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Influence of Demographic Indicators on Smartphone Choice: Evidence from Azerbaijan

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ABSTRACT

This study investigates the key factors shaping smartphone choice among Azerbaijani consumers, emphasizing demographic characteristics. A questionnaire survey was conducted among smartphone users (n = 312) from Azerbaijan, and the results were analyzed using an independent sample T-test to identify statistically significant differences between groups based on gender, and education level. In the analyzed sample, women slightly outnumber men, and students make up the largest group highlighting a tech-savvy generation that's deeply engaged with smartphones. The analyses, done using SPSS version 23, revealed several statistically significant differences, helping uncover the patterns behind smartphone choices in Azerbaijan. The research highlights the importance of features such as phone size, battery life, camera quality, and design. The findings reveal notable gender-based differences: Males tend to prioritize technical features like water resistance, while females favor aesthetic design elements. Educational attainment also plays a role, as individuals with higher education levels place greater importance on advanced functionalities like face recognition. These findings underscore the complexity of the smartphone market in Azerbaijan, where demographic factors define consumer behavior. Recognizing these preferences not only allows marketers to tailor strategies for specific consumer segments but also assists policymakers in formulating digital inclusion policies that address diverse demographic needs.

Keywords: Smartphone Choice, Demographic Indicators, Education Level, Gender
JEL Classification: 033, L96, D12

1. INTRODUCTION

The evolution of smartphones has significantly reshaped global communication, cementing their role as indispensable tools in economic and social progress (Reid, 2018). By integrating advanced technological features with practical usability, smartphones have become essential for individuals worldwide, particularly in developing nations such as Azerbaijan. In these regions, demographic and economic conditions play a pivotal role in shaping smartphone adoption rates (GSM Association, 2020). Variables such as income level, education, and cultural norms not only influence consumer preferences but also mirror broader patterns of digital adoption and the diffusion of innovations (Jamalova, 2020).

The evolution of smartphones has profoundly transformed global communication, emphasizing their role in economic and social development. Smartphones, combining advanced technical features with practical usability, have become indispensable for many individuals, especially in developing countries like Azerbaijan (James, 2014; James, 2016).

The demographic and economic landscape of these regions significantly influences smartphone adoption rates (Jamalova and Constantinovits, 2020b). Factors such as income level (Jamalova and Constantinovits, 2020b), education (Aljomaa et al., 2016), and social norms (Jamalova, 2021) shape preferences and choices, reflecting broader trends in digital adoption and innovation diffusion. However, the factors influencing smartphone sales are

multifaceted and vary across different demographics and consumer segments. Therefore, cross-cultural studies in this field illustrate the significance of actual adoption and usage behavior (Rau et al., 2015; Shin and Choo, 2012).

At the microeconomic level, factors influencing adoption behavior can be broadly categorized into technological attributes (Baah and Naghavi, 2018), income/price-related factors (Li et al., 2016), smartphone service quality (Adekunle and Ejechi, 2018), as well as habit. Each of these categories plays a distinct role in shaping the purchasing decisions of consumers and the market strategies of firms. Therefore, a detailed understanding of these influences is essential to capture the complex interplay that drives the smartphone market in Azerbaijan. Considering that mobile phones account for 79.66% of internet traffic, this matter is of serious importance.

Azerbaijan, a society characterized by collectivist values, provides a compelling context for examining the intersection of smartphone choice and demographic factors (such as gender and education). Previous research by the authors highlights a high smartphone penetration rate among Azerbaijani youth, driven largely by considerations of affordability and utility (Jamalova and Constantinovits, 2021). Nevertheless, the adoption process remains uneven, with variations observed across different demographic groups due to disparities in income, cultural norms, and age. These dynamics underscore the importance of understanding how demographic indicators influence technology adoption in such a distinctive socio-economic and cultural environment (Jamalova and Constantinovits, 2020b). This study seeks to address the following research questions:

- Are there any gender differences in smartphone choices based on various features?
- Are there any education-related differences (bachelor's vs. master's degree) in smartphone choices based on various features?

This study explores the interplay between two primary categories of variables—age and education level —smartphone preferences in Azerbaijan, aiming to enhance our understanding of consumer behavior in rapidly evolving technological contexts. This survey is designed to capture a wide array of influences ranging from the technological features of the devices, such as battery life, camera quality, and processing power, to broader socioeconomic factors, including income levels, and consumer trends. To achieve this, the study employs convenience sampling, a pragmatic approach that facilitates quick data collection from readily accessible respondents, enabling an efficient exploration of prevailing consumer attitudes and behaviors in the smartphone market.

2. SITUATION IN AZERBAIJAN: STATISTICS AND MARKET RESEARCH

Azerbaijan represents a unique case for analyzing these dynamics due to its socio-economic transformation, burgeoning middle class, and increasing adoption of digital technologies. The smartphone market in Azerbaijan is experiencing significant growth, driven by the rapid adoption of mobile technology and evolving consumer preferences. According to research, Azerbaijan boasts one of the highest mobile subscription rates globally, with over 100 subscriptions/100 residents, highlighting the nation's strong connectivity and readiness for digital engagement (Jamalova, 2020). The telecommunications sector's competitive landscape has created an environment conducive to market expansion, with consumers prioritizing affordability (Jamalova and Constantinovits, 2020b), reliability, and advanced smartphone functionalities (Jamalova and Constantinovits, 2020a). Additionally, the rise of digital banking and e-commerce platforms has further incentivized smartphone usage, underscoring their integral role in daily life and economic activity (We Are Social and Hootsuite, 2019). The Azerbaijani smartphone market, therefore, serves as a promising case study of technological integration and consumer adaptation, contributing to the nation's broader digital transformation efforts.

Phone usage in Azerbaijan is outpacing population growth, likely due to individuals using multiple phone numbers (Table 1). Mobile devices contributed 51.2% of internet traffic in 2019, rising to 79.66% by 2023, confirming their role as the primary access point. Table 2 shows significant price differences for Samsung models across six countries. The USA offers the lowest prices, with the S24 at $799.99, while Turkey has the highest at $1,280.92, mainly due to import taxes. Azerbaijan falls in the mid-range, with the S24 priced at $852.94. France, Canada, and the UK offer similar or slightly higher prices, with the UK notably more expensive. During Black Friday, Azerbaijan's discount on the S24+ narrows the price gap with the USA, making it more competitive. These variations reflect the influence of taxes, import costs, and market conditions as well as some impact of COVID (Jamalova & Bálint, 2023).

3. LITERATURE REVIEW

3.1. Determinants of Consumer Attitudes Toward Smartphones

Smartphones, while complex, have specific features that become more important before purchase and during usage. Users' attitudes towards smartphones are shaped by a mix of ideas, beliefs, experiences, values, and other factors, such as advertising, gender, and usage priorities. According to Jansson-Boyd (2010) a buyer's attitude is influenced by affective, cognitive, and behavioral systems, though some researchers only distinguish affective and cognitive factors (Crano and Prislin, 2008). In many cases, the cognitive system, which deals with analytical thinking and past experiences, dominates in shaping attitudes toward products like smartphones.

The significance of smartphone functions and features can be seen from consideration of utility and necessity characteristics (Jamalova and Constantinovits, 2020a). Some authors identified (Jamalova and Constantinovits, 2020a) five key attributes for assessing loyalty in the Korean smartphone market: Functions, usability, design, applications, and price (Kim et al., 2016, p. 939). Similarly, a study in Malaysia found that students' choices were influenced by product features, price, and social factors. Product features included aspects like design, application variety, internet

Table 1: Indicators of internet and mobile phone usage in Azerbaijan (2019-2023)

Years	Population of Azerbaijan (million)	Number of people having mobile phone subscriptions (million)*	Percentage of mobile phones in the Internet traffic (%)	Percentage of Android phones in the Internet traffic (%)	Percentage of iOS phones in the Internet traffic (%)	Average annual prices of smartphones in Azerbaijan (in AZN)**
2019	10.09	10.8	52	86.5	11.6	252,24
2020	10.18	10.3	51.2	85.7	14.0	271,91
2021	10.26	10.8	61.2	81.74	17.44	290,12
2022	10.39	11.1	61.89	81.99	17.31	375,82
2023	10.44	11.0	68.10	83.82	15.83	372,08

The data about Mobile phone subscriptions is marked with * and was obtained from the World Bank database and provided by ITU. The remaining data was collected from https://datareportal.com/. The data marked with **was obtained from the Azerbaijan Statistical Information Service

Table 2: The prices of selected Samsung models in some countries

Countries	S24 128 GB	S24+256 GB	S23 128 GB	S24+256 GB (Black Friday)*
Azerbaijan	$852,94	$1235,29	$911.76	999.99$
USA	$799.99	$999.99	$799	924.99$
UK	$1018,05	$1272,88	$1075	n/a
France	$844,58	$1055,99	$984	n/a
Turkey	$1280,92	$1640,73	$1099.71	n/a
Canada	$849.99	$1149.99	$824	n/a

Data was obtained on 07.12.2024, from the https://www.samsung.com and https://www.androidauthority.com/cheapest-place-to-buy-samsung-galaxy-s23-3335713/. Data marked with was obtained on 29.11.2024 from https://www.samsung.com (Black Friday). Source: Authors' compilation

access, and the operating system (Jamalova, 2020). Other important factors mentioned by researchers include price, after-sales service, brand, social influence, durability, and product features (Jamalova and Constantinovits, 2020a; Kim et al., 2020; Sata, 2013). Researchers often analyze different combinations of these variables to determine the most suitable model (Coelho et al., 2013; Liao and Hsieh, 2013; Swapana and Padmavathy, 2017). These factors shape users' attitudes towards smartphones, which was the focus of the current study aimed at measuring users' attitudes towards these devices.

3.2. Variables Impacting Consumer Attitudes in Smartphone Purchase and Usage

Smartphones are defined by their dominant designs, which play a significant role in consumer decisions (Cecere et al., 2015). Attributes like aesthetics and design are pivotal in influencing buyer choices; studies have consistently shown that style elements such as color and size impact purchasing decisions (Filieri and Lin, 2017; Jamalova and Constantinovits, 2020a). Research among Chinese smartphone users has found that physical characteristics are key to acceptance and usage, with design being a crucial factor (Liu and Yu, 2017).

Smartphone innovation is another critical aspect influencing buyer decisions. The novelty and advancement of features in each model are significant drivers of consumer interest and market success (Coelho et al., 2013). Innovations are more readily accepted by well-known brands, and purchasing such devices is often linked to the buyer's personality traits, income, education, and sociodemographic profile (Kim et al., 2015). Customer satisfaction emerges as a complex yet crucial factor that directly affects consumer behavior. Satisfaction results from various influences, including previous experiences, product quality, features, and technical support (Ruiz Díaz, 2017). Furthermore, continuous product development and the introduction of innovative features encourage consumers to upgrade their devices frequently. Overall, the literature shows a combination of factors like personal use, previous experience, and product characteristics. These factors are crucial for understanding how and why consumers choose and use their devices.

3.3. Influence of Gender on Smartphone Choice

Since the 1960s, gender has been a focus of scholarly attention, particularly its complex impact on consumer behavior (Kolyesnikova et al., 2009). Studies have shown that attitudes toward advanced technological products differ significantly between genders (Moghaddam, 2010; Venkatesh and Morris, 2000). Despite this, the impact of gender on behavioral intentions, usage, and purchasing decisions of high-tech products remains underexplored. Gender not only influences the initial decision to adopt smartphones but also affects the prioritization of specific features and functionalities. This section examines how gender affects smartphone choices, drawing on various studies to provide a comprehensive analysis.

3.4. Influence of Education on Smartphone Choice

Education plays a critical role in influencing consumer behavior, particularly in the adoption and selection of smartphones (GSMA, 2015; GSMA, 2018). Research indicates that individuals with higher educational attainment are more likely to use smartphones for diverse and skill-intensive activities, highlighting the impact of education on technological literacy and adoption patterns (Wenz and Keusch, 2023). Furthermore, education influences how consumers evaluate the value of smartphones, balancing cost considerations against perceived utility and long-term benefits (Rigopoulou et al., 2017). Studies suggest that educated consumers are more inclined to choose smartphones with advanced features and functionalities, reflecting their capacity to utilize complex technological tools effectively (Amez et al., 2019). These findings underscore the significant role of education in shaping consumer preferences and behavior in the smartphone market.

Research on Nigerian university students found that while brand preferences were consistent between undergraduate and postgraduate students, factors such as brand attachment, perceived usefulness, and aesthetic appeal played a universal role in shaping

smartphone choices (Adekunle and Ejechi, 2018). In contrast, a study in Saudi Arabia revealed that undergraduate students demonstrated higher levels of smartphone usage and addiction compared to their postgraduate counterparts, indicating that the educational stage impacts engagement and dependency (Aljomaa et al., 2016). Additionally, higher-level students often prioritize advanced productivity and communication features, reflecting the influence of academic needs on smartphone utility (Feng et al., 2015). These findings underscore the nuanced relationship between education and smartphone preferences, shaped by both functional and behavioral factors.

4. METHODOLOGY

4.1. Participants and Procedure

The subjective nature of questionnaire survey data means that participant selection can significantly affect the results (Zikmund et al., 2013). Researchers chose this method for its time efficiency and ability to access diverse social groups. The study targeted young smartphone users in Azerbaijan, distributing Azerbaijani-language questions via social media between October 1st and November 3rd, 2024. Participants were classified by age, education, gender, and occupation to better understand which smartphone features they value. A control question confirmed all respondents identified as Muslim.

The survey aimed to explore users' perceptions of smartphone features and examine how factors like gender, and education level influence their choices. Questions were grouped into three categories—personal use, previous experience, and product information—to align with the study's objectives. Clear, simple language was used to avoid respondent confusion.

4.2. Instrument and Measures

The study applied the same methodology as Işıklar and Büyüközkan (2007) who aimed to determine essential characteristics of smartphones in Turkey. This same method was later applied to study mobile phone preferences of men in Finland (Haverila, 2011) and in multinational study involving respondents from Azerbaijan, Turkey, Russia and Hungary (Jamalova and Constantinovits, 2020a). The main body of the survey consisted of 12 questions where participants reported on their smartphone usage and demographic details. The questions used a four-point Likert scale, ranging from "not important at all" (1) to "very important" (4), making it consistent with the earlier studies (Haverila, 2011; Işiklar and Büyüközkan, 2007).

4.3. Data Collection and Analysis

Table 3 paints a clear picture of the study's respondents: most are young, with the majority between 18 and 24 years old. Women slightly outnumber men, and students make up the largest group—highlighting a tech-savvy generation that's deeply engaged with smartphones. To better understand how factors like age, gender and education shape these preferences, the study used an independent sample T-test. This analysis, done using SPSS version 23 (IBM Corp., 2015), revealed several statistically significant differences, helping uncover the patterns behind smartphone choices in Azerbaijan.

Table 3: Demographic profile of respondents

Demographic profile of respondents	Frequency	Percentage
Age		
Till 18	21	6.73
18-24	198	63.46
25-34	54	17.31
35 and higher	39	12.50
Gender		
Female	177	56.73
Male	135	43.27
Occupation		
Employed in public-private sector	138	44.23
Private business owner	6	1.92
Student	150	48.08
Unemployed	18	5.77
Brand choice		
Samsung	81	25.96
iPhone	159	50.96
Xiaomi	51	16.35
Other	21	6.73
Total	312	100.00

Source: Own editing

5. RESULTS AND DISCUSSION

5.1. Results for Research Question 1: Influence of Gender on Smartphone Choice

This research question seeks to explore whether gender differences exist in the prioritization of smartphone features, addressing the research question:

Research Question 1. Are there any gender differences in smartphone choices based on various features?

To analyze this question, an independent samples t-test was employed (Table 4). This statistical method allows for the comparison of mean differences between two independent groups—in this case, male and female respondents—across various smartphone features. By identifying significant differences, the t-test provides a robust framework for understanding gender-specific preferences in smartphone selection.

The analysis revealed notable gender differences in smartphone feature preferences, with males and females diverging significantly in their prioritization of specific attributes. For instance, females placed higher importance on phone size, as indicated by a significant t-test result ($t(238) = -2.063$, $P = 0.040$). Similarly, features like SIM card slots ($t(238) = 3.578$, $P < 0.001$), face recognition ($t(238) = -4.830$, $P < 0.001$), water resistance ($t(238) = 3.036$, $P = 0.003$), and design ($t(238) = -3.357$, $P = 0.001$) also demonstrated significant gender differences. In these cases, males often assigned greater value to these features compared to females, with the mean differences ranging from −0.225 for phone size to −0.544 for face recognition (Table 1).

5.2. Research Question 2 Influence of Educational Attainment on Smartphone Choice

This study also investigates the potential influence of educational attainment on the preferences for specific smartphone features (Table 5). Given the pervasive role of smartphones in daily

Table 4: Independent sample T-test (gender differences)

Variables – T test	t-test for equality of means						
	t	df	Sig. (2-tailed)	Mean difference	Standard error difference	95% confidence interval of the difference	
						Lower	Upper
The importance of Phone size							
Equal variances assumed	−2.063	238	***0.040***	−0.225	0.109	−0.440	−0.010
Equal variances not assumed	−2.099	168.826	***0.037***	−0.225	0.107	−0.437	−0.013
The importance of sim card slots							
Equal variances assumed	3.578	238	***<0.001***	0.472	0.132	0.212	0.732
Equal variances not assumed	3.650	170.076	***0.000***	0.472	0.129	0.217	0.728
The importance of Camera quality							
Equal variances assumed	−1.291	238	0.198	−0.088	0.068	−0.222	0.046
Equal variances not assumed	−1.231	142.100	0.220	−0.088	0.072	−0.229	0.053
The importance of Battery life							
Equal variances assumed	−1.588	238	0.114	−0.126	0.079	−0.282	0.030
Equal variances not assumed	−1.299	100.441	0.197	−0.126	0.097	−0.318	0.066
The importance of new application installations							
Equal variances assumed	−0.297	238	0.767	−0.029	0.099	−0.224	0.165
Equal variances not assumed	−0.294	155.847	0.770	−0.029	0.100	−0.227	0.168
The importance of Operational system							
Equal variances assumed	−1.510	238	0.132	−0.141	0.093	−0.325	0.043
Equal variances not assumed	−1.503	159.076	0.135	−0.141	0.094	−0.327	0.044
The importance of eye (face) recognition function							
Equal variances assumed	−4.830	238	***0.000***	−0.544	0.113	−0.766	−0.322
Equal variances not assumed	−4.321	121.344	***0.000***	−0.544	0.126	−0.794	−0.295
The importance of Fingerprint recognition function							
Equal variances assumed	−0.119	238	0.906	−0.015	0.130	−0.271	0.240
Equal variances not assumed	−0.121	170.397	0.904	−0.015	0.127	−0.266	0.235
The importance of Water resistance							
Equal variances assumed	3.036	238	***0.003***	0.310	0.102	0.109	0.512
Equal variances not assumed	3.408	216.744	***0.001***	0.310	0.091	0.131	0.490
The importance of design							
Equal variances assumed	−3.357	238	***0.001***	−0.234	0.070	−0.371	−0.097
Equal variances not assumed	−3.410	168.204	***0.001***	−0.234	0.069	−0.370	−0.099

Source: Authors' calculations. Note: Significant results marked with italic and bold

communication and information exchange, understanding how users with different educational backgrounds value these features could offer insights into consumer behavior and technology adoption. We specifically aim to discern if there are discernible differences between bachelor's and master's degree holders in their choice of smartphones based on a range of features. This research question seeks to explore whether differences in education level impact the prioritization of smartphone features, addressing the question:

Research Question 2. Are there any education-related differences (bachelor's vs. master's degree) in smartphone choices based on various features?

The study aimed to explore the impact of educational level—bachelor versus master degree—on preferences for various smartphone features, using independent sample t-tests to compare the mean importance ratings between the two groups. The significant differences were noted in preferences for SIM card slots, with master's degree holders placing greater importance on this feature compared to bachelor's degree holders ($t(277) = 2.506$, $P = 0.013$). Additionally, the importance of the eye (face) recognition function showed a trend toward significance, indicating a slightly higher preference among master's degree holders ($t(277) = 1.895$, $P = 0.059$). These findings suggest that individuals with a higher educational level may prioritize advanced connectivity and security features more than those with a bachelor degree. Overall, while most smartphone features are equally valued across educational groups, certain functionalities that provide enhanced connectivity and technology are more highly valued by those with more advanced degrees.

6. DISCUSSION

6.1. Discussion of Results regarding Influence of Gender on Smartphone Choice (Research Question 1)

The findings of this study reveal notable gender differences in smartphone feature preferences, with males and females prioritizing distinct aspects of devices. For instance, males demonstrated a preference for technical functionalities such as water resistance, while females placed greater emphasis on design and aesthetic appeal. Statistical analysis confirmed these trends, with significant gender differences observed for features like eye (face) recognition and water resistance. These insights align with research conducted in Hungary, which highlighted how gender modulates the balance between utilitarian and hedonic motivations for smartphone use (Jamalova and Constantinovits, 2021). Furthermore, cultural and socioeconomic factors played a

Table 5: Independent sample T-test (education differences)

Variables – T test	t-test for equality of means						
	t	Df	Sig. (2-tailed)	Mean difference	Standard error difference	95% confidence interval of the difference	
						Lower	Upper
The importance of Phone size							
Equal variances assumed	0.589	277	0.557	0.058	0.099	−0.137	0.254
Equal variances not assumed	0.557	194.962	0.578	0.058	0.105	−0.148	0.265
The importance of sim card slots							
Equal variances assumed	2.506	277	***0.013***	0.301	0.120	0.064	0.537
Equal variances not assumed	2.582	271.673	***0.010***	0.301	0.116	0.071	0.530
The importance of Camera quality							
Equal variances assumed	−0.576	277	0.565	−0.037	0.064	−0.164	0.090
Equal variances not assumed	−0.563	228.040	0.574	−0.037	0.066	−0.167	0.093
The importance of Battery life							
Equal variances assumed	−1.159	277	0.247	−0.078	0.068	−0.211	0.055
Equal variances not assumed	−1.134	229.203	0.258	−0.078	0.069	−0.214	0.058
The importance of new application installations							
Equal variances assumed	0.554	277	0.580	0.048	0.087	−0.124	0.221
Equal variances not assumed	0.566	267.363	0.572	0.048	0.086	−0.120	0.217
The importance of Operational system							
Equal variances assumed	0.502	277	0.616	0.041	0.082	−0.121	0.203
Equal variances not assumed	0.513	266.169	0.609	0.041	0.081	−0.117	0.200
The importance of eye (face) recognition function							
Equal variances assumed	1.895	277	***0.059***	0.224	0.118	−0.009	0.456
Equal variances not assumed	1.974	275.615	***0.049***	0.224	0.113	0.001	0.447
The importance of Fingerprint recognition function							
Equal variances assumed	0.294	277	0.769	0.036	0.121	−0.203	0.274
Equal variances not assumed	0.296	257.195	0.767	0.036	0.120	−0.201	0.272
The importance of Water resistance							
Equal variances assumed	1.494	277	0.136	0.155	0.104	−0.049	0.360
Equal variances not assumed	1.520	263.866	0.130	0.155	0.102	−0.046	0.356
The importance of design							
Equal variances assumed	−1.296	277	0.196	−0.094	0.073	−0.237	0.049
Equal variances not assumed	−1.298	251.327	0.196	−0.094	0.072	−0.237	0.049

Source: Authors' calculations. Note: Significant results marked with italic and bold

critical role in shaping preferences. Research in Iraq shows that male users emphasize technical advantages while females value cultural compatibility and symbolic uses, highlighting how culture intersects with gender to shape preferences (Ameen and Willis, 2018). These findings suggest that cultural context amplifies gender-specific trends in technology adoption. Additionally, males' preferences for technical features align with studies showing their higher sensitivity to brand attachment and technological innovation when making purchase decisions, whereas females prioritize perceived utility and ease of use (Hew et al., 2017; Zeeshan, 2013).

The interplay between technical features and aesthetic appeal underscores the nuanced nature of smartphone preferences. While both genders appreciated technological aspects such as operational systems and application capabilities, males prioritized utility-driven features, whereas females leaned toward aesthetic dimensions. Studies in Azerbaijan further supported these results, emphasizing the importance of practical elements like battery life and multi-SIM support among younger users (Jamalova, 2021). A broader lens shows that male users tend to favor status-enhancing features and tools for broader social networking, while females use smartphones for maintaining close personal relationships (Liu and Guo, 2017; Park and Lee, 2014) These preferences are also shaped by broader socioeconomic dynamics, where income levels and affordability significantly influence technology adoption, particularly in developing countries (Jamalova and Constantinovits, 2019). Gender and age further mediate these patterns, with younger users showing a consistent preference for multi-functional devices across demographics (Glasscock and Wogalter, 2006).

6.2. Discussion of Results regarding Influence of Educational Attainment on Smartphone Choice (Research Question 2)

The t-tests demonstrate that bachelor's and master's degree holders do not significantly differ in preferences for core features like camera quality, battery life, and design. However, statistically significant differences were observed for features such as sim card slots and face/eye recognition, suggesting that higher education levels may drive preferences for functionalities with specific technical or practical advantages (Jamalova and Constantinovits, 2019).

Further research supports these findings, highlighting subtle variations in preferences across educational levels. For instance, a study on Nigerian university students revealed that while brand preferences between undergraduate and postgraduate students

showed no significant differences, factors such as brand attachment, perceived usefulness, and aesthetic appeal emerged as universally influential in shaping smartphone choices across all education levels (Adekunle and Ejechi, 2018). Additionally, undergraduate students in Saudi Arabia exhibited higher smartphone usage and addiction levels compared to their postgraduate counterparts, emphasizing the role of educational stage in shaping engagement and dependency (Aljomaa et al., 2016). In another study, higher-level students displayed a stronger preference for advanced productivity and communication features in educational contexts, highlighting how academic needs influence smartphone utility (Feng et al., 2015). These results underscore that while baseline preferences for essential smartphone features may remain consistent across educational levels, specific functionalities and usage patterns diverge, reflecting the broader impacts of academic requirements, socio-cultural expectations, and resource availability.

7. CONCLUSION

This study set out to explore the factors influencing smartphone choices among Azerbaijani consumers, with a particular focus on demographic characteristics. The findings confirm that demographic variables significantly shape consumer preferences and decisions in the smartphone market:

- Gender differences were prominent, with males prioritizing technical functionalities such as water resistance and SIM card slots, while females showed a higher preference for design and aesthetic features. This aligns with the broader literature on technology adoption, which often cites gender as a significant factor in the choice and use of technological products.
- Educational attainment also played a crucial role, influencing the importance placed on advanced features such as face recognition technologies. Higher education levels were associated with a greater appreciation for sophisticated functionalities, which may reflect a broader understanding and need for advanced technological tools.

These findings underscore the complexity of the smartphone market in Azerbaijan, where demographic factors to define consumer behavior. For marketers, understanding these dynamics is crucial for tailoring strategies that resonate with specific consumer segments. For policymakers, recognizing these preferences can help in formulating digital inclusion policies that accommodate diverse needs and preferences across different demographic groups.

This study contributes to the existing body of knowledge by delineating clear patterns of smartphone preferences in Azerbaijan and emphasizes the need for targeted approaches in both marketing and policy-making to cater to the diverse needs of smartphone users. Future research should continue to explore these relationships, perhaps by incorporating additional demographic variables or extending the study to other regions to compare how cultural differences may further influence smartphone preferences. Additionally, longitudinal studies could provide insights into how these preferences evolve with technological advancements and changing consumer landscapes.

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