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HYBRID SHOPPING MODELS: WHERE INNOVATION MEETS TRADITION IN THE MODERN MALL

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ABSTRACT

This study investigates the pivotal role of innovation in shopping malls, which is integral to their success within the competitive retail environment. As consumer expectations evolve, malls must transcend conventional models by incorporating sustainability, advanced technologies, and personalized experiences. The research focuses on these dynamics through fieldwork and visitor surveys conducted at Retaj and Yes Malls in Ali Mendjeli City, Algeria. A comprehensive analytical framework evaluates dimensions such as multifunctionality, sustainability, technological integration, and community engagement. Employing a mixed-methods approach with 100 valid questionnaires, the study examines visitor preferences, particularly in the post-COVID-19 context. The findings underscore visitors' emphasis on eco-friendly features and highlight the multifunctional nature of malls as spaces for shopping, entertainment, services, and social interaction, supported by rigorous chi-square analysis. Technological innovations are classified into two categories: enhancing the shopping experience and fostering customer engagement, with a particular focus on entertainment that reflects local cultural contexts. Accessibility emerges as a key factor, with proximity to public transportation significantly increasing mall attractiveness. While respondents value technological advancements, they prefer a hybrid approach that combines augmented reality (AR) and artificial intelligence (AI) with traditional in-person shopping experiences. This equilibrium sustains malls' roles as social hubs, ensuring community engagement while embracing modern innovation.

1. Introduction

Innovation has become a cornerstone for the success of shopping malls in today's increasingly competitive retail landscape. As consumer behaviors and expectations shift rapidly, malls must evolve beyond traditional shopping models to remain relevant. Integrating new strategies and technologies is crucial to attracting, engaging, and retaining customers. Today's shoppers demand convenience, personalized services, and immersive experiences, which requires malls to adopt innovative approaches that create unique, value-added environments. This shift toward innovation also responds to the growing demand for multifunctional spaces where retail, entertainment, and social engagement converge. E-commerce has significantly accelerated this transformation, pushing brick-and-mortar malls to enhance customer engagement through digital and interactive elements. Innovative technologies, such as AI-driven kiosks, mobile apps, and augmented reality (AR), are now integral tools for providing personalized shopping experiences.

Moreover, sustainability initiatives have emerged as a key factor in attracting eco-conscious consumers, with malls incorporating energy-efficient systems, green building practices, and sustainable product offerings. The impact of these changes is further compounded by shifting socio-cultural trends, where consumers seek not only shopping convenience but also meaningful experiences that foster a sense of community and belonging. In this environment, malls are no longer just retail spaces; they have become experiential hubs that blend entertainment, leisure, and retail. As these trends continue to reshape the retail landscape, innovation is no longer a luxury but a necessity for malls striving to maintain their competitive edge. This research explores how these evolving strategies and innovations can redefine the mall experience, ensuring their relevance and success in the future retail ecosystem.

➢ How have visitor behaviors in shopping malls changed post-pandemic, particularly regarding shopping habits, preferences, and expectations?

➢ Do visitors prefer traditional shopping mall models, or are they more inclined towards entirely innovative malls that integrate advanced technologies and experiential features?

➢ What factors influence visitors' preferences for traditional versus innovative mall models, and how do these factors vary across different consumer demographics (age categories)?

2. Literature Review

The concept of shopping malls has evolved significantly over time, originating from ancient marketplaces and 19th-century arcades. For instance, London's Burlington Arcade, established in 1819, served as one of the precursors to the modern mall (Friedman, 2010). The introduction of the contemporary shopping mall is often attributed to Victor Gruen, whose 1956 Southdale Center in Edina, Minnesota, was designed as a suburban community center, integrating retail with social and cultural spaces (Hardwick, 2004). The development of shopping malls is grounded in theoretical concepts such as central place theory and retail accumulation. Hotelling (1929) and Christaller (1933) provided early frameworks for understanding consumer behavior, suggesting that shoppers typically visit the nearest center for a single-purpose trip. This idea was further explored by Berry and Garrison (1958). However, subsequent studies revealed more complex consumer behaviors. For instance, Golledge, Rushton, and Clark (1966) found that multipurpose shopping trips often led consumers to bypass closer locations in favor of malls offering greater functionality (Clark, 1968; Rushton, 1969). Shopping malls, or shopping centers, are expansive, enclosed spaces designed to facilitate retail, entertainment, and social interaction. Levy and Weitz (2004) define malls as coordinated groups of retail establishments planned and managed as a single property. Similarly, Gruen et al., (1960) highlight their role as centralized hubs offering diverse retail options alongside facilities such as restaurants, theaters, and recreational areas. These definitions emphasize the dual role of malls as economic and social spaces that cater to a wide range of consumer needs. By the 1980s, North America experienced an oversaturation of traditional mall formats, often called "the malling of America." Despite their initial uniformity, malls demonstrated adaptability by embracing new prototypes. Crawford (1992) describes the emergence of specialty centers with themed upmarket shops and urban "festival marketplaces," which served as tools of civic boosterism in competitive interregional markets (Goss, 1992; Harvey, 1989). In Britain, the rise of regional shopping centers such as Brent Cross, Metrocentre, and Meadowhall during the 1980s illustrates their profound impact on urban spaces and economies. These centers were often established in underutilized zones, supported by deregulation policies under the Thatcher administration (Guy, 1994b; Schiller, 1986). Studies such as those by Reynolds and Howard (1990) document the economic and spatial restructuring triggered by malls, noting the decline of traditional urban centers like Sheffield's central business district following Meadowhall's opening (Rowley, 1990). The rapid growth and diversification of malls during the 1970s and 1980s contributed to the emergence of "mall culture," cementing their role as popular social hubs (Cohen, 2002). Lifestyle centers and mixed-use projects, such as Easton Town Center in Columbus, Ohio, further exemplify the shift toward integrating retail with dining, entertainment, and residential spaces (Baker et al., 2010). Shields (1992) contextualizes these developments within postmodern urbanism, positioning malls as quintessential elements of consumer-oriented societies. However, Lowe and Wrigley (1996) argue that retail environments have become increasingly differentiated, with typologies extending beyond suburban mega-malls.

Shopping malls have become prominent spaces for socialization, consumption, and cultural interaction, providing diverse experiences to their users. Often called "mall rats," adolescents commonly use malls as social hubs where they experience key life milestones, such as making their first purchases or engaging in significant social interactions (Kowinski, 1985; Langman, 1992). Increasingly, malls are recognized as "third places," akin to streets, where individuals across age groups gather, socialize, and engage in recreational activities

beyond the confines of home or work. For example, North American malls market themselves as inclusive spaces by offering activities such as early morning fitness walking and events tailored to various demographics, including teenagers and retirees. Organized social and promotional activities can also cultivate a strong sense of community within these spaces (Goss, 1993). Despite their open and inviting image, malls are not entirely public spaces. They are highly controlled environments designed to appeal primarily to middle-class consumers. Malls simulate an idealized street experience, free from concerns like crime, pollution, and inclement weather, while enforcing strict behavioral norms (Chaney, 1990; Goss, 1993). Sociologist Rob Shields critiques this controlled environment by contrasting it with traditional streets, noting that while malls regulate user behavior, they also provide opportunities for creative agency. For instance, "post-shoppers" subvert conventional consumer roles by using malls for purposes beyond consumption, such as socialization or leisure activities (Shields, 1992). These dynamics highlight malls' multifunctionality, blending retail, social, and cultural functions within a carefully managed setting, making them integral to urban life. Urban dynamics encompass the mechanisms driving changes in cities' spatial, economic, social, and environmental dimensions, shaped by population growth, infrastructure development, and socio-economic transformations. In Algeria, these dynamics are regulated by frameworks promoting sustainability and spatial equity. Key regulatory tools include the Land Occupation Plan (Plan d'Occupation des Sols—POS), which governs land use to balance residential, commercial, and public infrastructure needs, and the Urban Development Plans (Plans Directeurs d'Aménagement et d'Urbanisme—PDAU), which outline strategies for managing urban sprawl and infrastructure distribution. The Law on Land Management and Urbanism (Loi n° 90-29 du 1er décembre 1990) emphasizes sustainability, spatial balance, and environmental conservation. Urban dynamics are categorized into three dimensions: spatial dynamics, focusing on land use and zoning; social dynamics, addressing population growth, housing, and public amenities; and economic dynamics, involving commercial centers, job creation, and investments, all overseen by the Investment Law (Ordonnance n° 01-03 du 20 août 2001).

Shopping malls are also social spaces that facilitate bonding experiences, serving as destinations for family gatherings, outings with friends, and other forms of socialization. For example, in urban India, malls are considered safe, vibrant places for shopping, fun, and leisure. Indian consumers often prefer malls for their multifunctional offerings, including spaces for informal business meetings, corporate events, or personal celebrations such as birthdays and promotions (Raguprasadh et al., 2020). Social shopping experiences, as first identified by Stone (1954), highlight the importance of personalizing interactions with shop personnel. Tauber (1974) later emphasized the social motives of shopping, such as engaging in experiences outside the home and interacting with others. Arnold and Reynold (2003) extended these ideas by framing social shopping as a hedonic activity that fosters pleasure through bonding with friends, family, and outsiders. For consumers in socially interdependent cultures like India, malls are not merely retail spaces but also significant social environments where individuals seek acceptance and support (Jacobson, 2004).

Malls' multifunctionality further enhances their appeal, blending shopping with leisure, dining, and cultural activities. This integration transforms malls into "third places" where people can engage in social interactions and recreational activities beyond consumerism (Goss, 1993; Crawford, 1992). By catering to diverse visitor needs, malls create environments that combine convenience with experiential engagement, which is central to modern urban life (Langman, 1992; Shields, 1992). Modern malls have evolved from traditional retail spaces into multifunctional hubs incorporating dining, entertainment, offices, residences, and leisure facilities. This evolution reflects consumers' preferences for spaces that offer a wide range of activities in one location, enhancing convenience and engagement. Scholars like Shields (1992) and Goss (1993) have noted that malls function as cultural and social centers, fostering community and identity formation. Shields describes malls as "microcosms of urban life," where communal activities thrive, while Goss emphasizes their role in hosting community events and facilitating social interactions. Malls also blend global and local retail trends, creating opportunities for social interaction influenced by economic status and access to consumer spaces. For instance, Istanbul's Istinye Park combines international brands with local retailers and features an open-air market, merging contemporary consumerism with traditional Turkish bazaar culture. Such examples illustrate how malls contribute to social and economic transformations while providing dynamic, inclusive spaces. Integrating local culture into malls preserves urban identity and enhances the consumer experience by blending traditional and modern elements. This strategy promotes sustainability by encouraging local engagement and counteracting the homogenizing effects of global retail trends. By combining cultural authenticity with sustainable practices, such as urban densification and environmentally conscious design, malls align commercial development with broader social and ecological goals, such as Istinye Park in Istanbul.

Sustainability has emerged as a vital criterion in developing innovative shopping malls, emphasizing adopting environmentally conscious practices and promoting urban densification to reduce ecological impacts. Križan et al. (2022) underscore this through a comparative analysis of shopping mall development in Prague and Bratislava. Their quantitative study examines the location of malls (brownfield versus greenfield sites), proximity to city centers, and mall size. The findings highlight a historical delay in establishing shopping centers in both cities, followed by a rapid growth phase in the 1990s driven by increased economic openness. This expansion introduced new players to the retail sector and significantly increased the number of malls. A key trend identified was a shift toward constructing smaller malls closer to city centers, which the authors argue supports sustainability by curbing urban sprawl and reducing transportation-related emissions. However, they caution that such developments may adversely impact traditional commercial streets in city centers. The experiences of Prague and Bratislava illustrate how sustainable urban planning can align shopping mall growth with broader goals of environmental conservation and efficient land use, offering a model for innovative and responsible mall design. Adding to this, Ilyas et al. (2022) emphasize the importance of technological innovation in adapting to dynamic societal changes. Emerging technologies, such as advanced recommendation systems, allow malls to remain relevant by responding to evolving consumer behaviors and market demands. These innovations underscore that an innovative mall harmonizes local culture, sustainability, and technological advancement to create adaptive retail environments, balancing commercial success with cultural preservation and ecological stewardship. For example, virtual reality (VR) and augmented reality (AR) enable immersive shopping experiences, allowing customers to try products virtually. Innovative payment systems, including contactless payments, are essential for secure and efficient transactions (Nanda et al., 2021). Additionally, online-to-offline (O2O) technologies bridge online browsing with in-store purchases, while predictive analytics improve inventory management (Bansal et al., 2023). Such advancements facilitate seamless physical and digital retail integration, enabling shopping malls to adapt to the digital economy's demands.

The retail landscape underwent significant transformations in the 2010s, as e-commerce drove malls to innovate through virtual reality, experiential retail, and a rebranding as community hubs (Howard, 2015). Ozuduru (2013) reinforced the importance of shopping centers in urban development, revealing that the supply and demand aspects of malls are geographically dependent. This relationship underscores the role of malls in shaping urban lifestyles, providing spaces where people congregate socially. The COVID-19 pandemic accelerated the adoption of e-commerce technologies, ushering in a new era of retail innovation. Online platforms transitioned from being alternatives to physical stores to becoming dominant retail channels, offering advantages such as competitive pricing, broader market reach, and reduced operational costs (Colla et al., 2012). Despite the growing prominence of e-commerce, physical stores remain vital for experiential shopping, trust-building, and personalized services. Multichannel strategies have gained importance, with physical stores complementing online retail by serving as spaces for showrooming and sensory engagement (Fornari et al., 2016; Alexander et al., 2020). E-commerce has increased transparency and efficiency, fostering competition and expanding audience reach (Baen, 2000). The post-pandemic retail environment continues to evolve by integrating advanced technologies, enhancing both customer experience and operational efficiency. The rise of omnichannel platforms seamlessly integrates online, in-store, and mobile shopping, enabling features like buy-online-pickup-in-store (BOPIS) and curbside pickup, offering greater convenience and safety (Bansal et al., 2023). Artificial intelligence (AI) and machine learning (ML) are crucial in personalizing shopping experiences, utilizing tailored recommendations, chatbots, and optimized inventory systems to meet consumer expectations.

Accessibility is another critical factor influencing retail success. Colaço et al. (2022) demonstrate the importance of accessibility in shaping retail locations, particularly in urban environments like Lisbon. Their research reveals how spatial configuration and accessibility significantly impact the success and sustainability of retail businesses across various urban areas. Accessibility metrics, such as local integration and choice, are integral to reducing information costs and enhancing retail activity in both new developments and older city regions. For shopping malls, high accessibility directly affects operational success, customer foot traffic, and overall competitiveness in the retail market.

3. Methodology and Study area

Our approach began with extensive field observation and data collection to investigate the relationship between introducing innovative concepts and consumer behavior in malls. We surveyed 120 people using a questionnaire to understand their shopping habits and openness to new mall experiences. Retailers looking to remain competitive and customer-centric must comprehend consumer preferences and behaviors in commercial settings. This strategy highlights the growing importance of innovation in the retail sector, particularly in malls, as emphasized by Levy et al., (2004) and Gruen et al., (1960). Innovations such as sustainability, smart technologies, and personalization have gained prominence in shaping modern retail environments.

To further explore innovation, we distributed 100 questionnaires at two malls located in Neighborhood Unit 2 of Ali Mendjeli City, in the province of Constantine. Ali Mendjeli is a newly developed city structured into five neighborhoods, each serving as an intermediate level of spatial organization between the smallest spatial unit, the neighborhood unit (NU), and the city as a whole. The city is divided into 20 neighborhood units, each meticulously planned to ensure comfort and support various residential activities. This hierarchical structure was established to enhance spatial organization and functionality within the urban plan, promoting a holistic approach to urban development.

The first mall surveyed was Ritaj Mall, which opened on April 16, 2016, and has since become a bustling retail hub, attracting an average of 30,000 visitors daily. The mall's layout consists of 72.2% non-food retail outlets, dominating the commercial landscape. With a commercial attraction rate of 2.59, the mall is a significant player in the region. Retaj Mall houses 12 international brands and a dedicated children's entertainment area, and the expansive Hypermarket Ilef spans two floors covering over 5,500 square meters. The hypermarket offers various products, including food, household essentials, clothing, and furniture. Spread across five floors and occupying 2.5 hectares, the mall hosts 295 stores, generating over 11.24 million visitors in 2023. It also provides 3,000 direct employment opportunities and fosters community engagement through indoor and outdoor playgrounds and events.

The second mall, Yes Mall, opened on November 23, 2023. It is a modern shopping center featuring 80 stores spread across five floors and a total area of 15,000 square meters. The ground floor houses a supermarket and an indoor play area for children, while the fifth floor is dedicated to dining options. Yes Mall, also plays an active role in the community by organizing events that celebrate national, social, and religious occasions, contributing to its dynamic position within the neighborhood.

We employed a survey of 100 clients with qualitative and quantitative methods in our survey structure. First, we asked open-ended questions to capture out-of-the-box ideas from respondents: "What innovative ideas or features do you think would enhance your shopping experience in a mall?" This allowed participants to express any novel concepts they might have. Following this, we used criteria-based questions to assess specific areas of innovation: "How important are the following innovations to you?" where respondents rated listed innovations, such as eco-friendly features or technological integration, on a Likert scale of 5-point used to assess participants' responses. One scale measured the importance of various innovation features (ranging from 'Very Important' to 'Not Important at All'), another measured the frequency of use (ranging from 'Always' to 'Never'), and a third scale evaluated agreement with statements (ranging from 'Strongly Disagree' to 'Strongly Agree'). This blended approach enabled us to balance exploratory and structured data collection, ensuring a comprehensive understanding of consumer attitudes toward innovation. After collecting the data, a thorough cleaning process was conducted to ensure the integrity of our dataset, eliminating responses with missing or inconsistent information. This refinement resulted in 100 valid questionnaires for detailed analysis. The Kaiser-Meyer-Olkin (KMO) measure was then employed to assess the appropriateness of our sample and identify variance among the variables, allowing for a robust factor analysis and deeper insights into consumer trends. In addition to the questionnaire data, this study was enriched through qualitative insights from semi-structured interviews conducted with the Ritaj and Yes Mall managers. These interviews provided in-depth information on event organization processes, designated activity areas, visitor demographics, and the number of stores operating within the malls. Furthermore, the discussions were instrumental in securing official permission to survey mall visitors and ensuring adherence to the malls' policies and ethical standards. Insights from the managers and retail experts at Ritaj Mall also offered a broader perspective on operational challenges and innovation strategies, providing valuable context and highlighting the strategic considerations that shape innovation within the mall environment.

To visualize our findings, we used a combination of bar charts by SPSS for quantitative analysis, employing descriptive statistics, cross-tabulations, and regression analyses to uncover significant trends. Additionally, the literature consistently highlights the need for malls to innovate, driven by changing consumer behaviors and the rise of e-commerce. Researchers such as Levy et al., (2004) and Gruen et al., (1960) emphasize that shopping malls must evolve from simple retail spaces into multi-functional hubs offering a wide range of experiences beyond shopping. Key themes from the literature, such as the integration of smart technologies, personalized services, and sustainability, influenced our questionnaire design and interviews. Contemporary studies further suggest that malls adopting these innovative elements are more likely to retain customer loyalty and maintain a competitive advantage in an increasingly dynamic retail environment. The independent variable in this study is the age group of the visitors, categorized into five distinct age groups: 18-24, 25-34, 35-44, 45-54, and 55 and above, and the chi-square measure tests these correlations. This variable assesses how preferences for innovative mall features, such as technological integration and personalization, vary across these age categories. Based on the literature background that we collected; we gave a table outlining the criteria used to determine whether the visitors of this mall and the mall's policies are innovative (Table 1).

Table 1. Criteria Used to Assess Innovation in Malls. Source: edited by the authors.

Criteria	Description
Multifunctionality	Integration of various functions beyond retail, such as entertainment, dining, coworking spaces, and wellness facilities, offering a holistic experience for visitors
Community and Social Engagement	Promotion of a sense of community through events, support for local businesses, and spaces for social interaction and cultural activities.
Integration with Local Culture	Incorporation of local culture, traditions, and crafts while merging them with global trends to create a unique mall identity.
Accessibility and Inclusivity	Prioritizing accessibility through seamless public transport connections, barrier-free design, and inclusive spaces that cater to diverse demographic groups.
Architectural Design and Sustainability	Adoption of cutting-edge architectural designs that focus on aesthetics, functionality, and environmental sustainability, with features like green roofs and energy-efficient systems.
Technological Integration	Use of technology to enhance shopping experiences, including interactive kiosks, AR for virtual try-ons, mobile payment systems, and mall apps for navigation and personalization
Personalization and Experiences	Providing tailored experiences through data-driven insights, loyalty programs, and curated services catering to individual customer preferences.

4. Results and Discussion

The results reveal diverse discovery sources for Ritaj and Yes Mall, with the highest percentage (25%) of visitors learning about the mall through recommendations from friends or family and events hosted there. This highlights the importance of social engagement and community-driven discovery in attracting visitors. Additionally, 20% of respondents discovered the mall via online social media advertisements, reflecting the effectiveness of digital marketing in reaching a wider audience. In contrast, traditional marketing methods like billboards (6%) were less impactful. Moreover, 14% learned about the mall by searching for new shopping centers, and 10% discovered it by chance during nearby visits, emphasizing the importance of location and spontaneous foot traffic. These findings suggest that digital media, community events, and word-of-mouth influence mall discovery more than traditional advertising (Figure 1).
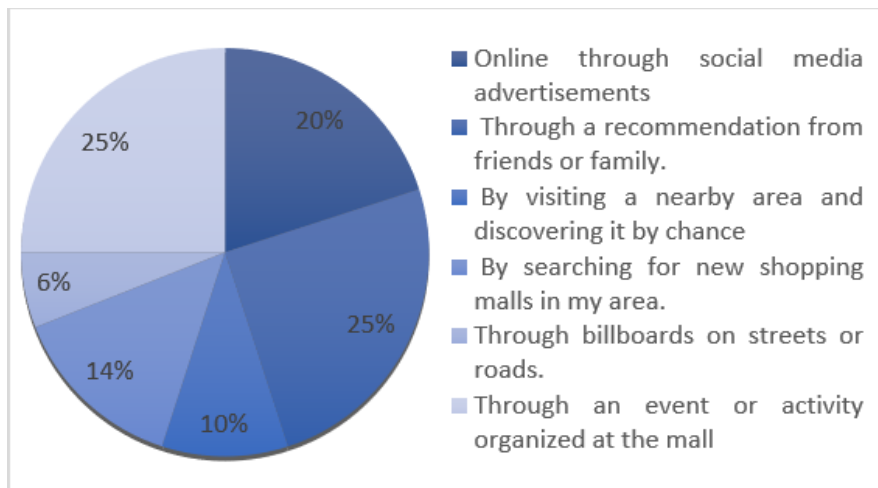

Fig. 1. How Visitors First Discovered Ritaj and Yes Mall. Source: edited by the authors using the survey

4.1 Multifunctionality

The comparative analysis of mall functions reveals diverse visitor preferences and satisfaction levels across four key activities: shopping, entertainment, services (e.g., dining), and social interaction. Shopping emerges as the predominant activity, with 60% of visitors agreeing and 25% strongly agreeing that malls are primarily shopping destinations. Visitor satisfaction with this function aligns with the variety and quality of retail offerings, particularly at Ritaj Mall, where 72.2% of stores are non-food retailers, including 12 international brands, creating a strong retail ecosystem. Entertainment activities, such as children's play areas, achieved moderate engagement, with 55% of visitors agreeing or strongly agreeing on their importance.

However, satisfaction levels indicate variability, with some visitors highlighting limited recreational options beyond children-specific spaces, pointing to a potential gap in entertainment diversity. Services related to activities, particularly dining, received high approval, with 70% of respondents agreeing or strongly agreeing on the importance of such functions. (figure 2). This satisfaction is driven by facilities like Hypermarket Ilef and various dining spaces, especially in Yes Mall, where the fifth floor is exclusively dedicated to dining experiences. Social interaction, including attending events and meeting friends, garnered balanced responses, with 50% of visitors agreeing and 20% strongly agreeing. The malls' role as community hubs is evident through their provision of event spaces and opportunities for social engagement. However, some respondents expressed neutral satisfaction, suggesting room for improvement in coworking spaces and wellness facilities to meet evolving visitor needs.

Integrating multifunctional spaces beyond retail—encompassing entertainment, dining, social interaction, and wellness facilities—offers a more holistic visitor experience. Retaj Mall excels in retail diversity, while Yes Mall complements this with a focus on dining and social activities. These findings emphasize the importance of expanding and diversifying mall functions to enhance visitor engagement and satisfaction. This aligns with Shields' (1992) description of malls as "microcosms of urban life," where communal activities foster a sense of community, and Goss' (1993) argument that malls serve as multifunctional spaces for social and cultural exchanges. By integrating shopping, entertainment, and services, malls reflect global trends that merge local and international retail cultures, promoting accessibility and inclusivity. Ultimately, these findings underscore the transformative potential of malls to move beyond traditional retail, balancing economic growth with community-building and reinforcing their pivotal role in urban spatial organization and identity formation.
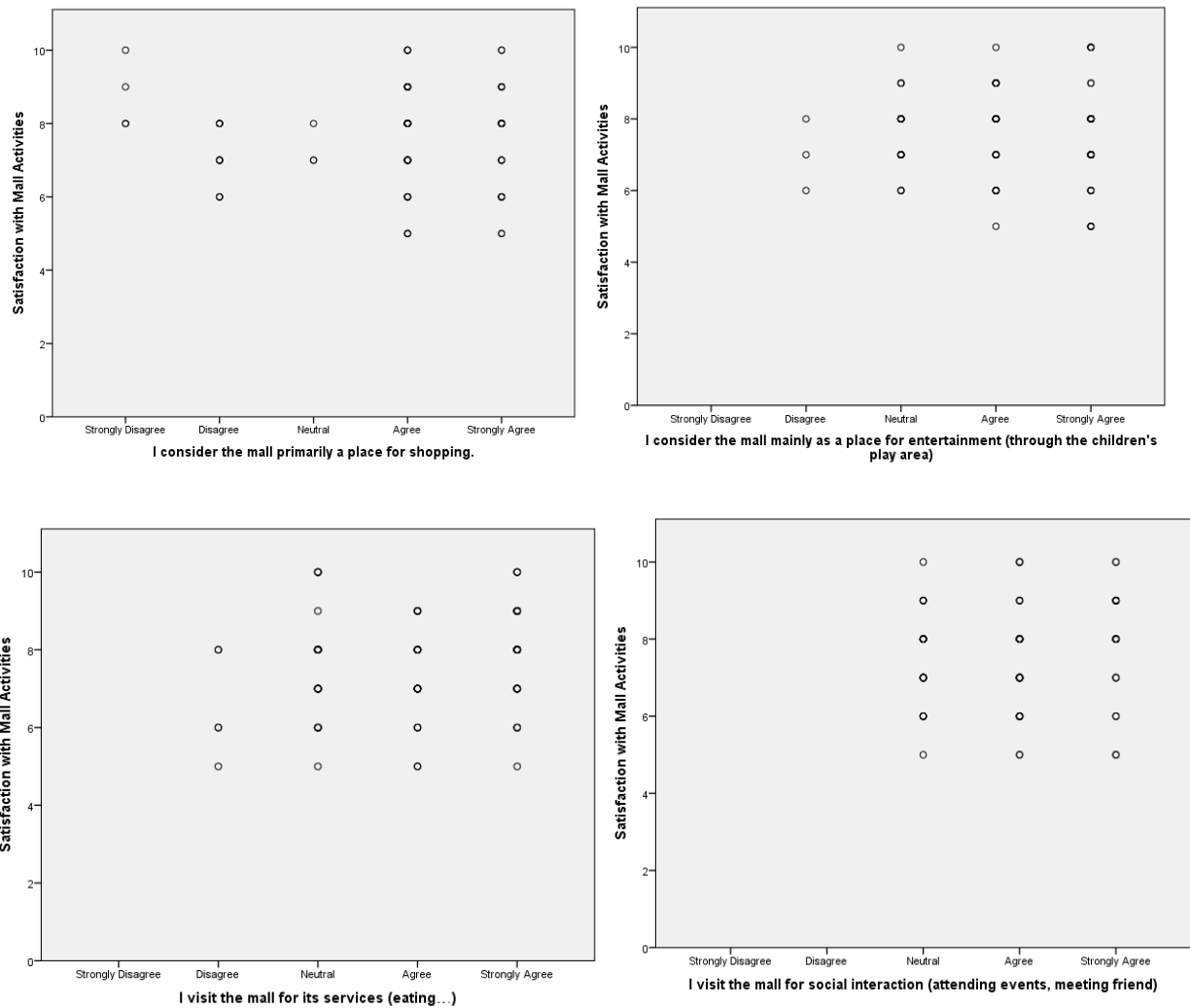

Fig. 2. Distribution of Visitor Satisfaction Across Mall Functions: Shopping, Entertainment, Services, and Social Interaction. Source: edited by the authors using the survey

4.2 Community and Social Engagement

The chart illustrates the frequency of event attendance among visitors to Ritaj and Yes malls, distributed across five categories: "never," "rarely," "sometimes," "often," and "always." Most respondents reported frequent attendance, with 40% attending events "always" and 30% attending "often," indicating high engagement with community and cultural activities hosted by the malls. Meanwhile, 20% of visitors reported attending events "sometimes," showing moderate involvement, and 10% stated that they "rarely" attend. Only 5% reported "never" attending, highlighting a minimal disengagement from mall-organized events. The Chi-Square test results (χ^2 = 25.200, p < 0.001) confirm that these differences in attendance frequency are statistically significant, suggesting meaningful variation in event participation across the sample. Notably, visitors who reported "Sometimes" or "Rarely" attending events are likelier to live farther away from the Ritaj and Yes Malls, including residents of other provinces or visitors from outside Algeria (figure 3). This indicates that geographical distance impacts attendance frequency, with less frequent participation observed among those traveling longer distances. These findings emphasize the effectiveness of the malls in fostering community and social engagement through their event offerings, particularly for local residents, while also suggesting the potential for enhancing accessibility and outreach efforts to attract visitors from farther regions. The results reinforce the role of the malls as multifunctional spaces that transcend retail, effectively connecting visitors to national traditions and cultural heritage.
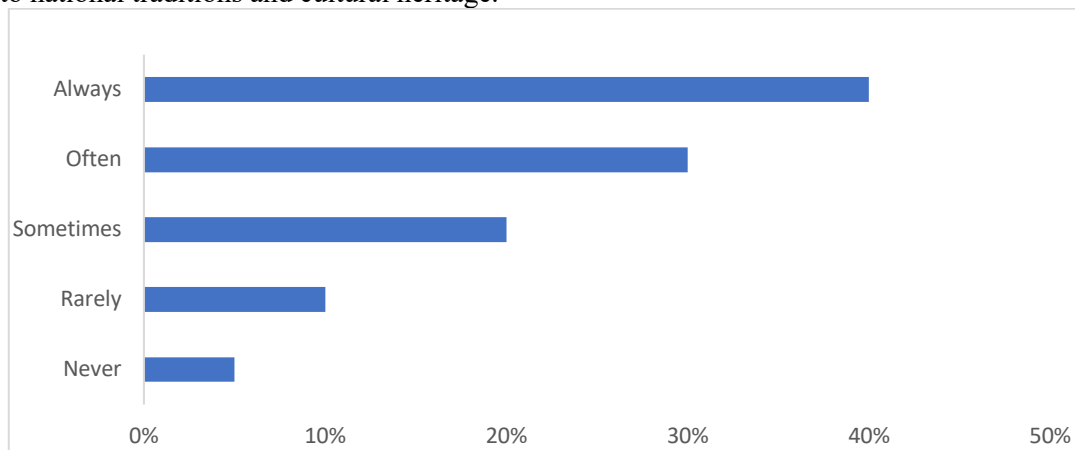

Fig. 3. The frequency of events attendance at the mall. Source: edited by the authors using the survey

4.3 Integration with Local Culture

The multifunctionality of Ritaj and Yes Malls goes beyond their roles as retail and social spaces, extending to the integration of local culture, traditions, and crafts. This integration creates a distinctive identity that merges local and global elements. The malls actively engage visitors with national and religious occasions through traditional expos, seasonal decorations, and cultural events that reflect local heritage. According to data gathered from a Likert-scale survey, most visitors (66%) agree or strongly agree that the malls help them connect with traditions, religious occasions, and cultural heritage, with 41% agreeing and 20% strongly agreeing. However, 14% of visitors remained neutral, indicating uncertainty or indifference regarding this cultural connection. A small group, 14% (5% strongly disagree and 9% disagree), did not perceive the malls as fostering a meaningful connection to these cultural elements (figure 4). Traditional expos featuring Algerian crafts, local culinary products, and cultural performances are regularly held at both malls, attracting local visitors and international tourists, including those from Tunisia and Libya. Photographic evidence from these events showcases the vibrancy of cultural displays, such as handcrafted pottery and traditional attire, highlighting the malls' role in promoting and preserving local heritage while blending it with global retail trends. In addition to celebrating local culture, the malls also embrace national and religious occasions by organizing various events, ranging from small holiday celebrations to impactful initiatives in diverse fields. For instance, they conduct awareness campaigns on the risks of breast cancer, offer blood sugar measurement services, and host blood donation drives in coordination with Ali Mendjeli Hospital. These activities enhance the malls' community-centric identity, combining cultural pride with meaningful social contributions (Figure 5). By incorporating local traditions and events into their operations, the malls improve visitor experiences and contribute to preserving regional culture in a globalized world. This approach is aligned with models such as Istinye Park Mall in Istanbul, which integrates high-end international brands with local retailers

and features an open-air market that celebrates local traditions, appealing to both global and local audiences. (Ritaj and Yes Mall's managers).
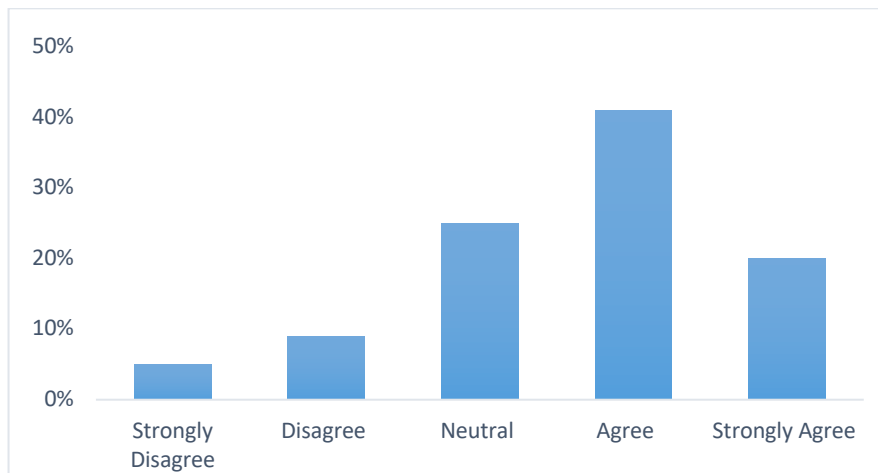

Fig. 4. Levels of Agreement on Connection to Culture. Source: edited by the authors using the survey


Fig. 5. Cultural Heritage and Medical Awareness Events at Ritaj and Yes Malls. Source: Official Facebook pages of Ritaj and Yes Malls

4.4 Architectural Design and Sustainability

The analysis of sustainability perceptions across age groups in the context of Ritaj and Yes Malls reveals that younger age groups (18–34) consider sustainability highly important, with 70% of respondents in the 18–24 age group and 65% in the 25–34 age group rating it as "very important" or "important." In contrast, older age groups (45+) display a more balanced view, with 40% of respondents in the 45–54 group and 45% in the 55+ group rating sustainability as "important," but with a notable proportion (around 25%) marking it as "neutral (figure 6)." The Kruskal-Wallis test, which shows a value of 0.328 ($p > 0.05$), indicates no significant

difference in sustainability perceptions across the age groups, suggesting that sustainability is considered necessary across all demographics. However, younger mall visitors tend to rate it more decisively as essential.
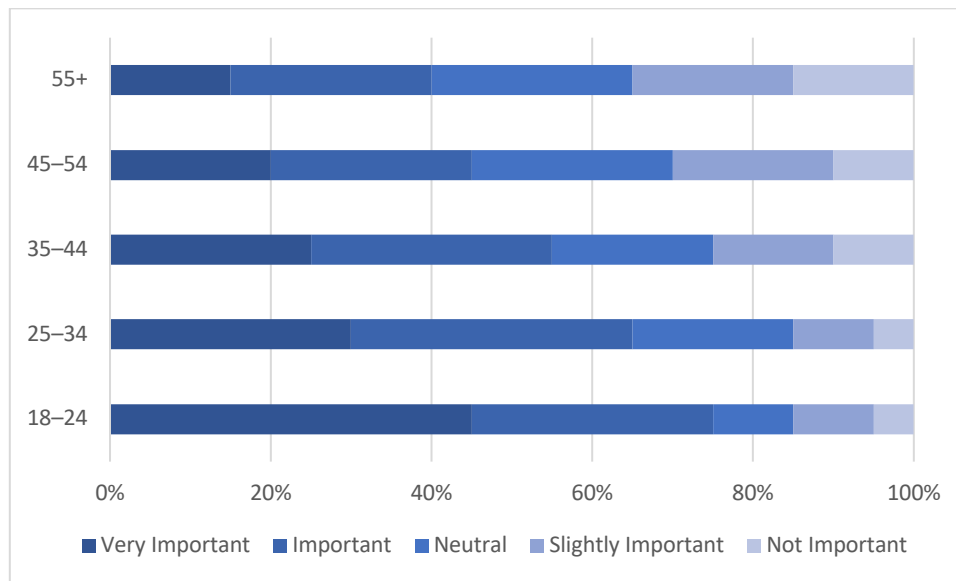
Fig. 6. Perception of Sustainability by Age Group for Ritaj and Yes Malls.
Source: edited by the authors using the survey

4.5 Accessibility and Inclusivity

Both Ritaj and Yes Malls benefit from a highly strategic location within Ali Mendjeli, situated near key landmarks such as Constantine University and Main Road No. 101. This prime positioning has made them central destinations within the city. In addition, their accessibility is further enhanced by the proximity to the Constantine tramway line, located just 600 meters (8 minutes walking distance) from both malls. Since its launch on July 4, 2013, the tramway has significantly improved connectivity, initially linking Benabdelmalek station to Zouaghi Slimane station over a 7.8 km stretch. The tramway network was later extended in 2019 and 2021, expanding coverage to crucial stations, including Chahid Kadri Brahim and University Abdelhamid-Mehri in Ali Mendjeli, thus integrating the malls into the broader urban transportation network (UrbanRail.Net, n.d.; Douichen et al., 2023). Moreover, the area benefits from an extensive public transportation system, including 15 urban bus lines operated by both the private and public sectors. The nearby Ali Mendjeli land station, just 290 meters (5 minutes walking) from Ritaj Mall and 700 meters (11 minutes walking) from Yes Mall, serves as a central transportation hub, connecting the city with surrounding municipalities and provinces to the south, east, and west. This station, covering 2,300 square meters, handles approximately one million passengers annually and operates 63 bus lines with a fleet of 385 buses, further enhancing the accessibility of both malls (Bosnia, 2019). Regarding transportation modes visitors used, 42% of those surveyed reported using public transportation, while 33% traveled by own cars, and 25% chose to walk to the malls. This diverse mix of transportation options underscores the accessibility and appeal of both malls to a wide range of visitors (Figure 7). Accessibility extends to and from Ritaj and Yes Malls, connecting them with other provinces and within the malls themselves. The design thoughtfully considers people with limited mobility, incorporating features such as seamless entryways, elevators, and other inclusive pathways to ensure ease of movement.
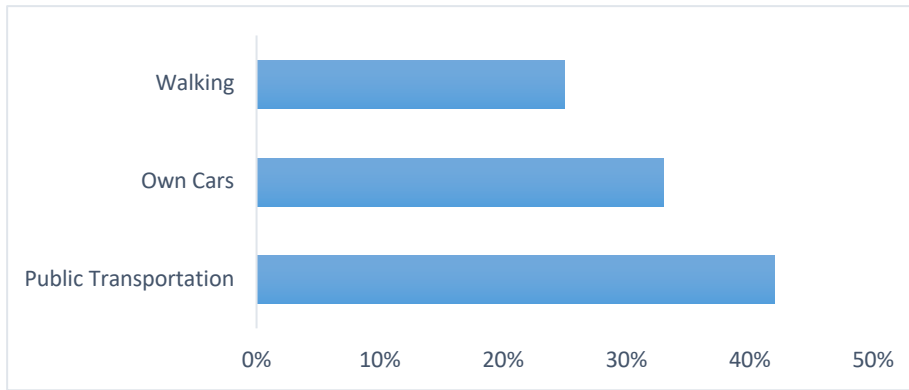
Fig. 7. Modes of Transportation Used by Visitors to Reach Ritaj and Yes Malls. Source: edited by the authors using the survey

4.6 Technological Integration

Before delving into the core research questions, an initial analysis was conducted to gauge consumer interest in innovative technological features within shopping centers. Respondents highlighted various interactive digital experiences they believed would enhance their shopping trips. Frequently mentioned features included virtual fitting rooms, augmented reality (AR) for product visualization, touchscreen directories with real-time updates, and interactive digital signage offering personalized recommendations. In addition to these technological advancements, preferences for personalized services were explored. Respondents expressed a strong interest in features such as personalized promotions based on their shopping habits, tailored shopping assistance via mobile applications or in-store services, loyalty programs with exclusive benefits, and AI-powered chatbots or kiosks providing personalized suggestions (figure 8). These findings provide valuable insights into the technological preferences of modern consumers, emphasizing the demand for a more interactive and customized shopping experience.

Fig. 8. Cloud Map of Frequently Mentioned Features Associated with Innovative Malls by Visitors. Source: edited by the authors using the survey

Figure 9 illustrates the distribution of visitors' preferences for technological integration in malls across different age groups, as measured by a five-point Likert scale. Most respondents in all age groups strongly agreed or agreed with the statement that technological features enhance the shopping experience. Specifically, 70% of the 18–24 age group and 64% of the 25–34 age group selected "strongly agree," demonstrating the highest enthusiasm for technological integration. Similarly, 60% of those aged 35–44 also strongly agreed. Among older age groups, the preference remains positive but slightly less pronounced. For instance, 47% of visitors aged 45–54 and 40% of visitors aged 55+ strongly agreed, with an additional 40% and 47% agreeing with the statement. Neutral responses were minimal, at approximately 8% overall, while no participants expressed or strongly disagreed, further highlighting a consensus on the importance of technological

integration in enhancing the shopping experience (figure 9). From the chi-square results, the Pearson Chi-square value of 5.033 (p =.754) indicates no statistically significant association between age groups and preference levels for technological integration, confirming that preference for technological enhancements is not strongly dependent on age. However, the linear-by-linear association value of 4.445 (p =.035) suggests a weak but significant trend, with younger participants showing slightly higher enthusiasm for technology. The data indicates that visitors across all age groups value technological features, such as interactive maps and self-checkout kiosks, to improve their shopping experiences. While younger visitors exhibit higher enthusiasm, older groups also demonstrate a significant preference, supporting the idea that technological integration appeals universally, making it a crucial aspect of modern mall design. These findings highlight the importance of hybrid shopping environments that blend technology with in-person interactions to cater to diverse age demographics.
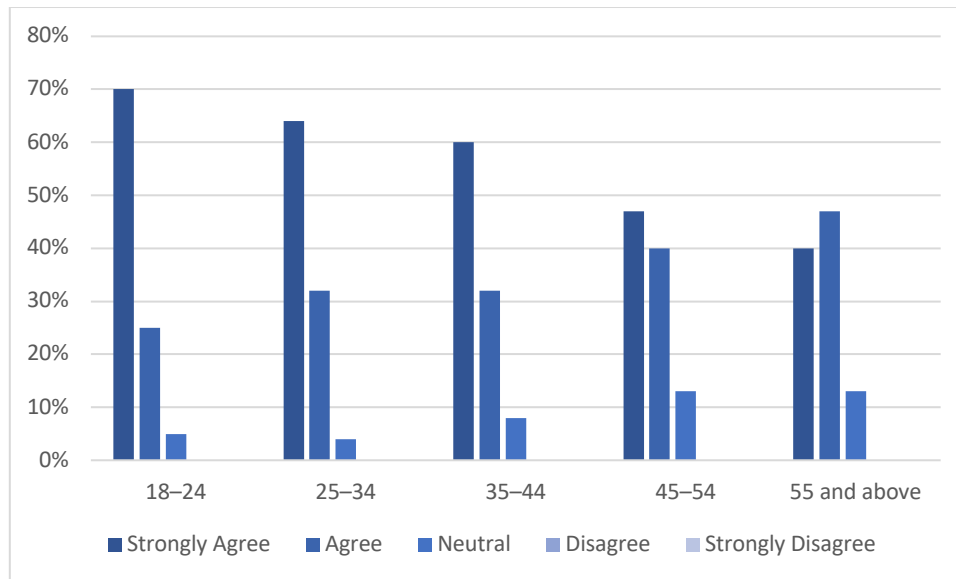

Fig. 9. Visitors' Preferences for Technological Integration in Malls by Age Group.
Source: edited by the authors using the survey

We analyze the correlation between shopping preferences and age categories to measure the distinction between personal and online shopping across age groups. This approach investigates whether age significantly shapes visitors' inclination toward personal, in-person shopping, or online alternatives, offering a comprehensive understanding of generational shopping behaviors. The accompanying bar chart highlights a strong preference for personal shopping among all age groups, with the majority of respondents (82%) choosing in-person shopping compared to only 18% favoring online alternatives. This preference is consistent across age categories, with younger groups (18–24) showing slightly more openness to online shopping, while older groups (45 and above) overwhelmingly favor personal shopping (figure 10). The findings suggest that malls like Ritaj and Yes malls serve as shopping destinations and spaces for social interaction, which resonates with visitors of all ages, and this is what the Chi-Square Test results (Pearson Chi-Square = 0.452, p = 0.978) indicate: no significant association between age group and shopping preference. This means that the preference for personal shopping over online shopping is uniform across age groups, supporting the idea that visitors of all demographics value the social and interactive aspects of mall experiences.

In contrast to the previous analysis on technological integration, where younger age groups (18-24 and 25-34) displayed a stronger inclination toward digital features to enhance their shopping experience, the preference for personal shopping remains dominant across all ages. While younger visitors may embrace technological innovations in malls (e.g., mobile apps, digital directories), they still prioritize the social and interactive value of in-person shopping over fully digital or online alternatives. This alignment underscores a hybrid shopping model: visitors appreciate technological tools that enhance convenience but do not see them as a replacement for the physical and communal experience of shopping in a mall. This balance between technology and tradition suggests that malls must integrate digital features while preserving their roles as social and cultural hubs.

Fig. 10. Preference for Personal Shopping vs. Online Shopping Across Age Groups.
Source: edited by the authors using the survey

4.7 Personalization and Experiences

The analysis of visitors' willingness to engage with personalization features in the context of Ritaj and Yes malls reveal insightful data on their openness to potential innovations. Using a Likert scale approach to measure agreement with statements regarding features such as loyalty programs, VIP areas, and tailored offers through mall apps, we found that most respondents, regardless of age group, showed a favorable disposition towards these personalization features. The bar chart shows a broad agreement spread across all age groups, with notable peaks in the "Agree" and "Strongly Agree" categories, especially among younger visitors. However, it is crucial to highlight that this criterion of personalization features is currently missing in both Ritaj and Yes malls. Thus, this analysis was conducted to measure the willingness of visitors to embrace such features should they be introduced in the future (figure 11). The Chi-Square results, showing no significant correlation ($p = 0.853$), suggest no major differences across age groups in their openness to personalized services. To align with the concept of personalization features in malls, examples like virtual fitting rooms, which allow customers to try on clothes using augmented reality, can greatly enhance the shopping experience. Additionally, personalized product recommendations through mobile apps based on previous purchases or preferences, smart mirrors that display additional clothing options when trying on items, and interactive kiosks offering real-time promotions can increase customer engagement. These features would foster customer loyalty, boost spending, and improve satisfaction by providing tailored shopping experiences across demographic groups.
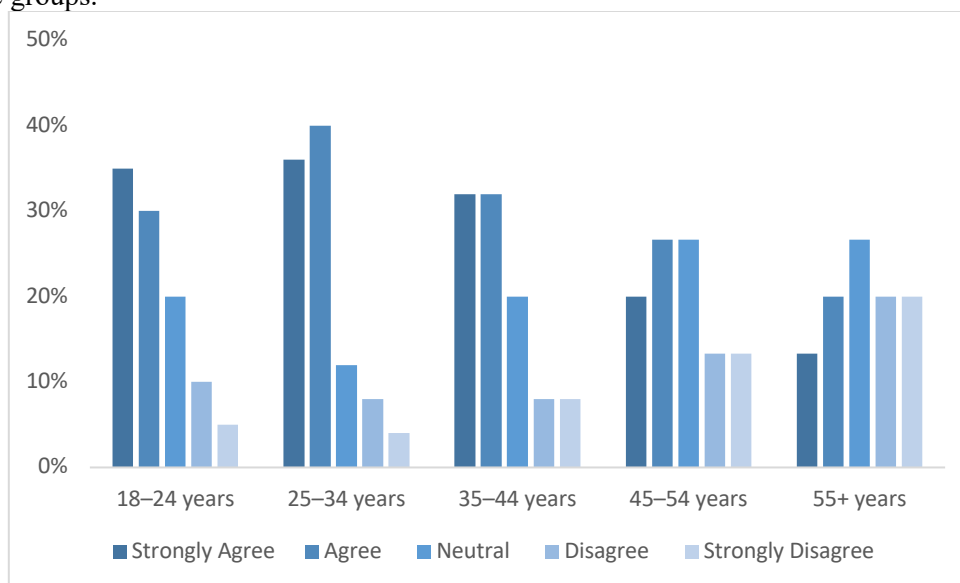

Fig. 11. Visitors' Willingness to Engage with Personalization Features Across Age Groups.
Source: edited by the authors using the survey

5. Conclusions

As the retail landscape continues to evolve, particularly with the rapid rise of e-commerce, shopping malls must adapt to remain relevant and thrive. Integrating digital technology, sustainability practices, and experiential retail is not merely a trend but a necessity for future success. By implementing technological innovations such as interactive digital solutions, personalized services, and innovative technologies, malls can enhance customer experiences and remain competitive in a changing market. Furthermore, by adopting a hybrid shopping model that combines the best of both digital and traditional retail, malls can offer consumers the convenience of online shopping alongside the unique benefits of in-person shopping. This approach ensures that malls can continue to serve as dynamic, multifunctional spaces where people can shop, socialize, work, and relax. Survey findings reveal consumers increasingly value technology-driven solutions, such as personalized services, mobile apps, and immersive in-store experiences. At the same time, sustainability has emerged as a critical factor, demonstrating that eco-friendly initiatives resonate strongly with modern shoppers. However, while consumers are open to innovation, they remain closely tied to familiar shopping habits. Many value traditional shopping experiences and are most comfortable when innovative elements complement their routines rather than radically disrupt them. This highlights the need for a balanced approach where malls incorporate innovative technologies and sustainable practices to enhance existing shopping habits rather than replace them entirely.

Ritaj Mall and Yes Mall, as part of their ongoing efforts to innovate and adapt to shifting consumer preferences, have embraced a sixth criterion that positions them as innovative malls. This criterion focuses on integrating cutting-edge technological features that cater to the evolving needs of modern shoppers. Visitor responses from all age categories indicate a strong willingness to embrace these technological innovations, demonstrating that both Ritaj and Yes Mall have successfully created environments that appeal to a broad demographic. By incorporating interactive technologies and personalized experiences, these malls have positioned themselves as leaders in the sector, offering modern shoppers the perfect blend of convenience, social interaction, and engagement. While the post-pandemic period saw a significant shift toward e-commerce as consumers became accustomed to its convenience, the enduring desire for social interaction reinforces the relevance of traditional shopping experiences. By adding innovative features such as virtual fitting rooms, personalized promotions, and interactive in-store technologies, malls can enhance these experiences, making them more efficient, enjoyable, and digitally connected. As Algeria continues to urbanize and consumer habits shift, malls must embrace these innovative strategies. By prioritizing community engagement, sustainability, accessibility, and personalization, malls can become vital hubs of commerce, leisure, and cultural interaction. The future of malls lies in their ability to blend innovation with tradition, creating spaces that are not only places to shop but also destinations that meet the diverse needs of modern consumers. Adopting these forward-thinking approaches will help malls in Algeria stay competitive, resilient, and vital in the face of a rapidly changing retail environment. In conclusion, the alignment between visitors' perspectives and the broader strategic vision of both malls underscores their shared commitment to fostering a vibrant, innovative, and community-centered shopping experience.

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