THE EFFECTS OF DEMOGRAPHIC SHIFTS ON CONSUMER BEHAVIOR

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ABSTRACT
Positive trends in the widespread adoption of mobile commerce are the focus of this research. The research used factor analysis and multiple regression analysis to look at the connections based on data acquired through survey questionnaire from mobile phone users in South India. Positive adoption rates of mobile shopping were found across all age groups, educational levels, and economic brackets, with the exception of gender. Women also tended to embrace mobile commerce at a faster pace than men. This research adds to what is known about how a person's demographics affect their behavior and outlook when it comes to mobile buying, which is useful information for companies that offer mobile services. The marketing function's focus on providing excellent service to clients and consumers has not changed much as we go into the 21st century. The marketing function is being influenced by changes in consumer behavior brought about by demographic shifts and the advent of assisting technologies in production, distribution, and personal use.
KEYWORDSconsumers' buying behavior, demographic, market Technology

INTRODUCTION
All industrialized nations are predicted to see a demographic shift toward older populations as a consequence of the brief high birth rates that led in the baby boom and dropping mortality rates that boosted both the likelihood of surviving to age 6.5 and life expectancy at age 65. As the baby boom generation reaches and passes the age of 65, the proportion of the United States' population that is 65 or older is predicted to rise. The proportion of the population aged 85 and over is predicted to double by 2020 and climb by 275 percent by 2040, while the growth in the oldest-old population is likely to be substantially bigger. Because the old behave economically in a completely different way from the young, these demographic shifts may have far-reaching consequences for the economy. The most noticeable change is in labor force participation, which decreases as the population ages. This results in decreased production per person in the economy (everything else being equal). In general, people in their retirement years spend their savings rather than putting them away. The result is a decreasing savings rate as the population ages. The elderly have a distinct consumption pattern, with increased use of medical services and less of private transportation. If these items are bought in a competitive market, then the economy will have to adjust to a new consumption pattern.

Changes in population may have far-reaching effects on the nature of existing market relationships, as well as the size and expansion of existing markets, by opening up whole new markets and sales possibilities. Due to the delayed nature of demographically conditioned market shifts, it is crucial for businesses to begin investigating the wants and requirements of the senior population right now. In light of this demographic shift, businesses must reevaluate not just their product and service offerings but also their internal development processes and most importantly their customer communication strategies. This is the only way for businesses to start taking advantage of the huge potential of this rapidly expanding industry. The current and projected demographic changes in Germany will be examined in further detail below. There are 12 possible permutations and 3 model-based computations included. We chose this version because it represents the floor of what might be considered "average" population growth, assuming that fertility and life expectancy continue their recent patterns

LITERATURE REVIEW
Abou Jeb et.al (2021) Over the last several years, the retail industry has expanded at a breakneck pace. More and more time and money are being spent by retailers on creating a unified omnichannel experience. Because of these innovations, patron behavior shifted drastically. This most recent turn of events was brought about by the sudden worldwide spread of the Covid-19 epidemic. Consumers are increasingly turning to the internet for their shopping and information requirements. As a result of Covid-19, new patterns of consumer behavior have begun to develop. The purpose of this research is

both exploratory and constructive. Its focus is on learning more about the impact of Covid-19's shift in consumer purchasing habits on the retail industry. The purpose of the research is to find and pilot novel behavioral patterns that might affect Swedish millennials' choice of where to shop for clothing and accessories. This paper used an abductive methodology. The goals of this exploratory study were attained via the use of a combination of qualitative and quantitative approaches. There were two stages of data collecting in this study, using a sequential exploratory approach. The empirical data was gathered via four focus group meetings with a total of twenty interviewees, as well as ninety-four pertinent replies from an online survey. Two major discoveries have been uncovered through this investigation, and it has also helped to offer a conceptual model. One useful finding from this research is that there is a substantial shift in consumer preference toward internet shopping. (2) Customers' spending habits are changing because of new patterns of behavior associated with Covid19. Three, a suggested conceptual model that considers how customers' preferences for shopping for clothing both online and in-store.

Iman Hassani et.al (2018) The purpose of this study is to investigate the connection between various demographic variables and ethical purchasing decisions. The correlation between age, gender, and environmentally or socially aware actions has been studied. Most of these studies provide us a moment in time look at a certain subset of the population. But this research attempts to measure the impact of demographics not just in one place and time but in many. Actual consumer behavior and the identification of consumer intents and requirements highlight the significance of this issue. Over 76,000 survey answers from 18 nations were evaluated using the Globe Scan Radar database. The study was conducted between 2007 and 2013. The question of whether or not to penalize or reward a firm based on its perceived degree of social responsibility was posed to respondents in each year and nation. This study primarily used Chi-square tests to examine whether or not there is a correlation between respondents' demographic characteristics and whether or not they actively punish or reward a company based on social responsibility. There was found to be a correlation between the demographic parameters tested and consumer inclination, albeit only the country variable exhibited a significant correlation with the outcome.

Dr. Kunal Gaurav et.al (2017) Understanding customer behavior has become a difficult challenge for marketers in today's highly competitive marketing environment. As the customer increasingly takes on several roles, including those of user, buyer, and payer, their actions are being included into marketing strategies at every stage. Consumers' actions are responsive to shifting environmental conditions. In this cutthroat market, the manufacturer who has their finger on the customer pulse will come out on top. Consumer behavior is influenced by a wide range of demographic characteristics, including age, gender, education level, employment, marital status, and socioeconomic position. The purpose of this article is to examine the correlation between 'Monthly Expenditure on Electronic Gadgets' and a number of socioeconomic factors such gender, income, education level, and profession.

Deepa Bakshi et.al (2016) As an emerging idea in E-Commerce, online purchasing and shopping is certain to become the norm in the Indian market in the near future. The vast majority of companies now have active websites through which they advertise and sell a wide variety of goods and services. As a result, the growth of the Indian internet market has been phenomenal in recent years. While India has a sizable consumer base, its market is underdeveloped compared to the rest of the world. The proposal to investigate the online shopping sector in India has been advanced in light of the industry's projected growth. This study includes qualitative and quantitative research for the Indian internet industry, examining the influence and significance of consumers' demographic aspects while purchasing online. We are thinking about things like how happy people are with the online shopping market as a whole, how often they shop there, how many different goods they purchase, and how much money they spend overall. The research relies on data acquired from a sample of 125 people in Bhopal City through questionnaires. This study's findings on the demographic influences on India's online purchasing sector include respondents' married status, age, family size, gender, and household income. Researchers may choose to expand upon the findings and analysis presented here in order to further similar work in the future.

Jong-Won Yoon et.al (2014) There will be a major shift in the size and age distribution of the population as a result of continuous demographic shifts, which will have far-reaching consequences

for economies throughout the world. Demographic shifts are sometimes overlooked in discussions and arguments over broad macroeconomic policies, despite the fact that they might have far-reaching effects. From an empirical stance, this article shows how demographic factors change over time and evaluates how they affect macroeconomic variables including GDP growth, inflation, savings and investment, and budget balances. We address the consequences for monetary policy and other macroeconomic strategies based on empirical data, especially those related to inflation. We also stress the need of taking population dynamics into account alongside macroeconomic considerations when making policy choices.

Facilitating Technologies and Consumer Behavior

New manufacturing, distribution, and end-user technologies will help support the shift in consumer behavior that is being driven by shifting demographics. Consumers' daily routines have been and will be profoundly altered by the speed with which technology is advancing. The speed with which new technologies are altering marketing strategies and consumer habits is unprecedented. Because of the effects of technology on manufacturing, retailing, and consumer electronics, incumbents are especially at risk.

The Impact on Consumer Behavior

The shifting habits of consumers and business owners have been emphasized so far. As individuals begin to alter the ways in which they work, interact, and relax, they will look for businesses that will accommodate their new habits. Customers who expect to be able to contact friends, family, and coworkers at any time through technological means will look for sellers who are flexible in their approach to doing business. Customers want brands to provide their needs for news, entertainment, and information in real time. They will look for ways to purchase products and services that take less time and effort as technology advances.

In the not-too-distant future, customers will be more pickier, more time- and knowledge-conscious, and more discerning than they are now. Changes in consumer behavior will be hastened by the advent of a ubiquitous broadband digital communications network and high-definition display terminals. In the future, marketers will be able to "mass customize" their messages via targeted, interactive digital media that also welcomes public involvement. The way we shop will evolve as well. Various on-demands, independent purchasing services will be readily available to consumers. Buyers will be far more proactive in their pursuit of even marketer-provided information thanks to the rise of interactive advertising.

Power Shift From Marketers to Consumers

Smart consumers will have more influence as a result of rising levels of competition and improved access to information resources. Since "buyers" may come to be seen as "marketers" and "sellers" as "prospects" in the business world, this may be the case. Some customers will become more than just "targets" of marketing campaigns; they will actively shape them via their sophistication and high expectations. Content-rich information and tangible product advancements are what consumers will be looking for in the future. Managers of customer relationships will have a new, clear mandate to find and keep lucrative clients.

METHODS

    1. **Survey and Sample Characteristics**

In order to obtain data on people's attitudes on ICT use and mobile commerce, a questionnaire was designed. Members of an online panel were polled using a web-based

Table 1 Characteristic of Samples

Sample characteristics		N	%
Sex	Male	314	63
	Female	186	37
Age	Below 19 years old	20	4
	20-29	129	26
	30-39	181	36
	40-49	113	23
	Above 50 years old	57	11
Education	Secondary (high school)	141	28
	Junior college	80	16
	University	249	50
	Graduate	30	6
Monthly income	Less than USD1000	75	15
	USD1001-2000	144	29
	USD2001-3000	133	27
	USD3001-4000	67	13
	USD4001-5000	53	11
	More than USD5001	28	6

questionnaire administered in India between October and December of 2008. Five hundred and eighty-four customers have answered, and we may utilize their input. Roughly half of these respondents (56%) have some kind of post-secondary education. A look at Table 1 reveals that the average monthly salary of these respondents was $2100 USD, putting it just over the 2008 median of $1900 USD reported by Indian workers.

RESULT

Measurement Scales and Factor Analysis

There were a total of seventeen measures created by the authors to gauge how people's perceptions of mobile commerce's ICT use varied. Each of these questions included a seven-point Likert scale with responses ranging from "strongly disagree=1" to "strongly agree=7." We utilized a single question, "intent to adopt mobile commerce," with a seven-point scale from "least likely=1" to "most likely=7" to gauge the variable of mobile commerce adoption. To uncover the structural components of the ICT user profile, we used factor analysis using a varimax rotation approach. Then, the extracted constructions' internal consistency was evaluated using a reliability test. ICT use image exploratory factor analysis with an eigenvalue cut-off of one revealed two variables. Together, the two components' sums of squared loadings account for 61.348% of the total variance in the data. The two sides of the picture of how people use information and communication technologies are called "hedonistic" and "utilitarian."

Two metrics were employed to examine the viability of factor analysis. Overall, the sampling adequacy (MSA) as measured by Kaiser-Meyer-Olkin (KMO) was 0.940, which is within the margin of error. Bartlett's test of sphericity also revealed a statistically significant correlation between the variables, with a value of 5614.389 (df = 136) and a p-value of 0.000. The dependability of the scale was further improved by looking at item-to-total correlation. The final factor size was 12, with 6 items representing the hedonistic factor (= 0.903) and 6 items representing the utilitarian component (= 0.866) (Table 2).

Table 2 Results of Factor Analysis and Reliability Test for ICT Usage

Items	Factor loadings	Eigenvalue	Extracted variance	Factor name	Corrected item-total correlation	α
				Hedonistic usage		
Upper class	0.846	5.575	32.789%		0.765	0.903
Wealthy/rich	0.843				0.775	
Success	0.796				0.778	
Charming	0.718				0.695	
Competence	0.701				0.693	
Important/valued	0.665				0.703	
				Utilitarian usage		
Honest	0.773	4.855	28.559%		0.628	0.866
Cheerful	0.767				0.782	
Happy	0.726				0.759	
Reliable	0.705				0.633	
Beneficial	0.695				0.579	
Imaginative	0.641				0.592	
Total variance			61.348%			

Multiple Regression Analysis with Demographic Variables

The strength of the relationship between numerous independent factors and a dependent variable was analyzed using multiple regression analysis, a statistical approach used in this research to quantify association. We were able to utilize it to separate the factors into those we could control and those we couldn't. Perceived ICT use image, gender, age, education, and income level were included as independent variables since they were generated from the aforementioned research study.

When working with a set of quantitative variables, regression analysis is the method of choice. Data that is not a metric (e.g., gender, level of education) has been converted into either ordinal or nominal data using dummy-coding so that it may be used in regression analysis. The data's normality on the distribution's shape, linearity, outliers, and multi-collinearity were also analyzed, along with feasible treatments to fix breaches of these model assumptions.

The following tests were applied to the model to assess its statistical validity. The number of independent variables and the size of the sample are both included into the modified R square. The standard errors of the regression coefficients were used to test the statistical significance of the model's anticipated regression coefficients. Computed partial t-values were used to assess the significance of the independent variables in the regression model. Once the regression model was found, we checked to make sure it was representative of the whole population. For the purpose of validation, we resampled the original data set to get a new set of 218 samples.

Table 3 Outputs of Regression Analysis by OLS Estimation

	Test sample N = 489			Validation sample N = 218		
	Regression coefficients (S.E.)		t-value	Regression coefficients (S.E.)		t-value
(Constant)	5.162	(0.272)		5.197	(0.417)	
H1: Hedonistic usage	0.456	(0.065)	6.998***	0.486	(0.103)	4.727***
H2: Utilitarian usage	0.428	(0.066)	6.519***	0.453	(0.099)	4.582***
H3: Gender of a user	-0.305	(0.136)	-2.242**	-0.341	(0.208)	-1.636
H4: Age of a user	0.006	(0.006)	0.964	0.006	(0.009)	0.688
H5: Education of a user	0.031	(0.076)	0.415	0.123	(0.117)	1.046
H6: Income level of a user	-0.091	(0.058)	-1.572	-0.173	(0.089)	-1.946

The first null hypothesis, "There is no relationship between hedonistic usage and mobile commerce adoption," and the second null hypothesis, "There is no relationship between utilitarian usage and mobile commerce adoption," were investigated experimentally. According to the data shown in Table 3, Both the regression coefficient between hedonic use and mobile commerce adoption and the regression coefficient between utilitarian use and mobile commerce adoption are statistically significant at the 0.05 level. This finding hints to a robust connection between consumers' preconceived notions of how they use ICT and their actual adoption of mobile commerce.

Users' demographic variables (gender, age, education, and income) were experimentally studied to see whether they were associated with the uptake of mobile commerce. The data demonstrate that 1) at the 0.05 level of significance, there is a positive relationship between users' gender and the prevalence of mobile commerce. To put it another way, there is little to no correlation between demographic criteria like age, education, and income and people's propensity to utilize mobile commerce. However, there is still a significant gender gap in the use of mobile commerce.

CONCLUSION

It's possible that the small sample size is to blame for finding no significant demographic differences. Users of the Internet and Indian e-commerce platforms were recruited for this research. They probably had some background in information and communication technologies and had shopped online before. This is especially true given that they were picked from surveys taken by internet users. It's possible that participants' shared internet experiences before the research accounted for the observed demographic convergence. As a result, there is a chance that the sample does not accurately represent the whole. This might potentially restrict the study's applicability in the wider world. Information on population shifts and technology that improve production, distribution, and individual consumption were provided in the report. We finish by reiterating the point that 21st-century market and customer habits will significantly alter marketing's role.

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