68	3.16	

Additionally, purchases of health products increased notably during T1 ($M = 3.99$), with significant differences across generations (Item 1; T1: $F(4,720) = 7.844$, $p < .001$), particularly among Generations C, Y, and X. Item 3 (“I think before deciding to buy”) also showed significant variance during T1 ($F(4,719) = 4.982$, $p = .001$), indicating a cross-generational shift toward more deliberate purchasing decisions amid uncertainty.

Table 5 presents the results of multiple regression analyses examining the influence of health anxiety (AnxietyH), economic anxiety (AnxietyE), and generational cohort on changes in shopping behaviour across 14 items, during both pandemic (T1) and endemic (T2) phases. Each shopping behaviour item served as a dependent variable, with AnxietyH, AnxietyE, and generation as predictors. Multiple comparisons were conducted using the approach by Hothorn et al. (2008) .

Findings indicate that higher anxiety levels generally correlate with greater behavioural change. However, in T1, AnxietyH did not significantly affect Items 7, 8, 10, and 13; while in T2, Items 4, 8, 9, 10, 12, and 14 were unaffected. Similarly, AnxietyE showed no significant association with Items 11, 12, and 13 in T1, and Items 4, 7, and 11 in T2.

The most sensitive behavioural indicator of AnxietyH in both phases was Item 1 (purchase of health products), with slope estimates of 0.15 (T1) and 0.13 (T2). For AnxietyE, Item 2 (necessities) and Item 6 (green products) were most affected in T1 ($\beta = 0.16$ and 0.14), while in T2, Item 3

(deliberate decision-making) and Item 6 ($\beta = 0.13$) were most responsive. These results confirm the significant impact of health and economic anxiety on consumer behaviour.

The study also examined changes in purchasing behaviour across 12 product categories, measured on a 5-point scale (1 = much less, 5 = much more), during the pandemic (T1) and endemic (T2) phases. Table 6 shows significant generational differences for Item 11 (internet data subscription), with increased reliance during both T1 ($F(4,718) = 3.419$, $p = .009$) and T2 ($F(4,715) = 3.776$, $p = .005$). The pandemic accelerated digital consumption for work, education, shopping, and entertainment, especially among younger cohorts.

Other items showing significant differences during T1 include Item 2 (hygiene products; $F(4,721) = 4.313$, $p = .002$), Item 6 (clothing and footwear; $F(4,720) = 2.829$, $p = .024$), and Item 10 (non-sport hobbies; $F(4,718) = 3.028$, $p = .009$).

Generation C exhibited increased purchasing of internet data, food, hygiene, and health-related products during T1, with slight declines in T2. Generation Y, similarly, tech-savvy, reported high spending on food, hygiene items, PPE, and data subscriptions in T1, with reductions in T2 as routines normalised. Generation X focused on essentials, shifting toward medicines and supplements in T2. Baby Boomers and the Silent Generation consistently prioritised food, hygiene, and health products across both phases, reflecting heightened vulnerability and health-conscious behaviour.

Table 5

Changes in shopping behaviour in relation to anxiety related to the COVID-19 pandemic and endemic: multiple linear regression results

Variable Subject (Item)		AnxietyH		AnxietyE	
		Effect	P	Effect	P
1: I buy health products	T1	0.13	0.000	0.06	0.033
	T2	0.15	0.000	0.12	0.001
2: I buy necessities	T1	0.11	0.002	0.16	0.000
	T2	0.08	0.009	0.07	0.020
3: I think first before Deciding to buy any product	T1	0.09	0.007	0.11	0.002
	T2	0.10	0.002	0.13	0.000
4: I buy Malaysian products	T1	0.07	0.021	0.08	0.009
	T2	0.05	0.112	-0.00	0.491
5: I shop at neighborhood stores	T1	0.08	0.011	0.08	0.016
	T2	0.09	0.006	0.06	0.044
6: I shop green products	T1	0.08	0.011	0.14	0.000
	T2	0.10	0.002	0.13	0.000
7: I buy products from known brands	T1	0.03	0.199	0.06	0.053
	T2	0.07	0.025	0.04	0.144
8: I do brand search before buying the product	T1	0.05	0.077	0.08	0.009
	T2	0.04	0.106	0.06	0.040
9: I buy products consciously	T1	0.09	0.004	0.12	0.000
	T2	0.05	0.083	0.08	0.011
10: I buy products in bulk.	T1	0.01	0.437	0.08	0.010
	T2	0.03	0.209	0.07	0.022
11: I buy products for family members, friends etc.	T1	0.07	0.027	0.03	0.190
	T2	0.02	0.297	0.02	0.233
12: I buy cheaper products to save	T1	0.11	0.001	0.03	0.172
	T2	0.05	0.091	0.06	0.044
13: I try to minimise food waste	T1	0.05	0.066	0.01	0.311
	T2	0.09	0.008	0.08	0.010
14: I buy products through e-commerce platforms such as Shopee, Lazada, etc.	T1	0.07	0.020	0.09	0.007
	T2	0.04	0.142	0.08	0.011

Table 6

Changes in the purchase of selected items by generation: one-way ANOVA

Characteristic		ANOVA		Gen		Average Mean Level				
Item/Generation		F	P	C	Y	X	B	S	Total	
1: Food	T1	0.280	0.891	3.76	3.85	3.84	3.76	3.82	3.81	
	T2	1.823	0.123	3.64	3.71	3.57	3.55	3.36	3.57	
2: Hygiene products	T1	4.313	0.002	4.12	4.31	4.28	4.10	3.73	4.12	
	T2	1.111	0.350	2.87	2.88	2.95	3.07	2.95	2.94	
3: Supplementary health products	T1	0.890	0.469	3.68	3.81	3.76	3.72	3.45	3.68	
	T2	0.296	0.881	3.07	3.12	3.10	3.17	2.95	3.08	
4: Medicines	T1	1.609	0.170	3.81	3.99	3.96	3.85	3.64	3.67	
	T2	1.322	0.260	3.50	3.60	3.60	3.50	3.18	3.48	
5: Personal protective Equipment	T1	1.986	0.095	3.97	4.12	4.11	3.96	3.68	3.97	
	T2	2.029	0.089	3.16	3.32	3.21	3.28	2.77	3.17	
6: Clothing and footwear	T1	2.829	0.024	2.81	3.03	2.91	2.67	2.55	2.79	
	T2	2.024	0.089	2.86	2.97	2.87	2.70	2.45	2.77	
7: Electronic appliances	T1	0.753	0.556	2.89	2.96	3.07	2.91	2.82	2.93	
	T2	0.814	0.517	2.77	2.84	2.85	2.73	2.59	2.74	
8: Home furniture	T1	0.475	0.754	2.13	2.20	2.26	2.15	2.36	2.22	
	T2	0.200	0.938	2.20	2.22	2.28	2.20	2.27	2.23	
9: Sporting goods	T1	0.647	0.629	2.05	2.10	2.09	2.01	2.32	2.11	
	T2	0.177	0.950	2.11	2.12	2.15	2.11	3.37	2.37	
10: Hobbies outside sports	T1	3.028	0.017	2.32	2.38	2.16	2.06	2.36	2.26	
	T2	2.010	0.091	2.81	2.73	2.56	2.49	2.45	2.61	
11: Subscription of internet data	T1	3.419	0.009	4.08	4.04	3.79	3.70	3.50	3.82	
	T2	3.776	0.005	3.76	3.79	3.55	3.44	3.14	3.54	
12: Digital devices	T1	0.755	0.555	3.07	3.10	3.05	2.96	2.68	2.97	
	T2	1.193	0.312	2.96	2.97	2.89	2.78	2.59	2.84	

Table 7 provides the findings of the regression analyses on the changes in the purchase of all 12 products in connection with health anxiety and economic anxiety.

The frequency of shopping in T1 and T2 was statistically significantly related to health anxiety (AnxietyH) for the following items: Item 1 (food), Item 3 (supplementary health and products), Item 4 (medicines), Item 7 (Electronics appliances) and Item 8 (home furniture) with positive correlation. (the greater the level of anxiety, the greater the frequency of purchase). Apart from that, in T1, the frequency of shopping was statistically significant for Item 6 (clothing and footwear) and in T2 for Item 2 (hygiene products) and Item 5 (personal protective equipment), with positive correlation.

While the frequency of shopping in T1 and T2 was statistically significantly related to anxiety of economic situation (AnxietyE) for the following items: Item 3 (supplementary health product), Item 8 (home furniture), and Item 9 (sporting goods), with a positive correlation. Other items that were statistically significantly related to anxiety of economic situation were, in T1, Item 1 (food), Item 4 (medicines), and Item 7 (electronic appliances). Furthermore, in T2, the items statistically significantly related were Item 2 (hygiene products) and Item 11 (subscription to internet data) with a positive correlation.

Table 7
Changes in the purchase of selected items in relation to anxiety related to the COVID-19 pandemic and endemic: Multiple linear regression

Variable		AnxietyH		AnxietyE	
Subject (Item)		Effect	P	Effect	P
1: Food	T1	0.11	0.001	0.09	0.006
	T2	0.10	0.002	0.03	0.192
2: Hygiene products	T1	0.02	0.244	0.02	0.237
	T2	0.13	0.000	0.09	0.008
3: Supplementary health products	T1	0.14	0.000	0.15	0.000
	T2	0.13	0.000	0.08	0.014
4: Medicines	T1	0.09	0.006	0.08	0.015
	T2	0.13	0.000	0.05	0.081
5: Personal protective Equipment	T1	-0.01	0.389	-0.00	0.438
	T2	0.14	0.000	0.04	0.130

Table 7 (continued)

Variable		AnxietyH		AnxietyE	
Subject (Item)		Effect	P	Effect	P
6: Clothing and footwear	T1	0.07	0.026	0.03	0.186
	T2	0.01	0.409	-0.02	0.229
7: Electronic appliances	T1	0.07	0.030	0.07	0.024
	T2	0.07	0.031	0.01	0.380
8: Home furniture	T1	0.06	0.039	0.07	0.017
	T2	0.06	0.047	0.10	0.002
9: Sporting goods	T1	0.08	0.012	0.11	0.002
	T2	0.01	0.385	0.09.	0.006
10: Hobbies outside sports	T1	-0.02	0.255	-0.01	0.388
	T2	-0.06	0.048	-0.04	0.132
11: Subscription of internet data	T1	0.01	0.396	0.02	0.290
	T2	0.02	0.219	0.06	0.037
12: Digital Devices	T1	-0.02	0.228	0.05	0.071
	T2	-0.02	0.260	0.05	0.091

DISCUSSION

This study affirms that the COVID-19 pandemic substantially altered consumer buying and shopping behaviour across generational groups in Malaysia, largely driven by varying levels of anxiety and uncertainty. Consistent with previous studies (Eger et al., 2021; Sheth, 2020), the findings demonstrate that consumers increasingly prioritised essential goods, health-related products, and digital purchasing during both the pandemic and endemic phases. More importantly, the findings suggest that consumer behaviour during crises should

not be understood solely as an individual psychological response, but rather as part of broader social and economic transformations that reshape everyday life and consumption practices within society.

From a sociological perspective, the increased reliance on digital purchasing, precautionary spending, and health-oriented consumption reflects broader social adaptations shaped by collective anxieties, socio-economic uncertainty, and changing lifestyle practices across generations (Bauman, 2007; Granovetter, 1985). The findings further indicate that consumer

behaviour is socially embedded within broader socio-economic structures, collective experiences, and generational identities. During the COVID-19 crisis, consumption no longer functioned merely as an economic activity but also as a coping mechanism through which individuals attempted to manage uncertainty, maintain social stability, and reduce perceived vulnerability. The normalisation of online shopping, stockpiling behaviour, and increased concern toward health-related products illustrates how crises can reconstruct social norms and redefine consumer priorities within post-pandemic society.

Significant generational differences were also observed. Generation C, Generation Y, and Generation X expressed stronger concerns regarding economic stability due to employment responsibilities, financial commitments, and social pressures, whereas older cohorts such as Baby Boomers and the Silent Generation demonstrated greater health-related anxieties. These findings align with international studies conducted in Europe, the United States, and East Asia, which similarly reported increased digital consumerism among younger generations and heightened health-oriented purchasing among older populations (Eger et al., 2021; Laato et al., 2020). However, the Malaysian context also demonstrates that socio-cultural environments and local economic conditions influence the intensity and manifestation of anxiety-driven consumption behaviours. This suggests that while pandemic-induced behavioural adaptations may transcend geographical

boundaries, consumer responses remain shaped by local social structures, cultural expectations, and economic realities.

The study further contributes new sociological insights by demonstrating that pandemic-related anxieties accelerated broader social and behavioural transformations, particularly in digital consumption, precautionary spending, and health-oriented purchasing practices. Unlike earlier studies focusing primarily on individual consumer responses, this study highlights how collective crises reshape consumption behaviour as a socially embedded phenomenon across generations within the Malaysian context. The findings also suggest that post-pandemic consumerism increasingly reflects adaptive social behaviour, where purchasing decisions are influenced not only by personal preference but also by collective insecurity, social responsibility, and changing societal norms. These findings therefore, contribute to the growing corpus of knowledge on the sociology of consumerism, sociology of economic behaviour, and post-pandemic social transformation.

Limitations and Recommendations for Future Research

While this study provides important empirical insights into generational purchasing behaviour within the Malaysian context, several limitations should be acknowledged. First, the findings are limited to Malaysia and may not fully capture variations in consumer behaviour across different cultural, economic, and social

environments. Consumer responses to crises such as COVID-19 are often influenced by local cultural norms, government policies, technological accessibility, and socio-economic conditions. Therefore, the absence of cross-country comparative analysis may limit the broader generalizability of the findings.

Future studies should incorporate multicultural and cross-national comparative datasets involving diverse societies and regions to strengthen the external validity of generational consumer behaviour research in post-pandemic contexts. Comparative studies between Asian, Western, and emerging economies may provide a deeper understanding of how cultural values, economic resilience, and public health responses shape anxiety-driven consumption patterns across generations. In addition, longitudinal approaches are recommended to examine whether the behavioural changes observed during the pandemic remain permanent or gradually diminish over time. Such approaches would contribute toward a more comprehensive understanding of long-term generational shifts in consumer behaviour following large-scale global disruptions.

Practical Implications for Asian Business

This study provides important practical implications for businesses operating in the Asian post-pandemic market environment. The findings demonstrate that consumer behaviour is increasingly shaped by health anxiety, economic uncertainty, and generational experiences, highlighting

the need for businesses to adopt more adaptive and consumer-centred strategies. Retailers and marketers should prioritise transparent communication emphasising product safety, hygiene, reliability, and consumer well-being to strengthen trust and reduce consumer anxiety during periods of uncertainty.

The findings also reveal significant generational differences in digital consumption and purchasing behaviour. Younger cohorts, particularly Generation Y and Generation Corona, demonstrated stronger reliance on digital platforms, e-commerce, and social media engagement, indicating the importance of strengthening digital infrastructures, personalized online experiences, and seamless digital payment systems. In contrast, older generations placed greater emphasis on health security, convenience, and reliability, suggesting that businesses should adopt more targeted and generationally responsive communication strategies.

From a broader sociological perspective, the study highlights how large-scale crises reshape consumer values, social behaviour, and economic practices across generations. The findings further suggest that consumer behaviour during crises should be understood as a socially embedded practice influenced by collective experiences, socio-economic uncertainty, and generational identity. Businesses should therefore continuously monitor shifts in consumer sentiment, social anxieties, and behavioural adaptation to remain resilient during future disruptions. Policymakers and

business sectors should also collaborate in developing consumer support frameworks and public communication strategies that address generational concerns, strengthen consumer confidence, and support long-term social and economic recovery in a post-pandemic society.

CONCLUSION

This study demonstrates that the COVID-19 pandemic significantly reshaped consumer behaviour across generational cohorts in Malaysia through anxiety-driven consumption patterns during the pandemic and endemic phases. The findings reveal that health anxiety, economic uncertainty, and collective crisis experiences influenced purchasing behaviour differently across generations, resulting in increased digital consumption, precautionary spending, and health-oriented purchasing practices.

From a sociological perspective, the study highlights that consumer behaviour during crises is socially embedded and shaped by collective anxieties, socio-economic conditions, and generational experiences rather than purely individual decision-making. By integrating Generational Cohort Theory with perspectives from the sociology of consumerism and economic behaviour, this study contributes empirical and sociological insights into post-pandemic social transformation and generational behavioural adaptation within the Malaysian context.

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REFERENCES

- Accenture. (2020, April 28). *COVID-19 will permanently change consumer behaviour*. <https://www.accenture.com/us-en/insights/consumer-goods-services/coronavirus-consumerbehaviour-research>
- Ahmed, R. R., Streimikiene, D., Rolle, J., & Duc, P. A. (2020). The COVID-19 pandemic and the antecedents for the impulse buying behaviour of US citizens. *Journal of Competitiveness*, 12(3), 5-27. <https://doi.org/10.7441/joc.2020.03.01>
- Alwin, D. F., & McCammon, R. J. (2003). Generations, cohorts, and social change. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the life course* (pp. 23-49). Springer. https://doi.org/10.1007/978-0-306-48247-2_2
- Arafat, S. M. Y., Kar, S. K., Menon, V., Alradie-Mohamed, A., Mukherjee, S., Kaliamoorthy, C., & Kabir, R. (2020). Responsible factors of panic buying: An observation from online media reports. *Frontiers in Public Health*, 8, 603894. <https://doi.org/10.3389/fpubh.2020.603894>
- Arndt, J., Solomon, S., Kasser, T., & Sheldon, K. M. (2004). The urge to splurge: A terror management account of materialism and consumer behaviour. *Journal of Consumer Psychology*, 14(3), 198-212. https://doi.org/10.1207/s15327663jcp1403_2
- Bauman, Z. (2007). *Consuming life*. Polity Press.
- Brosdahl, D. J. C., & Carpenter, J. M. (2011). Shopping orientations of U.S. males: A generational cohort comparison. *Journal of Retailing and Consumer Services*, 18(6), 548-554. <https://doi.org/10.1016/j.jretconser.2011.07.005>
- Carpenter, J. M., Moore, M., & Fairhurst, A. (2012). Consumer shopping value for retail brands. *Journal of Fashion Marketing and Management*:

- An International Journal*, 16(2), 183-199. <https://doi.org/10.1108/13612021211222824>
- Chaney, D., Touzani, M., & Ben Slimane, K. (2017). Marketing to the (new) generations: Summary and perspectives. *Journal of Strategic Marketing*, 25(3), 179-189. <https://doi.org/10.1080/0965254X.2017.1291173>
- Chen, L. (2020). Older adults and COVID-19 pandemic: Resilience matters. *Archives of Gerontology and Geriatrics*, 89, Article 104124. <https://doi.org/10.1016/j.archger.2020.104124>
- Chirumbolo, A., Callea, A., & Urbini, F. (2021). The effect of job insecurity and life uncertainty on everyday consumptions and broader life projects during COVID-19 pandemic. *International Journal of Environmental Research and Public Health*, 18(10), Article 5363. <https://doi.org/10.3390/ijerph18105363>
- Davis, J. (2004). The power of generational thinking: How to prepare for the millennial boom. *Public Management*, 86(8), 12-17.
- Despin, T. (2020, May 11). Knock-on effects of COVID-19 on consumer behaviour and how businesses can prepare for them. *Entrepreneur*. <https://www.entrepreneur.com/article/350457>
- Donthu, N., & Gustafsson, A. (2020). Effects of COVID-19 on business and research. *Journal of Business Research*, 117, 284-289. <https://doi.org/10.1016/j.jbusres.2020.06.008>
- Duhachek, A. (2005). Coping: A multidimensional, hierarchical framework of responses to stressful consumption episodes. *Journal of Consumer Research*, 32(1), 41-53. <https://doi.org/10.1086/426612>
- Di Crosta, A., Ceccato, I., Marchetti, D., La Malva, P., Maiella, R., Cannito, L., Cipi, M., Mammarella, N., Verrocchio, M. C., & Di Domenico, A. (2021). Psychological factors and consumer behavior during the COVID-19 pandemic. *PLOS ONE*, 16(8), e0256095. <https://doi.org/10.1371/journal.pone.0256095>
- Dodgson, L. (2020, March 22). A human behaviour expert explains 4 psychological reasons why people are panic buying items in bulk during the coronavirus pandemic. *Insider*. <https://www.insider.com/why-people-are-panic-bulk-buying-during-the-coronavirus-pandemic>
- East, R., Singh, J., Wright, M., & Vanhuele, M. (2016). *Consumer behaviour: Applications in marketing* (3rd ed.). SAGE Publications.
- Edelman. (2020). *Brand trust and the coronavirus pandemic*. <https://www.edelman.com/research/COVID-19-brand-trust-report>
- Eger, L., Komárková, L., Egerová, D., & Mičík, M. (2021). The effect of COVID-19 on consumer shopping behaviour: Generational cohort perspective. *Journal of Retailing and Consumer Services*, 61, Article 102542. <https://doi.org/10.1016/j.jretconser.2021.102542>
- Esposti, D. P., Mortara, A., & Roberti, G. (2021). Sharing and sustainable consumption in the era of COVID-19. *Sustainability*, 13(4), Article 1903. <https://doi.org/10.3390/su13041903>
- Fairfield, B., Mammarella, N., Palumbo, R., & Di Domenico, A. (2015). Emotional meta-memories: A review. *Brain Sciences*, 5(4), 509-520. <https://doi.org/10.3390/brainsci5040509>
- Ferraresi, M. (2020, May 22). COVID effect: First we bought time, now space. *HuffPost Italy*. https://www.huffingtonpost.it/entry/mauro-ferraresi-effetto-covid-prima-compravamo-tempo-ora-spazio_it_5ec7ddb5b6cc3a293443f8
- Granovetter, M. (1985). Economic action and social structure: The problem of embeddedness. *American Journal of Sociology*, 91(3), 481-510. <https://doi.org/10.1086/228311>
- Greenberg, J., Solomon, S., & Pyszczynski, T. (1997). Terror management theory of self-esteem and cultural worldviews: Empirical assessments and conceptual refinements. In M. P. Zanna (Ed.), *Advances in experimental social psychology*

- (Vol. 29, pp. 61-139). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60016-7](https://doi.org/10.1016/S0065-2601(08)60016-7)
- Hesham, F., Riadh, H., & Sihem, N. K. (2021). What have we learned about the effects of the COVID-19 pandemic on consumer behaviour? *Sustainability*, 13(8), Article 4304. <https://doi.org/10.3390/su13084304>
- Hothorn, T., Bretz, F., & Westfall, P. (2008). Simultaneous inference in general parametric models. *Biometrical Journal*, 50(3), 346-363. <https://doi.org/10.1002/bimj.200810425>
- Ignatius, J. S., & Hechanova, M. R. M. (2014). Internet usage from a generational perspective. *Philippine Journal of Psychology*, 47(1), 133-152. https://www.pap.org.ph/sites/default/files/upload/pjp2014-47-1-pp73-92-ignatiushechanova-internet_usage_from_generational_perspective.pdf
- IMARC Group. (2023). Millennial market report: Trends, consumer preferences, and growth opportunities 2023-2028. IMARC Group. <https://www.imarcgroup.com>
- Jackson, V., Stoel, L., & Brantley, A. (2011). Mall attributes and shopping value: Differences by gender and generational cohort. *Journal of Retailing and Consumer Services*, 18(1), 1-9. <https://doi.org/10.1016/j.jretconser.2010.08.002>
- Jones, J. S., Murray, S. R., & Tapp, S. R. (2018). Generational differences in the workplace. *Journal of Business Diversity*, 18(2), 88-97. <https://doi.org/10.33423/jbd.v18i2.528>
- Laato, S., Islam, A. K. M. N., Farooq, A., & Dhir, A. (2020). Unusual purchasing behaviour during the early stages of the COVID-19 pandemic: The stimulus-organism-response approach. *Journal of Retailing and Consumer Services*, 57, Article 102224. <https://doi.org/10.1016/j.jretconser.2020.102224>
- Leach, J. (1994). Psychological responses to a disaster. In *Survival psychology* (pp. 10-29). Palgrave Macmillan. https://doi.org/10.1057/9780230372719_2
- Lehmann, J., & Beckmann, M. (2024). *Digital transformation in Switzerland: The current state and expectations* (arXiv:2412.12784). arXiv. <https://doi.org/10.48550/arXiv.2412.12784>
- Leverin, A., & Liljander, V. (2006). Does relationship marketing improve customer relationship satisfaction and loyalty? *International Journal of Bank Marketing*, 24(4), 232-251. <https://doi.org/10.1108/02652320610671333>
- Lissitsa, S., & Kol, O. (2016). Generation X vs. Generation Y: A decade of online shopping. *Journal of Retailing and Consumer Services*, 31, 304-312. <https://doi.org/10.1016/j.jretconser.2016.04.015>
- Marjanen, H., Kohijoki, A., Saastamoinen, K., & Engblom, J. (2019). Old dogs learning new tricks? The effect of age and generation on shopping behaviour. *The International Review of Retail, Distribution and Consumer Research*, 29(5), 549-567. <https://doi.org/10.1080/09593969.2019.1664613>
- Maslow, A. H. (1970). *Motivation and personality* (2nd ed.). Harper & Row.
- McKinsey & Company. (2020, October 7). *Consumer sentiment and behaviour continue to reflect the uncertainty of the COVID-19 crisis*. <https://www.mckinsey.com/business-functions/marketing-and-sales/our-insights/a-globalview-of-how-consumer-behaviour-is-changing-amid-COVID-19>
- Noble, S. M., & Schewe, C. D. (2000). Cohort segmentation: An exploration of its validity. *Journal of Business Research*, 48(2), 147-156. [https://doi.org/10.1016/S0148-2963\(98\)00075-6](https://doi.org/10.1016/S0148-2963(98)00075-6)
- Oblinger, D. (2003). Boomers, Gen-Xers, and Millennials: Understanding the "new students." *Educause Review*, 38(4), 37-47. <https://er.educause.edu/articles/2003/7/boomers-genxersand-millennials-understanding-the-new-students>

- Pantano, E., Pizzi, G., Scarpi, D., & Dennis, C. (2020). Competing during a pandemic? Retailers' ups and downs during the COVID-19 outbreak. *Journal of Business Research*, *116*, 209-213. <https://doi.org/10.1016/j.jbusres.2020.05.036>
- Parment, A. (2013). Generation Y vs. baby boomers: Shopping behaviour, buyer involvement and implications for retailing. *Journal of Retailing and Consumer Services*, *20*(2), 189-199. <https://doi.org/10.1016/j.jretconser.2012.12.001>
- Rajagopal. (2020). Development of consumer behaviour. In *Transgenerational marketing: Evolution, expansion, and experience* (pp. 163-194). Springer International Publishing. https://doi.org/10.1007/978-3-030-33926-5_6
- Ryder, N. B. (1985). The cohort as a concept in the study of social change. In E. Shanas & M. B. Sussman (Eds.), *Images of aging in Western societies* (pp. 114-144). Duke University Press.
- Schewe, C. D., & Noble, S. M. (2000). Market segmentation by cohorts: The value and validity of cohorts in America and abroad. *Journal of Marketing Management*, *16*(1-3), 129-142. <https://doi.org/10.1362/026725700785100479>
- Sessa, V. I., Kabacoff, R. I., Deal, J., & Brown, H. (2007). Generational differences in leader values and leadership behaviours. *Psychologist-Manager Journal*, *10*(1), 47-74. <https://doi.org/10.1080/10887150709336612>
- Sheth, J. (2020). Impact of COVID-19 on consumer behaviour: Will the old habits return or die? *Journal of Business Research*, *117*, 280-283. <https://doi.org/10.1016/j.jbusres.2020.05.059>
- Shulga, L. V., Busser, J., & Kim, H. (2018). Generational differences in brand loyalty in the hotel industry. *International Journal of Hospitality Management*, *72*, 1-8. <https://doi.org/10.1016/j.ijhm.2018.01.004>
- Sneath, J. Z., Lacey, R., & Kennett-Hensel, P. A. (2008). Coping with a natural disaster: Losses, emotions, and impulsive and compulsive buying. *Marketing Letters*, *20*(1), 45-60. <https://doi.org/10.1007/s11002-008-9049-y>
- Ting, H., & de Run, E. C. (2015). A qualitative inquiry into the formation of generational cohorts: A case of an emerging market. *Journal of Economics and Business Research*, *21*(1), 126-143.
- USA Today. (2020, August 11). 'Generation Corona': How COVID-19 will shape young people for the rest of their lives. <https://www.usatoday.com/story/news/nation/2020/08/11/generationcorona-COVID-19-shape-young-people/3317483001/>
- Wallenfeldt, J. (2023, August 18). Silent Generation. In *Encyclopaedia Britannica*. <https://www.britannica.com/topic/Silent-Generation>
- Williams, K. C., & Page, R. A. (2011). Marketing to the generations. *Journal of Behavioural Studies in Business*, *3*, 1-17. <https://www.aabri.com/manuscripts/10575.pdf>
- Yuen, K. F., Wang, X., Ma, F., & Li, K. X. (2020). The psychological causes of panic buying following a health crisis. *International Journal of Environmental Research and Public Health*, *17*(10), Article 3513. <https://doi.org/10.3390/ijerph17103513>