Does Digital Adaptability Shape Consumer Experience in Hybrid Retail? Focusing on Generational Differences

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Introduction. Digital technology has revamped the fashion retail business through multiple channels (Pantano et al., 2022). Fashion retailers have implemented connected retail strategies to enhance consumers' experiences by adopting various in-store technologies (Timoumi et al., 2022). Particularly, fashion retailers have embraced various technologies to create a more seamless shopping experience within their physical space (hybrid retail; Prior, 2021; Vannucci & Pantano, 2020). For instance, smart in-store technology (e.g., contactless or smart checkout, automation services, AI-based size recommendations) has been introduced to physical stores to meet consumers' expectations of convenience (Perumal et al., 2022). While advanced technologies have established an efficient retail atmosphere, consumers' shopping experiences using digital technology might vary depending on an individual's ability to adjust to newly introduced technologies (i.e., digital adaptability). Differences in individuals' learning or adaptation styles toward retail technologies are crucial determinants of future behaviors (Puckett, 2020). Additionally, generational differences (i.e., younger vs. older consumers) in consumer attitudes toward technology-involved shopping have been examined by previous scholars (i.e., Agrawal, 2022). However, little investigation has been conducted to understand digital adaptability across different generations, especially in the hybrid retail context. Thus, this study aims to understand consumers' digital technology adaptability and how it influences four antecedents of technology use that lead to consumers' attitudes toward smart in-store technologies and subsequent shopping intentions considering the age differences.

Literature Review and Hypotheses. This study adopts the Unified Theory of Acceptance and Use of Technology (UTAUT; Dwivedi et al., 2019; Venkatesh et al., 2012) and extends this framework by incorporating the concept of digital adaptability (DA) into the model. DA is defined as an individual's ability and habits in learning new technologies, and it has been studied as a determinant factor that affects individuals' technology use (Puckett, 2020). Based on the framework, the research model examines consumers' attitudes about smart in-store technology and shopping intention by accounting for their technology adoption styles and its influence on the four technology adoption determinants such as performance expectancy (PE), effort expectancy (EE), social influence (SI), and facilitating conditions (FC) (Dwivedi et al., 2019). PE refers to consumers' expectations of how much their shopping experiences can be improved through technology. EE refers to the degree of consumers' expectations of the easiness of using technology. SI refers to the level of consumers' perception of others' influence on their technology adoption behavior. FC refers to the level of consumers' perception of the

environment or resources supporting their technology use (Dwivedi et al., 2019). Existing literature has argued that PE, EE, SI, and FC have a significant effect on consumers' attitudes and behavioral intentions toward shopping using digital technology (Gil-Cordero et al., 2023). Also, the consumers' generation (younger vs. older consumers) has been confirmed to be a significant factor that differentiates their shopping experience when using digital technology (Kim et al., 2022). Based on the previous findings, this study suggests such relations can be supported regarding digital adaptability in the smart store setting. Thus, this study proposes the following hypotheses.

H1 Digital Adaptability (DA) will positively affect four determinants of technology use — (a) performance expectancy (PE), (b) effort expectancy, (c) social influence (SI), and (d) facilitating condition (FC).

H2 Four determinants of technology use — (a) PE, (b) EE, (c) SI, and (d) FC — will positively affect consumers' attitude (ATT) toward using the technology in the store.

H3 ATT will positively affect behavioral intention (BI) to shop using smart in-store technology.

H4 Consumers' generations (i.e., younger and older consumers) will moderate the effect of PE, EE, SI, and FC on ATT.

Methods. The data were collected by recruiting the survey participants 18 years old or above living in the United States, using MTurk. After excluding incomplete and straight-lining cases, a total of 289 usable responses were analyzed. Approximately 59 % of the survey participants were male, and 41% were female. Most participants were Caucasians (75%) and living in urban areas (75%). The survey participants were divided into two groups according to their generation, younger consumers (born after 1981; 64%) and older consumers (born before 1980; 36%), to consider age effect on the research model. The survey measurement items were adapted from existing literature and measured using a 7-point Likert scale (Dwivedi et al., 2019; Puckett, 2020; Venkatesh et al., 2012). Path analysis and multigroup analysis (MGA) using the partial least squares structural equation modeling (PLS-SEM) were conducted to test the hypotheses.

Results. The validity of the measurement model was assessed based on the complete group (N=289) and two subgroups, younger consumers (N=185) and older consumers (N=104). Factor loadings were >.70, and the composite reliability for all constructs was ≥ .88, confirming the convergent validity of the complete and the two subgroups. The discriminant validity was checked using the Fornell-Lacker criterion. After confirming the measurement model, the path analysis was conducted. Results of the complete model confirmed that DA positively influenced PE, EE, SI, and FC (H1a: $\beta = 0.55$, $p < .001$, H1b: $\beta = 0.55$, $p < .001$, H1c: $\beta = 0.42$, $p < .001$, H1d: $\beta = 0.58$, $p < .001$), confirming H1. Among the four factors, PE, SI, and FC positively influenced consumers' attitudes (ATT) toward using smart in-store technology (H2a: $\beta = 0.50$, $p < .001$, H2c: $\beta = 0.11$, $p < .05$, H2d: $\beta = 0.19$, $p < .01$), while the effect of EE on ATT was not statistically significant, indicating H2 was partially accepted. ATT positively affected their shopping intentions (BI) using the smart in-store technology (H3: $\beta = 0.85$, $p < .001$), accepting H3. As for the moderation effect of generations on the relationship between the four

determinants of technology adoption and attitude, the MGA results indicated significant differences in paths between the two determinant factors (PE and SI) and consumer attitude (ATT). PE had a greater effect on ATT in the older consumer group than it had in the younger consumer group ($|diff| = 0.29$, $p < .05$). In addition, SI had a significant effect on ATT in the younger group, while it had a non-significant effect in the older group ($|diff| = 0.19$, $p < .05$), indicating that H4 was partially accepted.

Discussion and Conclusion. The findings of this study provide theoretical and managerial implications. It provides a DA-added UTAUT research model explaining consumers' shopping experiences with in-store technology (e.g., smart checkout) and the differences in the perception mechanisms across different generations. The results also offer practical insight into fashion retailers in two ways. First, retailers can provide support to their customers in using in-store digital technology by considering their different levels of digital adaptability and technology learning styles (e.g., in-person assistance, help desk, and user-centered systems). Second, retailers can differentiate their strategies to promote their in-store technology to customers considering age differences among target customers. For those consumers who are older, emphasizing the effectiveness of using smart in-store technology is recommended, while younger consumers mainly need social referrals to adopt smart technology when shopping.

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References

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Agrawal, D. K. (2022). Determining behavioural differences of Y and Z generational cohorts in online shopping. *International Journal of Retail & Distribution Management, 50*(7), 880-895. https://doi.org/ 10.1108/IJRDM-12-2020-0527

Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers, 21*(3), 719-734. https://doi.org/10.1007/s10796-017-9774-y

Gil-Cordero, E., Ledesma-Chaves, P., & Baena-Luna, P. (2023). Acceptance factors of Zara's shopping app among fashion consumers during COVID-19. *Journal of Consumer Behaviour 22*(4), 955-970. https://doi.org/10.1002/cb.2134

Kim, S., Jang, S., Choi, W., Youn, C., & Lee, Y. (2022). Contactless service encounters among Millennials and Generation Z: the effects of Millennials and Gen Z characteristics on technology self-efficacy and preference for contactless service. *Journal of Research in Interactive Marketing, 16*(1), 82-100. https://doi.org/10.1108/JRIM-01-2021-0020

Pantano, E., Pedeliento, G., & Christodoulides, G. (2022). A strategic framework for technological innovations in support of the customer experience: A focus on luxury retailers. *Journal of Retailing and Consumer Services, 66*, 102959. https://doi.org/10.1016/j.jretconser.2022.102959

Pantano, E., & Viassone, M. (2015). Engaging consumers on new integrated multichannel retail settings: Challenges for retailers. *Journal of Retailing and Consumer Services, 25*, 106-114. https://doi.org/10.1016/j.jretconser.2015.04.003

Perumal, S., Qing, Y., & Jaganathan, M. (2022). Factors influencing attitudes and intentions towards smart retail technology. *International Journal of Data and Network Science, 6*(2), 595-602. https://doi.org/ 10.5267/j.ijdns.2021.11.005

Prior, P. (2021, June 30). *Phygital – What is it and why should I care?* Forbes. https://www.forbes.com/sites/forbesbusinesscouncil/2021/06/30/phygital---what-is-it-and-why-should-i-care/?sh=3b0b0464587a

Puckett, C. (2020). Digital Adaptability: A New Measure for Digital Inequality Research. *Social Science Computer Review,40*(3), 641-662. https://doi.org/ 10.1177/0894439320926087

Timoumi, A., Gangwar, M., & Mantrala, M. K. (2022). Cross-channel effects of omnichannel retail marketing strategies: A review of extant data-driven research. *Journal of Retailing. 98*(1), 133-151

Vannucci, V. and Pantano, E. (2020). Digital or human touchpoints? Insights from consumer-facing in-store services. *Information Technology & People, 33*(1), 296-310. https://doi.org/10.1108/ITP-02-2018-0113

Venkatesh, V., Thong, J., & Xu, X. (2012). Consumer acceptance and use of information technology: Extending the unified theory of acceptance and use of technology. *MIS Quarterly, 36*(1), 157–178. https://doi.org/10.2307/41410412