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NAVIGATING THE DIGITAL MARKETPLACE IN AN AGEING MALAYSIA: CHALLENGES FACING BABY BOOMER CONSUMERS

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Abstract

Baby Boomer consumers, generally defined as individuals born between 1946 and 1964, represent a significant yet often misunderstood segment in today's digital marketplace. In Malaysia, their importance is growing as the country experiences population ageing alongside rapid digital transformation in e-commerce, e-wallets, online banking, digital public services, telehealth, social media commerce and artificial intelligence (AI)-driven services. This paper examines the challenges faced by Baby Boomer consumers in the digital era, with a specific focus on Malaysia. Drawing on academic literature, policy documents and industry reports published from 2020 onwards, it argues that Baby Boomers should not be viewed as digitally incapable or resistant to technology. Rather, their digital consumer experiences are shaped by factors such as access, affordability, digital literacy, trust, privacy, financial scams, payment anxiety, accessibility, language, cultural expectations and the decline of human service. The Malaysian context highlights a key tension: older consumers are increasingly connected, but their participation in higher-risk digital activities remains uneven. The paper proposes a multidimensional framework based on access, capability, usability, trust, safety, autonomy and representation. It concludes that Malaysia's digital economy must become more age-inclusive to support confident, safe, dignified and meaningful participation.

Keywords: Baby Boomers, Malaysia, digital divide, digital literacy, online scams

■1.0 INTRODUCTION

The digital era has transformed everyday consumption. Consumers order food through mobile applications, compare prices on digital marketplaces, pay through e-wallets, scan quick response (QR) codes, transfer funds through online banking, receive promotions through social media and interact with customer service through chatbots. These changes improve convenience but also make the marketplace more complex, less personal and more dependent on digital confidence.

For Baby Boomer consumers, this transformation is especially significant because they have experienced both the analogue marketplace and the digital marketplace. They remember a consumer environment built around cash, physical shops, printed receipts, bank counters, telephone calls, handwritten forms and face-to-face service. Today, they are expected to operate in a marketplace shaped by passwords, one-time passcodes (OTPs), mobile applications, online reviews, subscription renewals, digital wallets, artificial intelligence, algorithmic recommendations and cybersecurity warnings.

Baby Boomers are commonly defined as individuals born between 1946 and 1964 (Fry, 2026; U.S. Census Bureau, 2020). In 2026, this places the cohort roughly between the ages of 62 and 80. Although they are often described as older consumers, this label can be misleading if it encourages a narrow view of their consumer role. Many Baby Boomers remain economically active, manage households, support adult children, care for grandchildren, travel, make healthcare decisions, purchase insurance, use financial services and influence family consumption. International evidence also shows that older adults are increasingly using technology, challenging the stereotype that older consumers are outside the digital marketplace (AARP, 2024, 2025; Gelles-Watnick, 2024).

Although many Baby Boomers are digitally connected, their consumer experiences remain uneven. A Baby Boomer may own a smartphone but still struggle with online payments, app updates, privacy settings, QR code menus, banking authentication, scam messages, or automated services. Digital consumer inclusion, therefore, cannot be measured solely by device ownership or internet access; it must also encompass capability, trust, safety, accessibility, privacy, autonomy, and meaningful support (DeLiema et al., 2023; Franco, 2023; OECD, 2025; Panetta et al., 2025).

This issue is especially important in Malaysia. The country is experiencing population ageing while also accelerating digital transformation. The Department of Statistics Malaysia reported that people aged 60 and above made up 11.6% of Malaysia's population in

2024, compared with 5.4% in 1970 and this proportion is projected to reach 17.3% by 2040 (Department of Statistics Malaysia [DOSM], 2024a). At the same time, Malaysia's digital economy is expanding. DOSM (2024b) reports that information and communication technology and e-commerce contributed 23.5% to Malaysia's economy in 2023, with a value of RM427.7 billion. MyDIGITAL also positions digitalisation as a key national strategy while recognising the need to bridge digital divides (Economic Planning Unit, 2021).

The problem addressed in this paper is that Baby Boomer consumer challenges are often reduced to age, personal weakness or technological resistance. Many challenges instead emerge because digital markets are designed around an assumed user who is fast, mobile-first, confident, data-tolerant, self-service oriented, English-literate and comfortable with automation. Malaysian Baby Boomers vary by income, education, language, location, ethnicity, health status, household support and digital experience. A fair digital economy must recognise this diversity.

This paper aims to investigate the challenges faced by Baby Boomer consumers in the digital era, with specific attention to Malaysia. The paper asks: (1) What are the main challenges faced by Baby Boomer consumers in Malaysia's digital marketplace? (2) How do access, affordability, digital literacy, trust, safety, privacy and usability shape their digital consumer experiences? (3) Why should these challenges be understood beyond stereotypes of technological resistance or digital incapability? (4) How can businesses and policymakers make Malaysia's digital economy more age-inclusive?

Based on these questions, the objectives of this paper are to examine the changing role of Baby Boomer consumers in the digital marketplace; identify key barriers affecting their participation in e-commerce, online banking, e-wallet use and other digital services; analyse the Malaysian context of population ageing and digital economic growth; propose a more inclusive understanding of Baby Boomer digital consumer challenges; and suggest how digital markets can better support older consumers through safety, accessibility, trust, autonomy and meaningful choice.

■2.0 LITERATURE REVIEW

2.1 Baby Boomer Consumers and the Digital Marketplace

Baby Boomer consumers are often discussed through generational labels, but such labels can obscure important differences within the group. The youngest Baby Boomers are still in their early sixties, while the oldest are around eighty. Some continue to work in professional or business roles, while others are retired. Some are digitally confident because they used computers in their careers; others had limited exposure to digital systems before retirement. Some live in urban households with broadband, smartphones and family support; others live in rural areas or alone. Some have high purchasing power; others live on fixed incomes and are careful with spending. These differences matter because digital consumption is shaped by resources, confidence, social support and perceived risk (Franco, 2023; Rybaczewska & Sparks, 2021).

Franco (2023) warns that older consumers are often stereotyped in marketing and consumer research as technologically incapable, vulnerable or resistant. Such stereotypes are harmful because they simplify a complex group. A Baby Boomer who refuses to use a particular e-wallet may not be anti-technology. The refusal may reflect concern about fraud, lack of trust in the provider, difficulty reading the app, fear of losing control over money or preference for a payment method that provides clearer records. Similarly, a Baby Boomer who avoids online shopping may not be able to shop online; the consumer may distrust fake sellers, dislike hidden delivery charges or prefer to inspect products physically. These behaviours may be rational responses to real marketplace risks.

Rybaczewska and Sparks (2021) show that older consumers' e-commerce activities are shaped by more than chronological age. Household structure, routine, access to physical retail, social support and personal circumstances all influence whether older consumers buy online. This is highly relevant to Malaysia, where family structures and intergenerational support remain important. Many Baby Boomers live with spouses, adult children, or extended family members. Within the Malaysian context, national data reveal that approximately 84% of older adults reside with other family members, establishing co-residence as a core pillar of late-life social support. This domestic proximity heavily mediates technology use; while some older individuals rely continuously on younger relatives to perform basic digital tasks, others retain daily operational independence but systematically consult or delegate control to family members when navigating high-risk digital activities such as online banking, financial investments, or health-related purchases (Havens & Latulipe, 2024).

In Malaysia, Baby Boomer consumer behaviour is also shaped by language and culture. Digital platforms may offer Bahasa Malaysia, English, Mandarin or Tamil interfaces, but the quality and clarity of translation vary. Privacy policies, banking warnings, product terms and insurance documents may still be difficult to understand. Older consumers who are comfortable speaking one language may face difficulties when an app, chatbot or scam warning uses another. Malaysia's multicultural setting, therefore, adds a layer of complexity to digital inclusion. Age-inclusive digital design in Malaysia must also be multilingual and culturally sensitive.

2.2 Digital Inclusion, Vulnerability and Consumer Trust

The literature suggests that digital consumer inclusion is multidimensional. Older consumers may be online yet still face barriers in trust, privacy, payment, scam prevention, accessibility and customer support. Franco (2023) warns that older consumers are frequently stereotyped as technologically incapable, vulnerable or resistant. Rybaczewska and Sparks (2021) show that e-commerce participation among older consumers is shaped by household structure, routines, access to physical retail and social support rather than by chronological age alone. DeLiema et al. (2023) emphasise that increased online activity can intensify privacy and data safety risks, while Panetta et al. (2025) argue that payment innovation may create age-driven inequalities when digital financial systems are designed around speed and automation without adequate consumer support.

In the Malaysian context, this literature is especially relevant because the consumer marketplace is becoming increasingly app-based and cashless, while the population is ageing. The Baby Boomer cohort is not a homogeneous group. Some are highly digitally confident, while others rely on family members or physical service channels. Consequently, the key concern is not whether Baby Boomers can use technology in general, but whether digital systems give them safe, understandable, accessible and recoverable pathways for everyday consumption.

■3.0 METHODOLOGY

This paper adopts a conceptual review approach. It synthesises academic literature, government reports, industry publications and policy documents published from 2020 onwards. Sources include international research on older consumers, e-commerce, digital vulnerability, privacy, cybersecurity, digital payments and technology adoption, as well as Malaysia-specific evidence from DOSM, MyDIGITAL, Bank Negara Malaysia-related reporting such as institutional annual reports and financial fraud statistics, the Ministry of Finance and regional digital economy reports. The purpose is not to test a statistical model but to build an integrated understanding of the challenges affecting Baby Boomer consumers today.

A conceptual review is appropriate because the challenges of Baby Boomer consumers in the digital era are multidimensional. A purely technical explanation would be insufficient because many problems are not simply about knowing how to use a device. A purely marketing explanation would also be limited because digital consumer challenges involve public policy, fraud prevention, data protection, financial inclusion, healthcare access and social ageing. For example, an older Malaysian consumer's reluctance to use online banking may reflect usability problems, scam exposure, difficulty with authentication, lack of trust, poor internet connectivity, fear of family judgment after mistakes or preference for bank-counter reassurance. These factors interact and cannot be separated easily (DeLiema et al., 2023; Panetta et al., 2025; Pucer et al., 2024).

The paper is organised around major themes identified from the literature and Malaysian evidence: access, digital literacy, e-commerce, digital finance, online scams, privacy, health and accessibility, artificial intelligence, ageism and customer support. These themes are then integrated into a framework for Baby Boomer digital consumer inclusion in Malaysia.

■4.0 RESULTS

4.1 Malaysia's Ageing Digital Economy

Malaysia is moving toward an aging society while also accelerating digital economic growth. DOSM (2024a) reports that Malaysians aged 60 and above accounted for 11.6% of the population in 2024 and are projected to account for 17.3% by 2040. This shift will affect consumption patterns across healthcare, housing, retail, financial services, transportation, tourism, telecommunications, insurance and public services. Older consumers will not only be service recipients; they will be active market participants whose needs shape demand.

At the same time, Malaysia's digital economy has become a major part of national development. DOSM (2024b) reports that ICT and e-commerce contributed RM427.7 billion or 23.5%, to Malaysia's economy in 2023. Google, Temasek and Bain & Company (2024) also report that Malaysia's internet economy continues to grow, supported by e-commerce, online travel, digital financial services and platform-based services. These developments create opportunities for Baby Boomer consumers. They can access wider product choices, compare prices, communicate with family, manage health appointments, use digital banking and participate in online learning or leisure. However, these opportunities are unevenly distributed (see Table 1).

Table 1 Selected Malaysia-Specific Indicators Relevant to Baby Boomer Consumers

Indicator	Malaysia-specific evidence	Implication for Baby Boomer consumers
Population aged 60+	11.6% in 2024; projected to reach 17.3% by 2040 (DOSM, 2024a).	Older consumers will become more important in Malaysia's consumer economy.
ICT and e-commerce contribution	RM427.7 billion or 23.5% of Malaysia's economy in 2023 (DOSM, 2024b).	Digital consumption is central to economic participation.
Internet use among Malaysians aged 60+	86.9% in 2023 (DOSM, 2024c).	Most older Malaysians are online, but some remain excluded.
E-commerce purchasing among internet users aged 60+	35.3% in 2023 (DOSM, 2024c).	Older users participate in e-commerce selectively.
Internet banking among internet users aged 60+	31.1% in 2023 (DOSM, 2024c).	Digital finance remains a key trust and inclusion challenge.
Online information verification among internet users aged 60+	49.8% in 2023 (DOSM, 2024c).	Misinformation and scam detection require stronger literacy support.
Privacy-setting changes among internet users aged 60+	55.2% in 2023 (DOSM, 2024c).	Privacy management is uneven and should not depend only on individual effort.
NSRC calls	122,603 calls from October 2022 to August 2024, with RM371 million in reported losses (Ministry of Finance Malaysia, 2024).	Scam response and fraud prevention are major consumer protection priorities.

The data summarized in Table 1, specifically from DOSM's ICT Use and Access by Individuals and Households Survey Report 2023, shows that while Malaysia has high household internet access and high individual mobile phone ownership, older consumers remain less digitally engaged than younger consumers in some activities. Internet usage among Malaysians aged 60 and above was 86.9% in 2023, while usage for many younger age groups exceeded 95% (DOSM, 2024c). Among these older internet users, 35.3% purchased goods or services through e-commerce, 31.1% used internet banking, 49.8% verified the reliability of online information, 37.5% set up effective measures to protect devices and online accounts and 55.2% changed privacy settings (DOSM, 2024c). These figures reveal a central policy challenge: Malaysia cannot assume that digital adoption equals digital readiness. Baby Boomer consumers may be connected enough to be exposed to digital risk but not always confident enough to protect themselves. This makes age-inclusive digital consumer protection urgent.

4.2 Access, Affordability, Rurality and Meaningful Digital Inclusion

Malaysia's digital access indicators are strong, but meaningful inclusion remains uneven. DOSM (2024c) reports high household internet access and mobile phone ownership. However, meaningful access involves more than having a device or internet connection. It includes affordability, connection quality, device suitability, accessible design, language support, digital skills and the ability to use digital services safely and independently (OECD, 2025). For Baby Boomer consumers, these conditions vary greatly.

Affordability is one concern. Some Baby Boomers have stable pensions, savings or family support, but others live on fixed or limited incomes. Digital participation may require a smartphone, data plan, broadband subscription, device repairs, app storage, antivirus tools and occasional technical assistance. As more consumer services become app-based, these costs become less optional. A consumer who cannot afford a newer smartphone may find that banking apps stop working on older devices. A consumer with limited data may avoid video-based customer support or telehealth services. A consumer who shares a device with family members may lose privacy when managing health, banking or personal purchases.

Rurality also matters. Urban Baby Boomers may have stronger connectivity, more service points and greater exposure to digital tools. Rural Baby Boomers may depend more on physical branches, post offices, local shops or family members. When banks close branches, retailers move promotions online or public services require digital forms, rural older consumers may face higher costs and greater dependence. MyDIGITAL recognises the need to bridge digital divides, but implementation must include older consumers explicitly (Economic Planning Unit, 2021).

Access is also shaped by disability and ageing-related changes. Some Baby Boomers experience reduced vision, hearing, memory, attention or hand dexterity. Small fonts, low contrast, time-limited verification codes, complex menus and confusing icons can make digital services difficult. These are design failures, not consumer failures. If an older consumer cannot complete a transaction because the "confirm" button is unclear or the security code expires too quickly, the problem lies partly in the system.

Meaningful inclusion, therefore, requires a shift from "Can older consumers get online?" to "Can older consumers benefit from digital services safely and confidently?" This shift is important for Malaysia because high internet access may create a false sense of success. A connected Baby Boomer who cannot safely use online banking, identify fake sellers or manage privacy settings is still at risk of exclusion.

4.3 Digital Literacy, Confidence and Continuous Learning

Digital literacy is a major challenge for Baby Boomer consumers because the digital marketplace requires multiple forms of knowledge. Consumers must know how to search, compare, evaluate, pay, authenticate, protect, report and recover. These skills are not learned once and then completed. They must be updated continuously because apps, scams, security rules and platform designs change frequently (OECD, 2025; Pacheco, 2024; Pucer et al., 2024).

In Malaysia, digital literacy among older consumers must be practical. Beyond smartphone use, Baby Boomers need to recognise fake bank short message service (SMS) alerts, verify marketplace sellers, avoid suspicious parcel links, use DuitNow safely, set transaction limits, contact the National Scam Response Centre quickly, manage privacy settings and distinguish reliable health information from misleading advertisements. DOSM (2024c) shows that only 49.8% of internet users aged 60 and above verified online information, while 37.5% set up effective measures to protect devices and accounts. These figures show a capability gap directly connected to consumer safety.

Confidence is just as important as skill. A Baby Boomer may know how to perform a task but hesitate because the consequences of making a mistake feel serious. This is especially true for money, health, travel, insurance and government services. Fear of losing money, being scammed, embarrassing oneself or asking for help can reduce participation. Pacheco (2024) notes that older adults may be concerned about online safety while also lacking clarity about reporting or protective action. Pucer et al. (2024) similarly show that perceived cyberthreats and technology anxiety influence older adults' smartphone adoption.

Digital learning support should therefore be respectful and task-based. Many older consumers do not want abstract training; they want help with real problems. Community programmes in Malaysia could focus on "safe online shopping," "protecting your bank account," "using e-wallets safely," "recognising scam calls," "privacy settings for WhatsApp and Facebook," and "how to report fraud." Training should be available in Bahasa Malaysia, English, Mandarin, Tamil and local languages where appropriate. It should also be delivered through trusted institutions such as banks, universities, libraries, mosques, churches, temples, residents' associations, senior citizen clubs and government-linked community centres.

The emotional tone of support matters. Baby Boomers should not be shamed for asking questions. Younger family members sometimes help by taking over the device instead of teaching the older person. While this solves the immediate problem, it may reduce long-term confidence. A better approach is guided practice, where older consumers complete the task themselves with patient support. This preserves autonomy and builds confidence.

4.4 E-Commerce Participation, Trust and Platform Design

E-commerce is central to Malaysia's digital economy. DOSM (2024b) reports that e-commerce forms a major part of Malaysia's digital economic contribution, while Google et al. (2024) identify e-commerce as a key driver of Malaysia's internet economy. For Baby Boomer consumers, e-commerce offers real benefits. It can reduce travel, provide access to wider product choices, enable price comparison, support gift purchasing and help consumers with mobility limitations. However, participation remains uneven. DOSM (2024c) reports that only 35.3% of internet users aged 60 and above purchased goods or services through e-commerce in 2023.

The lower participation rate should not be interpreted simply as resistance. Rybaczewska and Sparks (2021) show that older consumers' e-commerce behaviour is shaped by household structure, routines and personal circumstances. In Malaysia, older consumers may avoid e-commerce because they prefer to inspect products physically, distrust unknown sellers, worry about fake goods, dislike complicated return procedures or feel uncertain about digital payment. These concerns are rational in a marketplace where social media advertisements, marketplace sellers, courier messages and online reviews can be difficult to verify.

Trust is therefore central. Baby Boomer consumers often value clear product descriptions, reliable delivery, known brands, visible seller information, secure payment options and human customer service. They may be less tolerant of pop-up advertisements, confusing vouchers, hidden delivery fees, countdown timers or auto-selected add-ons. Such features may increase conversion for platforms, but they can create anxiety or confusion for consumers who prefer careful decision-making. Yap et al. (2021) argue that technology can both support and intensify consumer vulnerability, especially during crises or rapid digital shifts. This insight applies to older consumers who may benefit from e-commerce but also face platform-related risks.

Malaysian e-commerce platforms should strengthen age-inclusive design. Product pages should use readable fonts, clear language, transparent pricing, verified seller labels and simple return instructions. Platforms should provide stronger warnings about fake sellers and suspicious links. Customer service should include human escalation, not only chatbots. Delivery updates should be clear because parcel-related scams are common. Refund processes should be easy to understand, especially for consumers who are anxious about money leaving their accounts.

E-commerce also intersects with family life. Some Baby Boomers ask children or grandchildren to buy items online for them. This can be convenient, but it means the older consumer may not fully control product choice, payment or account privacy. Building older consumers' own e-commerce confidence can therefore support independence.

4.5 Digital Payments, Online Banking and Financial Control

Digital payments are now part of everyday Malaysian consumption. Consumers use online banking, DuitNow, QR payments, debit cards, credit cards, e-wallets and app-based financial services. Digital finance can save time and reduce the need to visit branches. It can also provide transaction records, alerts and convenience. However, for Baby Boomer consumers, digital finance is one of the most sensitive areas because it involves money, savings and financial security.

DOSM (2024c) reports that only 31.1% of Malaysian internet users aged 60 and above used internet banking in 2023. This suggests that many older internet users remain cautious about digital finance. Panetta et al. (2025) argue that digital payment innovation can create age-driven inequalities when systems are designed around speed, automation and mobile-first convenience without sufficient attention to older consumers' needs. This argument is highly relevant to Malaysia because merchants, banks and public campaigns increasingly encourage cashless transactions.

For many Baby Boomers, cash and physical banking provide a sense of control. Cash is visible. A passbook or paper statement can be kept and checked. A bank officer can explain a transaction. Digital payments, by contrast, may feel invisible and irreversible. A mistaken transfer, unauthorised transaction or scam-induced payment can create panic. Older consumers may worry about clicking the wrong button, entering the wrong account number, losing a phone, forgetting a password or being tricked into revealing an OTP. These fears are understandable because Malaysia has experienced significant scam activity (Ministry of Finance Malaysia, 2024).

Banks and e-wallet providers should therefore design for reassurance, not only efficiency. Older consumers benefit from confirmation screens, plain-language warnings, adjustable transaction limits, cooling-off periods for suspicious transfers, easy account freezing and human assistance. Bank Negara Malaysia and financial institutions have introduced stronger security measures, but consumer-facing design remains crucial. A warning message that is too technical may be ignored. A fraud alert that appears after the transfer may be too late. A kill switch that is hard to find may not help a panicked consumer.

Financial inclusion should not mean forcing all consumers into cashless systems. Payment choice matters. Malaysia's digital economy can grow while still preserving cash, cards, counters and assisted digital support. This is especially important for older consumers in wet markets, rural areas, small towns, religious communities and informal retail settings where trust and personal relationships remain central to consumption.

4.6 Online Scams, Fraud and Cybersecurity Risks

Online scams are among the most serious threats facing Baby Boomer consumers in Malaysia. The National Scam Response Centre received 122,603 calls from October 2022 to August 2024, with reported losses of RM371 million (Ministry of Finance Malaysia, 2024). This figure captures only reported cases and advisory calls, so the true scale may be higher. Scam losses are not only financial. They can also produce shame, anxiety, family conflict, reduced trust and withdrawal from digital services.

Baby Boomer consumers may encounter fake bank calls, Macau scams, parcel-delivery smishing, fake investments, romance scams, fake online sellers, malware links, fake government messages, loan scams and impersonation of police or tax authorities (Houtti et al., 2024; Ministry of Finance Malaysia, 2024). Malaysia's multilingual communication environment makes scams especially complex because fraudsters can contact consumers through phone calls, short message service (SMS), WhatsApp, Facebook, Telegram, email or fake websites in Bahasa Malaysia, English, Mandarin, Tamil or local dialects.

International evidence reinforces the seriousness of older consumer fraud. The Federal Bureau of Investigation (2025) reported that people over 60 submitted the most internet crime complaints and suffered the highest losses among age groups in the United States in 2024. The Federal Trade Commission (2024) also identifies older consumer fraud as a major consumer protection priority. Houtti et al. (2024) show that scam exposure and underreporting are global problems. Herrera et al. (2024) warn that artificial intelligence may make scams more convincing by improving message quality, personalisation and impersonation.

Table 2 Common Digital Risks Affecting Malaysian Baby Boomer Consumers

Risk area	Malaysian relevance	Possible impact	Suggested response
Parcel scams	The growth of e-commerce increases exposure to fake courier messages.	Stolen banking details, malware or payment loss.	short message service (SMS) filtering, public warnings and courier verification pages.
Fake bank calls	Scammers impersonate banks or enforcement agencies.	Authorised push-payment fraud and account loss.	Kill switches, human hotlines and transaction warnings.
Investment scams	Older consumers may hold retirement savings.	Large financial losses and emotional distress.	Stronger financial literacy and investment verification tools.
Romance scams	Social media and messaging apps enable long-term manipulation.	Financial harm, shame and family conflict.	Non-judgmental reporting and community education.
Fake online sellers	Marketplace and social commerce growth increase seller uncertainty.	Non-delivery, counterfeit goods, refund problems.	Verified sellers, escrow protection, platform accountability.
AI-enabled impersonation	Voice cloning and deepfakes may imitate family or officials.	Reduced ability to rely on familiar trust cues.	Family code words, AI scam education, rapid reporting.

The various digital risks brought together in Table 2 highlight why it is vital not to portray Baby Boomers as gullible. Modern scams are sophisticated and can deceive consumers of all ages. Older consumers may be targeted because they are perceived to have savings, pensions or retirement funds. They may also be more reachable through phone calls or more trusting of official-sounding communication. However, the problem is not individual weakness; it is the result of organised fraud, platform weaknesses, data leaks, social engineering and insufficient consumer protection.

Consequently, the strategic counteractions outlined in Table 2 indicate that Malaysia's scam response must be fast, practical and non-judgmental. Older consumers need to know exactly what to do in the first minutes after a suspected scam: call the bank, contact NSRC, freeze accounts, save evidence and avoid further communication with the scammer. Public education should repeat these steps clearly. Banks should make emergency reporting easy. Family members should avoid blaming older victims because shame can delay reporting. Community leaders can also play a role by normalising scam awareness discussions.

4.7 Privacy, Data Protection and Consumer Autonomy

Digital consumption depends on data. Malaysian consumers provide personal data when using online banking, e-commerce platforms, loyalty cards, e-wallets, ride-hailing apps, health portals, government services, telecommunications accounts and social media. For Baby Boomer consumers, this data environment can feel unclear. They may understand why a seller needs an address, but not how browsing behaviour, location data, cookies, app permissions and third-party trackers are used.

DeLiema et al. (2023) argue that increased online activity among older adults after COVID-19 created new privacy and data safety concerns. This is relevant to Malaysia because the pandemic accelerated online shopping, digital communication, remote work, online learning and digital public services. Many older Malaysians adopted digital tools quickly during this period. Some gained confidence, but others entered digital spaces without sufficient understanding of privacy settings, phishing risks or data-sharing practices.

DOSM (2024c) reports that 55.2% of internet users aged 60 and above changed privacy settings on devices, accounts or applications in 2023. This indicates that some older consumers actively manage privacy, but many may not. Privacy policies are often long and written in legal or technical language. Consent banners may encourage users to accept all cookies. App permissions may be difficult to interpret. Older consumers may click "accept" simply because they want to continue with the transaction.

Privacy is also connected to autonomy. When Baby Boomers depend on adult children or relatives to manage digital accounts, they may lose control over personal information. A child helping with online banking may see financial details. A relative helping with health portals may see medical information. A grandchild helping with online shopping may see personal purchases. Family support can be valuable, but older consumers should not have to sacrifice privacy to participate digitally.

Malaysia's digital service providers should adopt privacy-by-design. This means collecting only necessary data, using clear language, providing privacy-protective defaults and making settings easy to change. Privacy information should be available in languages familiar to Malaysian older consumers. Consumers should also have simple ways to delete accounts, unsubscribe and withdraw consent. Such measures would improve trust not only among Baby Boomers but across the consumer population.

4.8 Health, Accessibility and Digital Well-Being

As Malaysia ages, digital health services will become more important. Baby Boomers increasingly need healthcare information, appointment systems, prescription services, insurance, wellness products, health monitoring devices and caregiver support. Digital health tools can improve convenience, especially for consumers with mobility limitations or chronic conditions. However, if poorly designed, they can also create barriers.

Zhang et al. (2022) argue that older consumers can co-create value in e-services when they participate meaningfully and appreciate digital affordances. This is relevant to health services because digital tools are useful only when older consumers can understand and trust them. A health portal that requires complex logins, uses small fonts, times out quickly or presents test results without explanation may increase anxiety. Telehealth may be difficult for consumers with hearing problems, weak internet or limited privacy at home. Online health information may also expose consumers to misinformation, exaggerated claims or unregulated products.

Accessibility must therefore be central to Malaysia's digital health and consumer systems. Baby Boomers may experience changes in vision, hearing, memory, attention or dexterity. Digital services should provide larger text options, high contrast, simple navigation, captions, clear instructions, voice support and compatibility with assistive technologies. These features are not special treatment. They are well-designed.

Digital well-being is another concern. The digital marketplace encourages constant notifications, promotions and engagement. Older consumers may benefit from online connections, but they may also experience fatigue, anxiety or information overload. Health-related advertising can be particularly sensitive. Baby Boomers may be targeted with supplements, anti-ageing products, miracle treatments, insurance packages or medical devices. Ethical marketing should avoid exploiting health fears or loneliness.

In Malaysia, digital health inclusion should include physical and assisted options. Older consumers should be able to use online portals, but telephone support and counter services should remain available for complex issues. Community health clinics and hospitals could provide assisted digital support, especially for appointment booking, prescription refills and access to test results.

4.9 Artificial Intelligence and Algorithmic Consumer Markets

Artificial intelligence is increasingly embedded in consumer markets. AI systems recommend products, rank search results, power chatbots, detect fraud, personalise advertisements, screen customer complaints, summarise reviews and assist with financial or health information. For Baby Boomer consumers in Malaysia, AI may offer both support and risk.

AI can help older consumers by simplifying information, translating content, summarising product descriptions, detecting suspicious messages and enabling voice-based assistance. A Baby Boomer who finds long product pages difficult may benefit from AI summaries. A consumer who is unsure whether a message is a scam may benefit from AI-supported fraud detection. Voice assistants may also help consumers who find typing difficult.

However, AI can also deepen consumer vulnerability. Chatbots may fail to understand complex complaints. AI-generated scams may sound more polished and convincing. Deepfake audio or video may imitate family members, bank officers or officials. Algorithmic advertising may target older consumers based on health anxieties, financial concerns or loneliness. Herrera et al. (2024) warn that AI-enhanced scams may increase the credibility and scale of fraud. LaRubbio et al. (2025) show that deepfake scams targeting older adults create new challenges for intergenerational verification and trust.

Algorithmic exclusion is another risk. If AI systems are trained mainly on younger consumers' behaviour, they may misunderstand older consumers' preferences. A chatbot may interpret a slower response or different phrasing as confusion. A fraud system may flag legitimate transactions by older consumers as unusual without providing a clear explanation. A recommendation system may show older consumers narrow categories of products based on stereotypes.

Malaysia's AI and digital economy strategies should therefore include age-inclusive consumer protection. Consumers should know when they are interacting with AI. High-risk decisions in banking, insurance, healthcare and public services should allow human review. AI systems should be tested with older Malaysian users across different languages and digital skill levels. Innovation should not proceed faster than trust.

4.10 Ageism in Digital Design and Marketing

Ageism remains a major problem in digital consumer markets. Baby Boomers are sometimes ignored because digital marketing is associated with younger consumers. When older consumers are represented, they may be portrayed narrowly as frail, confused, dependent, wealthy, conservative or interested only in healthcare and retirement. Franco (2023) argues that such stereotypes distort the understanding of older consumers and limit the development of better marketing theory and practice.

In Malaysia, ageism can appear in several ways. Digital advertisements may assume that only younger consumers use e-wallets, online shopping, food delivery, travel apps or streaming platforms. User interfaces may be designed for fast, small-screen interaction without considering older users. Customer service agents may assume that an older consumer's problem is caused by ignorance rather than poor platform design. Product categories for older consumers may focus heavily on illness, anti-ageing or dependency.

These assumptions are inaccurate. Malaysian Baby Boomers are diverse. They include Malay, Chinese, Indian, Indigenous and other communities. They differ in religion, language, education, location, work history, family structure and lifestyle. Some travel frequently, some run businesses, some care for grandchildren, some participate in religious and community activities, some invest, some study and some are active on social media. They purchase not only health products but also household goods, travel services, technology, education, food, fashion, insurance, gifts and entertainment.

Age-inclusive marketing should therefore represent Baby Boomers as active and varied consumers. It should use respectful language, practical information and authentic imagery. It should not speak down to older consumers. It should also recognise that older consumers often value quality, reliability, service recovery and trust. Brands that provide clear information and dependable support may build loyalty among this cohort.

4.11 Decline of Human Services and the Rise of Digital-Only Systems

A major concern for Baby Boomer consumers is the decline of human services. Many organisations now rely on automated menus, chatbots, frequently asked questions (FAQs), online forms and app-based support. These systems may be efficient for routine tasks, but they can be frustrating when consumers face complex, emotional or high-risk problems. For Baby Boomers, the loss of human support can reduce trust and autonomy.

In Malaysia, human support remains important in banking, healthcare, telecommunications, travel, insurance, utilities and public services. When an older consumer suspects a scam, a chatbot may not be enough. When a hospital appointment is missed because a portal login failed, the consumer may need a person to help. When an online purchase is not delivered, the consumer may want a clear explanation rather than automated responses. When a digital bank transaction is blocked, the consumer may need reassurance.

Human services should not be dismissed as old-fashioned. It is part of consumer protection. A trained human agent can exercise judgement, explain options, detect distress and prevent further harm. Digital self-service should therefore be supported by escalation routes. Businesses can still promote digital efficiency, but they should not remove human support from high-risk or sensitive areas.

The decline of human services also affects family dynamics. If older consumers cannot obtain help from an organisation, they may turn to adult children. This can create dependence and reduce privacy. It can also create tension when family members are busy or impatient. Assisted digital service, where organisations provide guided support while allowing consumers to remain in control, is a better model.

4.12 Framework for Baby Boomer Digital Consumer Inclusion in Malaysia

The challenges discussed in this paper can be organised into a seven-dimensional framework: access, capability, usability, trust, safety, autonomy and representation. These dimensions are interrelated. A weakness in one area can affect the others. For example, poor usability can reduce trust. Scam exposure can reduce confidence. Lack of human support can reduce autonomy. Ageist marketing can lead to poor design. Limited privacy understanding can increase safety risks.

Table 3 Framework for Baby Boomer Digital Consumer Inclusion in Malaysia

Access	Capability	Usability	Trust	Safety	Autonomy	Representation
Devices Internet Cost Rurality	Skills Confidence Training Adaptation	Design Language Support Clarity	Brands Banks Platforms Recovery	Scams Fraud Privacy Security	Choice Human support Dignity Control	Age-inclusive marketing Cultural diversity Non-stereotyping Visibility

The framework highlights that Baby Boomer digital inclusion is not achieved by internet access alone. It requires systems that older consumers can afford, understand, trust, use and recover from when problems occur. It also requires representation that treats them as capable and diverse. To operationalize these seven conceptual dimensions into concrete marketplace solutions, a coordinated, dual-track intervention strategy is required across both private and public sectors. The abstract systemic barriers identified throughout this study translate directly into actionable friction points within the Malaysian macro-economy. Accordingly, Table 3 maps out targeted business and policy responses designed to shift older consumers from passive exposure to confident digital engagement.

Table 4 Policy and Business Responses for Malaysia

Challenge	Business response	Policy response
Uneven digital skills	Provide simple guides, multilingual tutorials and assisted digital counters.	Fund community-based digital literacy programmes for older adults.
E-commerce distrust	Verify sellers, simplify refunds and provide human customer support.	Strengthen platform accountability for fake sellers and misleading ads.
Digital payment anxiety	Offer transaction limits, confirmation screens and easy kill switches.	Require clear consumer warnings and rapid fraud response standards.
Scam exposure	Display scam alerts and provide emergency support channels.	Expand NSRC awareness through community and multilingual campaigns.
Privacy confusion	Use plain-language privacy notices and protective defaults.	Strengthen data protection enforcement and consumer education.
Accessibility barriers	Test apps with older users and improve readability.	Include older users in digital service standards.
Ageist representation	Use respectful, diverse images and messages.	Encourage age-inclusive consumer research and design guidelines.

Table 4 indicates that digital consumer inclusion in Malaysia requires a structured, multi-sector approach combining corporate strategy and public policy. Private firms can mitigate immediate transactional vulnerabilities by implementing clear confirmation interfaces, simplified refund processes and localized language options. However, these commercial practices require regulatory enforcement to achieve market-wide scale. Concurrently, state actors must strengthen data protection compliance, embed older cohorts into national digital service standards and expand public fraud prevention via the National Scam Response Centre. This dual-track strategy establishes a secure, accessible and dignified digital marketplace for aging consumers.

■5.0 DISCUSSION

5.1 Alignment of Findings with Research Questions

The Malaysian case answers the first research question by showing that Baby Boomer consumers face interconnected challenges rather than a single technology-adoption problem. The main challenges identified are uneven access, affordability pressures, variable digital literacy, e-commerce distrust, digital payment anxiety, online scams, privacy uncertainty, accessibility barriers, artificial intelligence (AI)-enabled risks, ageist design and the decline of human service. These findings are supported by Malaysia-specific indicators showing high internet use among people aged 60 and above but lower participation in e-commerce, internet banking, information verification and security practices (DOSM, 2024c; Ministry of Finance Malaysia, 2024).

The second research question is addressed by demonstrating how access, affordability, digital literacy, trust, safety, privacy and usability jointly shape digital consumer experience. Access provides the entry point, but meaningful participation depends on whether services are affordable, understandable, multilingual, readable, secure and recoverable when problems occur. This explains why device ownership alone is insufficient and why digital inclusion must include capability, confidence and practical consumer protection (DeLiema et al., 2023; OECD, 2025; Panetta et al., 2025).

The third research question is answered by challenging stereotypes that portray Baby Boomers as digitally incapable or resistant. The findings show that avoidance of e-commerce, online banking or e-wallets may be a rational response to fraud risk, unclear interfaces, limited recovery mechanisms, privacy concerns, inaccessible design or loss of human support. This interpretation aligns with research showing that older consumers' digital behaviour is shaped by context, routines, household support and perceived risk rather than chronological age alone (Franco, 2023; Rybaczewska & Sparks, 2021; Pucer et al., 2024).

The fourth research question is addressed through the proposed seven-dimensional framework and the business-policy responses in Table 3. Businesses can improve age-inclusion through clearer interfaces, verified sellers, simpler refunds, safer payment design, multilingual guidance and human escalation. Policymakers can strengthen platform accountability, data protection, scam response, community-based digital literacy and assisted service options. Together, these actions connect the findings to practical improvements for Malaysia's ageing digital economy.

5.2 Implications for Malaysian Businesses

Malaysian businesses should recognise Baby Boomer consumers as a valuable and growing segment. Retailers, banks, healthcare providers, insurers, telecommunications firms, travel companies and platform operators should include older consumers in design and testing. User testing should involve Baby Boomers with different levels of digital confidence, language preferences, income levels and locations.

Retailers should improve readability, seller verification, refund clarity and customer support. Banks and e-wallet providers should design security systems that are strong but understandable. Healthcare providers should ensure that patient portals are accessible and supported. Telecommunications companies should help older consumers understand devices, data plans, scams and privacy. Travel and hospitality firms should provide support for digital tickets, online check-ins and booking changes.

Businesses should also avoid patronising communication. Older consumers do not need to be treated as helpless. They need clear information, reliable service and respectful support. Brands that combine digital convenience with human trust may be especially successful with Baby Boomer consumers.

5.3 Implications for Policymakers and Regulators

Malaysia's digital policy should explicitly include older consumers. MyDIGITAL emphasises inclusive digital growth and bridging the digital divide (Economic Planning Unit, 2021). To achieve this, digital inclusion programmes should address the practical consumer needs of older adults. Training should include e-commerce safety, online banking, e-wallets, scam reporting, privacy settings and digital health services.

Regulators should strengthen platform accountability for fake sellers, scam advertisements, misleading financial promotions and subscription traps. Consumer protection agencies, MCMC, Bank Negara Malaysia, police, NSRC, banks and community organisations should coordinate public education. Messages should be repeated across television, radio, social media, banks, religious institutions, clinics and community centres. Older consumers should hear consistent advice from trusted sources.

Public services should avoid moving entirely online without alternatives. Digital services can improve efficiency, but telephone, counter and assisted digital options remain important. Older consumers should not be forced to depend on relatives for essential services. Policy should preserve autonomy.

■6.0 CONCLUSION, LIMITATIONS AND FUTURE DIRECTIONS

6.1 Conclusion

Baby Boomer consumers in Malaysia are navigating two major transitions at once: ageing and digitalisation. They are increasingly connected, yet their digital participation remains uneven in areas involving trust, money, privacy, scams and complex service systems. Their challenges are not caused only by age. They are shaped by affordability, design, language, safety, market trust, family support, accessibility and the availability of human services.

This paper argues that Baby Boomer consumers should be treated as experienced and diverse market participants, not as passive recipients of technology or as obstacles to digital progress. Many of their concerns are rational responses to real weaknesses in digital markets. Scams are real. Privacy policies are confusing. Chatbots often fail. Payment errors can be frightening. Interfaces can be inaccessible. These are not merely older consumer problems; they are digital market problems.

Malaysia's digital economy will be stronger if it becomes more age-inclusive. Businesses should design platforms that are readable, trustworthy, multilingual and recoverable. Banks should protect older consumers without making systems impossible to use. Policymakers should support practical digital literacy and preserve assisted service options. Regulators should hold platforms accountable for scams, misleading design and weak consumer protection. Community organisations should help older consumers learn without shame.

The future of digital consumption in Malaysia should not be digital-only or youth-centred. It should be inclusive, safe and human. Baby Boomer consumers have much to contribute to Malaysia's digital marketplace. Their experiences can help the country build digital systems that serve not only the fastest and most confident users, but everyone.

6.2 Limitations

This paper is limited by its conceptual review design. It synthesises recent academic, policy and industry literature rather than collecting primary empirical data from Baby Boomer consumers in Malaysia. As a result, the discussion identifies important patterns and proposes a framework, but it does not measure the prevalence, intensity or causal relationships among the challenges discussed. The paper also focuses on Malaysia as a national context. However, older consumers' experiences may differ substantially across states, urban and rural communities, languages, household structures, income groups and health conditions.

6.3 Future Directions

Future research should empirically investigate Baby Boomer digital consumers in Malaysia. Surveys could examine differences by state, urban-rural location, income, education, gender, ethnicity, language and household structure. Interviews could explore how Baby Boomers experience e-commerce, online banking, e-wallets, digital health, scam prevention and chatbot customer service. Such research would help move beyond general assumptions.

Longitudinal research is also needed. Baby Boomer digital behaviour will change as platforms evolve, scams become more sophisticated and AI becomes more common. Researchers should examine whether confidence grows with experience or declines after negative events such as fraud. Studies should also examine intergenerational support. Adult children and grandchildren often help older consumers, but more research is needed on how this affects privacy, autonomy and family relationships.

Research should also examine positive cases. Many Baby Boomers use technology successfully. Understanding what supports confident use can help policymakers and businesses design better systems. Future studies could identify best practices in Malaysian banks, retailers, healthcare providers and community programmes.

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Conflicts of Interest

The authors declares that there is no conflict of interest regarding the publication of this paper.

Data availability

Data supporting the findings of this study are available from the corresponding author upon request.

Ethics declaration

This research analysed secondary data obtained from available sources. No direct participation, interaction, or intervention involving human subjects was undertaken; therefore, formal ethical approval was not applicable.

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