

CONSUMER'S DEMOGRAPHICS AND COUPON PREFERENCE

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ABSTRACT

This study attempted to investigate whether customer's selection between mobile and paper coupons differs because of their difference in demographic profile. It also examined customer's coupons preferences out of different types of retail outlets. The data (n=1046) analysis of this study was done through standard linear regression. This study reveals that customer's coupon usage intention between mobile and paper coupons differ because of their difference in gender, age, income, and ethnicity, but not because of their level of education. Additionally, customer's product outlet selection for coupon usage differs because of their age, income, education, race, and ethnicity, but not because of their gender. The findings of this research will help managers identify the right coupon for the right customer. This study adds valuable knowledge to existing coupon literature by examining customer's perceptions of couponing in the light of differences in their demographic profiles.

Keywords: *Mobile coupon, paper coupon, age, gender, race, ethnicity, education, product outlets*

INTRODUCTION

Coupons are promotional codes or physical vouchers that allow customers to purchase a product at a reduced price. Marketers have been using this promotional tool to attract new customers, boost sales, and reward loyal customers. Couponing can have both positive and negative impacts on business, depending on how it is implemented. Some of the positive impacts of couponing include increased sales, customer loyalty, promoting new products, and clearing inventory, while some negative impacts include reducing profit margins, devaluing products and attracting deal-seekers. Thus, coupon implementation strategy may have some significant impact on company's profitability. The use of coupons has become increasingly popular among customers. Over two-thirds of all online shoppers find coupons important when shopping for groceries, (Valassis, 2022) and 97 percent of consumers search for deals when they shop, and 92 percent are always searching for deals (PRnewswire, 2022). Another research also confirms that 92 percent of shoppers searched for coupons or offers before buying online (Coupon Follow, 2022). Coupon statistics show that over two-thirds of all online shoppers find coupons important when shopping for groceries (Valassis, 2022) and 67 percent of consumers made an unplanned purchase solely because of a coupon or discount (Lake, 2023). Coupons have been issued by marketers through two channels: paper and mobile. Paper coupons were used for many decades before mobile technology was developed. Research shows that there is a substantial demand for

paper coupons. Recent research shows that 93 percent of consumers use paper coupons (Lake, 2023). In 2022, paper coupons accounted for 88 percent of all coupons distributed in the U.S (Inmar, 2022).

The advancement of mobile technology offered marketers a new opportunity to expand their promotional campaigns through mobile coupons. Mobile coupons offer some unique advantages over paper coupons including personalization, real-time tracking, eco-friendliness, cost-effectiveness, accurate target marketing, flexibility in modifications, and high engagement. With the increasing use of mobile devices, businesses that adopt this new marketing strategy are likely to enjoy increased customer engagement, customer loyalty and revenue. As a result, mobile coupon usage is increasing with a projected 145.3 million mobile users in the U.S. by 2022 (eMarketer) because research discloses that investing in mobile coupons earns businesses higher returns (Invesp, 2022). Recent research by Invesp (2022) revealed that the number of US companies that use mobile coupons is continually increasing, while over half of the consumers find coupons useful for building brand loyalty and awareness. It is estimated that the global mobile coupons industry will grow at more than 56 percent by 2025 (Orian Research, 2022). Digital coupon market worth over \$4.67 billion in 2020 and it is expected to surpass \$29.7 billion by 2031 (Meetanshi, 2023).

Treating the paper and mobile coupons equally and issuing both types of coupons to the same customers indiscriminately may not be effective because of customer's different needs and priorities. Due to the challenges and opportunities associated with each type of coupon, marketing communication strategy should be significantly different between paper and mobile coupons. Thus, companies cannot treat these two types of coupons the same way. A "one-size-fits-all" strategy may not work for both types of coupons. Marketers need to develop different strategies and tailor their strategies based on customer's need, expectation, and preferences, which is significantly dependent on their demographics. Thus, this study attempted to develop an improved understanding of customers' expectations and preferences about coupon usage based on their demographic attributes. Previous research revealed that coupon usage tends to vary by consumer's demographics. For example, Valassis (2022) revealed that millennials are more likely to use mobile coupons, while baby boomers are more likely to use paper coupons. This study only covered the age-based demand of coupons. In a gender-based coupon study, Harmon and Hill (2003) found that men use more online coupons than their women counterpart. These two coupon studies covered only two dimensions (age and gender) of demographic factors. Unfortunately, no single study has covered all the important demographic factors in coupon type selection. Despite the high usage of coupons and differences in the customer demand between the two types of coupons, no research has been undertaken to investigate the role of all demographic factors in coupon type selection. To fill up this research gap, this study attempts to identify the appropriate coupon type for the suitable customer segment constructed on their demographic makeups, including age, gender, income, education, and ethnicity. The purpose of this study is to investigate whether customer's selection between mobile and paper coupons differs because of their difference in gender, age, income, education, and ethnicity. It also examined customer's coupons preferences out of different types of retail outlets. This study aims to answer the following research question:

Does consumer's usage intention between mobile and paper coupons differ because of differences in their demographics?

LITERATURE REVIEW

Previous academic research on couponing has mainly focused on factors that influence the redemption of coupons. Among those few comparative studies between paper and mobile coupons, Danaher et al (2015) examined the determinants of customer's coupon redemption intentions between paper and mobile coupons where they found that the location and time of delivery of the mobile coupon has significant influence in the redemption of the mobile coupons and the expiry length plays significant role in redemption intention because redemption time of mobile (vs. paper) coupon is much shorter. In a study on consumers' perceptions of service coupon delivery between paper and online coupons, Ladik and Riggle (2013) found that consumer's economic benefits, enjoyment, and time costs vary significantly depending on their ways (online vs. direct mail) of accessing service coupons. Barat and Ye (2012) conducted a meta-analysis on the effects of paper vs. online coupons on consumer purchase behavior where they found the effects of attitude towards coupon and knowledge about coupon on the coupon usage and relationship between coupon perception and coupon usage behavior. In another study on paper and online coupons, Lu and Moorthy (2007) revealed that consumers perception between coupons and rebates is dependent of the uncertainty in redemption cost. To investigate the difference in consumer's reaction to information between print and online coupons, Suri et al. (2004) revealed that consumer's likelihood of processing information in a print vs. online coupon depends on their motivation levels where high motivated consumers process a print coupon's information more than online coupon, while low motivated consumers process online coupon's information more than print coupon. Kondo et al. (2007) also investigated the impact of direct mail (vs. mobile) coupon on customer's coupon usage during store visit where they found that a paper coupon sent on a post card positively affected the probability of customers' store visit, while a mobile coupon did not.

A very few studies investigated the socio-demographic, socio-economic, and psychographic factors. A relatively small number of studies examined demographic factors including age, gender, income and education. Banerjee et al (2011) examined the difference in gender regarding the impact of mobile coupon's design attributes and ad types. They found that men remember description appeals more than women, while women remember factual appeals more than men. Hill and Harmon (2009) explored the differences in coupon usage and perception towards coupon between male and female. Hill and Langley (2007) investigated the gender and ethnicity differences in responsiveness to coupons among college students. In this study, they discovered that coupon-related behaviors of Generation Y are more age dependent than gender or ethnicity based. In another gender-based study, Harmon and Hill (2003) found that women use fewer coupons than men. In an ethnic study, Green (1996) examined the relationship between consumer's race and motivation of coupons usage. This study discovered that motivation of the coupon usage significantly differs between Anglo-American and African American consumers. In another gender role study, Hill and Harmon (2007) examined the

influence of male gender role beliefs on coupon use and bargain hunting and found a strong relationship between a man's experience as the primary shopper and his belief that a variety of customer behaviors are gender neutral. Muk (2011) undertaken a cross-national study among young American, Korean, and Taiwanese customers and found a significant differences in their perceived economic value of coupon, perceived control and brand value that influence on their mobile usage intention. Appendix A summarizes some recent important coupon articles.

Current study differs from the previous studies in two key aspects. First, although previous studies analyzed the impact of individual characteristics of paper and mobile coupons on consumers' redemption intentions in various domains and functional areas, they have not compared these two types of coupons (paper vs. mobile) in the light of various demographic variables. Second, the few studies that examined the demographic factors only focused on only one or two demographic factors. None of those studies examined all the five demographic factors comprehensively in a single study.

HYPOTHESIS DEVELOPMENT

Gender

The impact of consumer's gender on their consumption behavior has been studied for many years and researchers have found difference in their product consumption and selection because of their differences in gender (Alshari & Lokhande, 2022; Wang, Wong, & Narayanan, 2020; Dastidar, 2016; Banerjee et al., 2011; Hill & Harmon, 2007). Previous studies have confirmed that consumer's coupon consumption is significantly influenced by their gender differences (Dastidar, 2016; Banerjee et al., 2011; Hill & Harmon, 2007; Kwon & Kwon, 2007; Harmon & Hill, 2003). For example, Banerjee et al. (2011) found that consumers differ based on gender in gender with regard to the impact of mobile coupon's design attributes, where men remember description appeals more than women and women remember factual appeals more than men. Hill and Langley (2007) also discovered the differences in responsiveness to coupons among college students based on their gender. In another gender-based study, Harmon and Hill (2003) found that men use more online coupons compared to their women counterpart. They also found that 61 percent of the women usually used coupons when paying for food delivery services, while only 46 percent of men used coupon for the same services. With that spirit, this study proposes the following hypotheses:

H_{1a}: Consumer's usage intention between mobile and paper coupons differs because of difference in their gender.

H_{1b}: Consumer's product outlet selection for coupon usage differs because of difference in their gender.

Age

People's priority between mobile and paper coupons may differ depending on their perceptions about coupons, which could be related to the age group they belong to. Researchers differ in dividing the American population into number of groups based on age. The determining

age of each group of this study has been adopted from the proposed year range by the Pew Research Center (2019), which is one of the leading research organizations in the USA. According to the Pew Research Center (2019), American population has been divided into five age groups, namely silent Generation (born between 1928 &1945), Baby Boomer (born between 1946 &1964), Generation X (born between 1965 &1980), Generation Y/Millennials (born between 1981 &1996), and Generation Z (born between 1997 & 2012). Previous studies found that age plays a significant role in acceptance of coupons and promotions (Dastidar, 2016; Kwon & Kwon, 2007). Harmon and Hill (2003) revealed that younger men were more likely to use coupons than older men. Thus, this study proposes the following hypotheses regarding age:

H_{2a}: Consumer's usage intention between mobile and paper coupons differs because of difference in their age.

H_{2b}: Consumer's product outlet selection for coupon usage differs because of difference in their age.

Income

Coupon is one of the ways of saving money in product purchase, hence it is possible to have a relationship between consumer's income and coupon consumption. Prior research studies have also found significant relationships between consumer's income and coupon consumption (Hill & Harmon, 2007; Harmon & Hill, 2003). Many theories and methods exist to divide consumers based on their income. According to the United States Census Bureau (2021), the median household income in the United States is 67,521 dollars in 2020. Considering that 67,521 dollars as the median household income, this study divided the participants into three categories based on their annual household income: (1) people who earn up to 60,000 dollars per year are in the low-income category (2) people who earn between 60,001 dollars and 80,000 dollars per year are in the middle-income category, and (3) people who earn more than 80,000 dollars per year are in the high-income category. Consumers in the low-income category may rely on coupons to stretch their household budgets and make end meet, while the middle-income category may be interested about couponing to save money on larger purchases, and the high-income category may use coupons for high-end and luxury items. Therefore, the appeal of each type of coupon to three income categories may be different. This study argues that consumer's income plays a role in their coupon usage, thus proposes the following hypotheses:

H_{3a}: Consumer's usage intention between mobile and paper coupons differs because of difference in their level of income.

H_{3b}: Consumer's product outlet selection for coupon usage differs because of difference in their level of income.

Education

Consumers' level of education impacts their couponing behavior in many ways, such as their ability to understand and navigate the couponing process and their ability to perform the

cost-benefit analysis of coupon usage. Consumers with low-level of education may not be able to perform the complex cost-benefit analysis and critically compare the available product opportunities because of the lack of necessary knowledge, while consumers with higher-level of education will be able perform those tasks easily. Previous researchers have also confirmed that consumer's level of education impacts their decision making while selecting products and services (Dastidar, 2016; Hill & Harmon, 2007; Kwon & Kwon, 2007; Harmon & Hill, 2003). For example, Harmon and Hill (2003) found a link between consumer's differences in level of education and the frequency of coupon usage. Thus, this study proposes the following hypotheses regarding education:

H_{4a}: Consumer's usage intention between mobile and paper coupons differs because of difference in their level of education.

H_{4b}: Consumer's product outlet selection for coupon usage differs because of differences in their level of education.

Race and ethnicity

According to the United States Census Bureau (2024), ethnicity and race are two different concepts, where ethnicity is dividing people into two mutually exclusive categories: Hispanic or Latino and Not Hispanic or Latino, while race is a person's self-identification with Caucasian, African American, Asian, American Indian, Alaska Native, Native Hawaiian and other Pacific Islander. The United States is ethnically diverse country where people from all major race and ethnic groups live. Every ten years, the United States Census Bureau collects data on ethnicity through self-identification, allowing every individual to choose their own race and ethnical identity. Based on the United States Census Bureau's (2023) classification, five major race and ethnic groups, including Caucasian, African American, Hispanic or Latino, Asian – American, and Native American were selected in this study. Consumer's culture, race and ethnicity are contributing factors for consumer's decision-making. Numerous research studies have shown that ethnicity and culture impact consumer's perception about coupon usage (Muk, 2011; Hill & Langley, 2007; Green, 1996). In a study on college students, Hill and Langley (2007) found that 64 percent of Caucasians use store loyalty cards while 42 percent African-Americans use that cards. In a study on ethnicity, Green (1996) revealed that consumer's coupon usage significantly differs between Anglo-American and African American consumers. In another cross-national study, Muk (2011) found that consumer's perceived economic value of coupon differs significantly among American, Korean, and Taiwanese consumers. Several coupon-related ethnic studies have confirmed that African-American consumers are less likely to use coupons than Caucasians (Green, 1996; Nieto 1995; Kashani and Quelch, 1990; Yovovich, 1981). Yovovich (1981) discovered the low coupon redemption rate among African-Americans due to a negative image of coupon users. Green (1996) found African-American women use less coupons because they are less coupon prone, less value conscious, and more time conscious. Interestingly, two separate studies by Green (1995) and Kashani and Quelch (1990) found that African-Americans view coupon use negatively, perceiving coupon usage as a sign of an

inability to pay full price. This study argues that consumer's ethnicity plays a significant role in their coupon usage, thus proposes the following hypotheses:

H_{5a}: Consumer's usage intention between mobile and paper coupons differs because of difference in their race and ethnicity.

H_{5b}: Consumer's product outlet selection for coupon usage differs because of difference in their race and ethnicity.

METHODOLOGY

Research design

This study employed a self-administered web-based online survey and a cross-sectional research approach. The survey was developed in Qualtrics and that survey link was sent to the participants. A non-probability sampling technique was utilized in this study.

Measurement

The questionnaire has only three sections. The first section includes five questions on five demographic factors. In the ethnicity question, participants were asked to select their ethnicity based on their self-selected ethnic identity. The second section has two questions, the first one is about their preference between paper and mobile coupons and the second one is about their coupon redemption intention. For the coupon redemption intention question, a five-point Likert scale (where 1 = strongly disagree and 5 = strongly agree) was used. The third section is about participant's preference of retail outlets from which they would like to receive coupons. The questionnaire identified eight different retail outlets and asked participants to select their top four preferred outlets out of the listed eight options. These outlets include grocery stores, department stores, discount stores, electronic stores, fast food restaurants, family restaurants, online stores, and service providers. A participant may select a maximum of four outlets from the list. This study will examine customer's preference in outlet selection in the light of each of those five demographic factors.

Data collection

The data collection for this study was done in two phases. The first phase of data ($n=546$) was collected from students of three universities in southern California and the second phase of the data ($n=500$) was collected through crowdsourcing via Amazon Mechanical Turk (MTurk). After rejecting surveys with missing data, outlier cases and non-engaged errors, a total of 1011 completed surveys were collected for the final data analysis. All the participants of this study are adults who live in the USA and own mobile phones, and there were no other exclusion criteria applied during data collection. Data were collected indiscriminately from different professions, age groups, genders, educational levels, income levels, and ethnic groups within the USA.

Data Analysis

In the data analysis phase, data screening, reliability and validity testing, demographic analysis, and standard linear regression analysis were performed. After completing the data collection, data were screened to identify the missing data, outlier, normality, linearity, and multicollinearity. Then the demographic analysis was performed to assess the distribution of the data based on participants' five demographic variables. In the last phase of the data analysis, the standard linear regression was performed to test the hypotheses. Participants of this study were almost equally divided between the two genders. Percent of female respondents (51%) was slightly higher than of male respondents (49%). The largest group (31%) was generation Y (Millennials), followed by generation X (29%) and generation Z (25%). The smallest group was the silent generation (3%). Low-income people made up the largest group (46%) among the three groups based on income. The smallest was the high-come people (13%). More than one-third (36%) of the participants had bachelor's degree. The second largest group had master's degree (26%), while the smaller group had doctoral degree. Caucasians (32%) formed the largest group among all ethnic groups, followed by African-Americans (26%) and Asian-Americans (23%). The smallest was the Native-American participants (3%). The demographic distribution of this study is shown in Appendix B. The main and interaction effects of the five demographic factors were measured using analysis of variance (ANOVA) in SPSS (version 21). After measuring the interactions effects, the summary of preferences of eight outlets were calculated for all five demographic factors.

RESULTS

Gender

A standard linear regression was performed to measure the main effect of coupon type on usage intention. A significant ($F = 27.24, p = .000$) regression equation was found. This signifies that people's coupon usage intention changes because of the change of coupon type between paper and mobile. Male participants have higher intention to use mobile coupons than paper coupons and this priority flips for female (Figure 1). The interaction effect of gender (Figure 2) is also significant ($F = 12.13, p = .000$), which indicates that consumer's usage intention between mobile and paper coupons differs because of difference in their gender (Table 1). Thus, hypothesis H_{1a} is accepted. In case of product outlet selection for coupon usage, no significant difference was found between male and female (Figure 3). For both male and female participants, top priorities are department stores, discount stores, grocery stores, and online stores (Table 2). Both prefer the service coupons the least. Thus, hypothesis H_{1b} is not accepted.

Table 1: Usage intention based on gender

Coupon Type	Gender	
	Male	Female
Paper	3.32	3.88
Mobile	3.82	3.51

Table 2: Outlet distribution based on gender

Outlets	Gender			
	Male		Female	
	Count	%	Count	%
Grocery stores	84	17%	91	18%
Dept. stores	92	19%	97	19%
Discount stores	74	15%	98	19%
Electronic stores	56	11%	53	10%
Fast food restaurants	52	11%	47	9%
Family restaurants	41	8%	38	7%
Online stores	81	16%	87	17%
Service providers	15	3%	5	1%
Total	495	100%	516	100%

Figure 1: Comparison based on gender

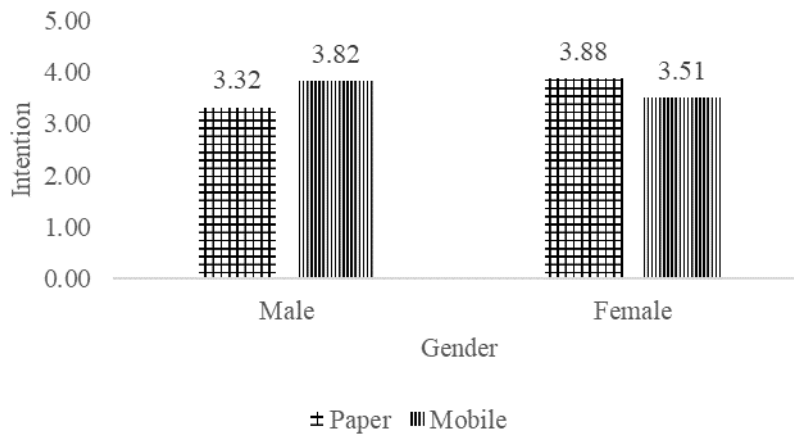


Figure 2: Interaction effect of gender

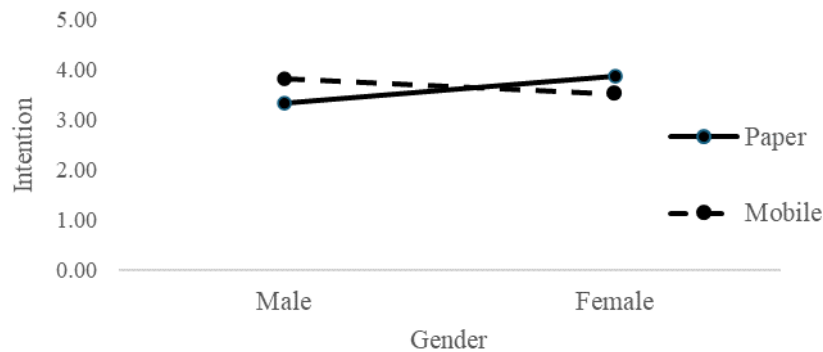


Figure 3: Outlet selection by gender



Age

There is a significant ($F = 14.25, p = .000$) difference in consumer’s usage intention between paper and mobile coupons for all five age-groups. This difference is considerably high for silent generation, baby boomer and generation Z compared to generation X and Y (Table 3). There is a notable downward trend in intention for mobile coupons and upward trend for paper coupons with the increase of people’s age (Figure 5). The interaction effect of age is significant ($F = 8.09, p = .000$), which means that consumer’s usage intention between mobile and paper coupons differs because of difference in their age (Figure 4). Thus, hypothesis H_{2a} is accepted. A significant difference was found among different age-groups for outlet selection (Table 4). Consumer’s product outlet selection in coupon usage differs because of difference in their age (Figure 6). Thus, hypothesis H_{2b} is accepted. The top three stores of the older generations are not on the priority list of the younger generations.

Table 3: Usage intention based on age

Coupon Type	Age				
	Silent	BB	X	Y	Z
Paper	3.78	3.59	3.42	3.23	1.32
Mobile	1.23	2.32	3.77	3.87	3.93

Table 4: Outlet distribution based on age

Outlets	Age									
	Silent		Boomer		Gen X		Gen Y		Gen Z	
	Count	%	Count	%	Count	%	Count	%	Count	%
Grocery stores	6	20%	27	22%	45	15%	32	10%	24	9%
Dept. stores	5	17%	18	15%	44	15%	42	13%	39	15%
Discount stores	4	13%	9	7%	39	13%	50	16%	43	17%
Electronic stores	3	10%	15	12%	53	18%	58	18%	51	20%
Fast food restaurants	1	3%	7	6%	18	6%	53	17%	24	9%
Family restaurants	7	23%	30	25%	55	19%	20	6%	15	6%
Online stores	3	10%	11	9%	35	12%	56	18%	55	22%
Service providers	1	3%	4	3%	4	1%	3	1%	2	1%
Total	30	100%	121	100%	293	100%	314	100%	253	100%

Figure 4: Comparison based on age

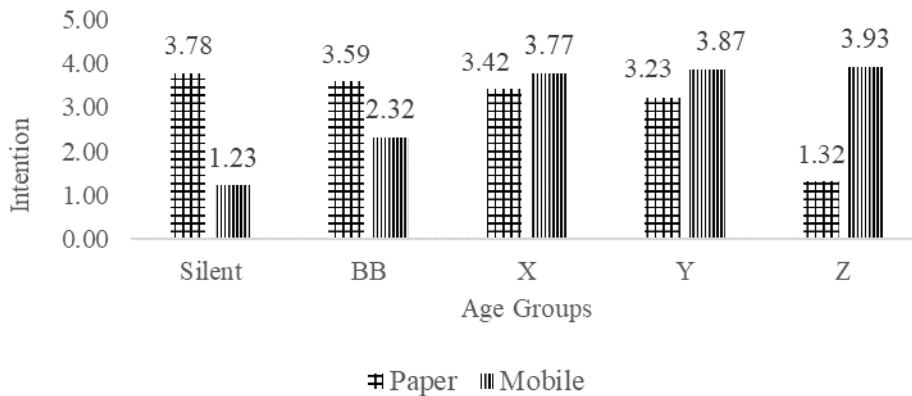


Figure 5: Interaction effect of age

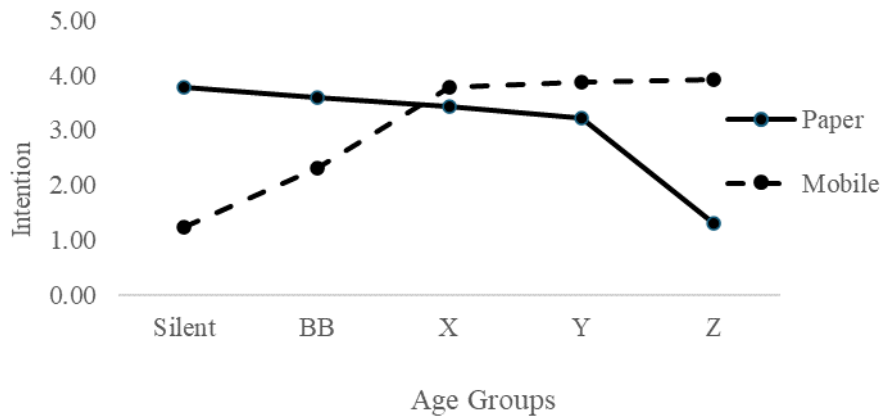
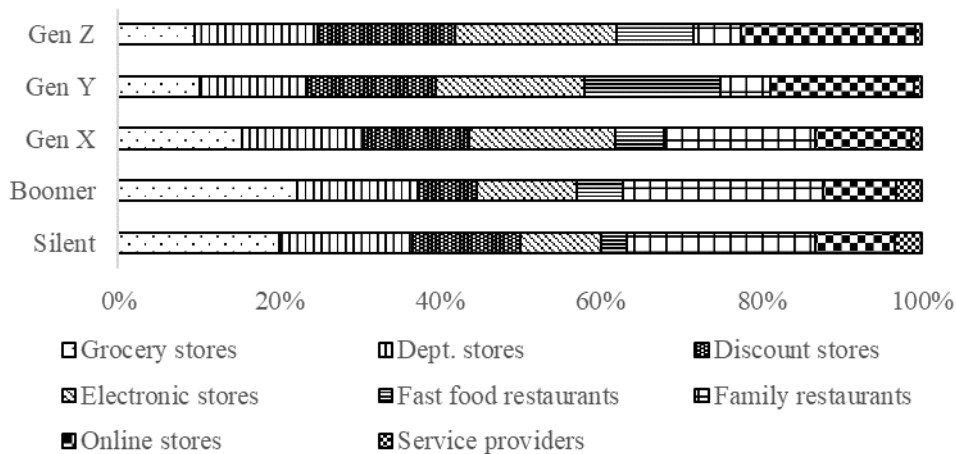


Figure 6: Outlet selection by age



Income

The difference between consumer’s usage intention of paper and mobile coupons among the three income groups is significant ($F = 13.52, p = .000$). Thus, hypothesis H_{3a} is accepted. People’s intention to use paper coupons decreases when their income drops (Table 5). High-income people have the lowest intention to use paper coupons while it is the highest for low-income group (Figure 7). Mobile coupon usage intention is the highest for middle-income group and lowest for low-income group (Figure 8). A significant ($F = 8.21, p = .000$) difference was found among different income groups for outlet selection. Consumer’s product outlet selection in coupon usage differs because of difference in their income (Table 6). Thus, hypothesis H_{3b} is accepted. Grocery stores, discount stores, fast food restaurants, and electronic stores are top

choices for both low and middle-income people, while online stores, family restaurants, and electronic stores are favored by the high-income group (Figure 9).

Table 5: Usage intention based on income

Coupon Type	Income		
	Low	Med	High
Paper	3.78	3.63	3.16
Mobile	3.42	3.81	3.57

Table 6: Outlet distribution based on income

Outlets	Income					
	Low Income		Med Income		High Income	
	Count	%	Count	%	Count	%
Grocery stores	85	18%	79	19%	15	11%
Dept. stores	70	15%	67	16%	7	5%
Discount stores	82	18%	65	16%	6	5%
Electronic stores	76	16%	72	17%	21	16%
Fast food restaurants	81	17%	68	16%	8	6%
Family restaurants	5	1%	10	2%	34	26%
Online stores	59	13%	46	11%	35	27%
Service providers	7	2%	8	2%	5	4%
Total	465	100%	415	100%	131	100%

Figure 7: Comparison based on income

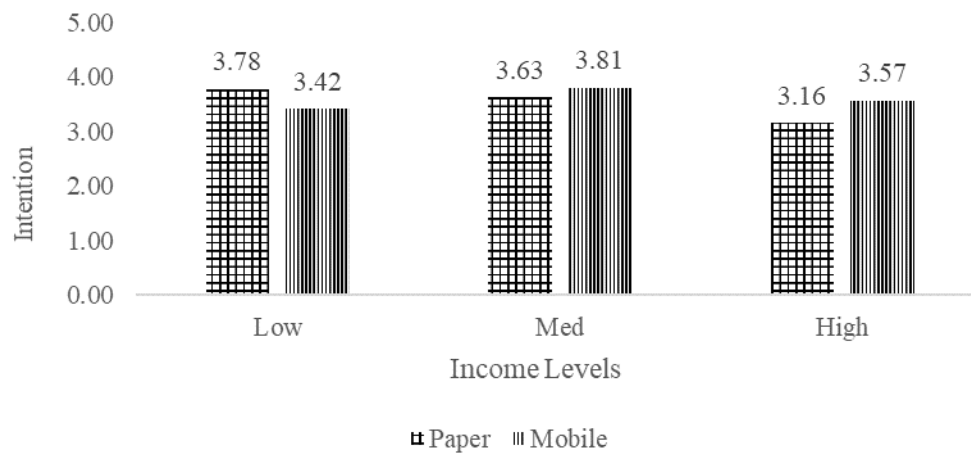


Figure 8: Interaction effect of income

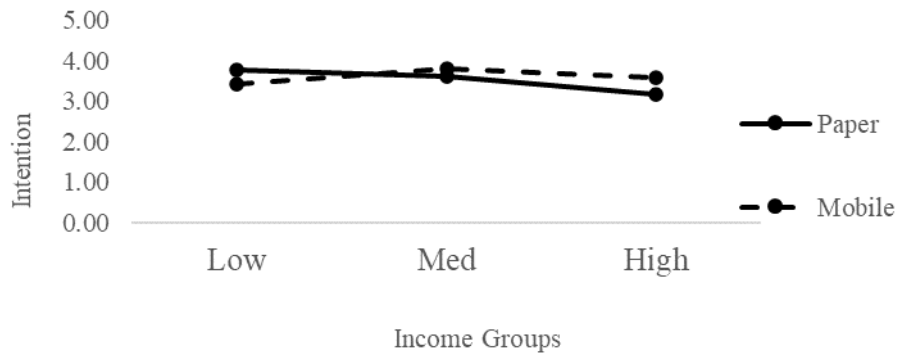
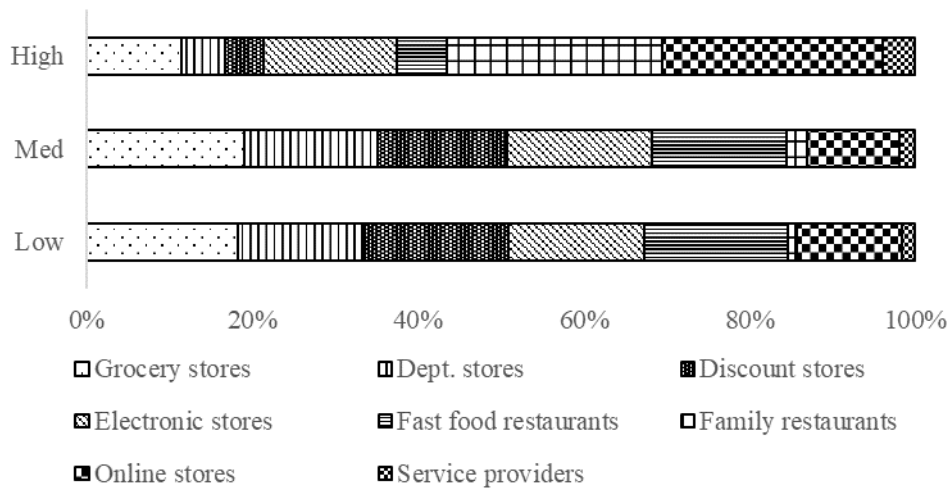


Figure 9: Outlet selection by income



Education

Unlike age, gender and income, the interaction effect of education is not significant ($F = 2.29, p > .10$). The result of data analysis (Table 7) reveals that consumer’s usage intention between mobile and paper coupons does not differ because of difference in their level of education (Figure 10). Thus, hypothesis H_{4a} is not supported. Even though due to people’s change in the level of education, no significant difference was found in their coupon usage intention (Figure 11), their outlet selection differs significantly (Table 8). People with bachelor’s and master’s degrees prefer grocery stores, department stores, and discount stores, while people

with high school degrees have different priorities. They prefer fast food restaurants the most, followed by discount stores, and online stores. Doctorate degree holders prefer the family restaurants and electronic stores most (Figure 12). A significant ($F = 7.54, p = .000$) difference was found among their level of education for outlet selection. This reveals that consumer’s outlet selection for coupon usage differs because of differences in their level of education. Thus, hypothesis H_{4b} is accepted.

Table 7: Usage intention based on education

Coupon Type	Education				
	HS	AA	BS	MS	DOC
Paper	3.14	3.46	3.71	3.57	3.12
Mobile	3.55	3.62	3.88	3.68	3.05

Table 8: Outlet distribution based on education

Outlets	Education									
	HS		AA		BS		MS		DOC	
	Count	%	Count	%	Count	%	Count	%	Count	%
Grocery stores	11	9%	39	18%	64	18%	44	17%	7	14%
Dept. stores	9	7%	36	17%	62	17%	41	16%	8	16%
Discount stores	27	22%	30	14%	60	16%	39	15%	8	16%
Electronic stores	21	17%	32	15%	55	15%	36	14%	9	18%
Fast food restaurants	29	24%	39	18%	41	11%	21	8%	2	4%
Family restaurants	2	2%	5	2%	23	6%	32	12%	9	18%
Online stores	21	17%	28	13%	48	13%	35	13%	6	12%
Service providers	1	1%	3	1%	11	3%	15	6%	2	4%
Total	121	100%	212	100%	364	100%	263	100%	51	100%

Figure 10: Comparison based on education

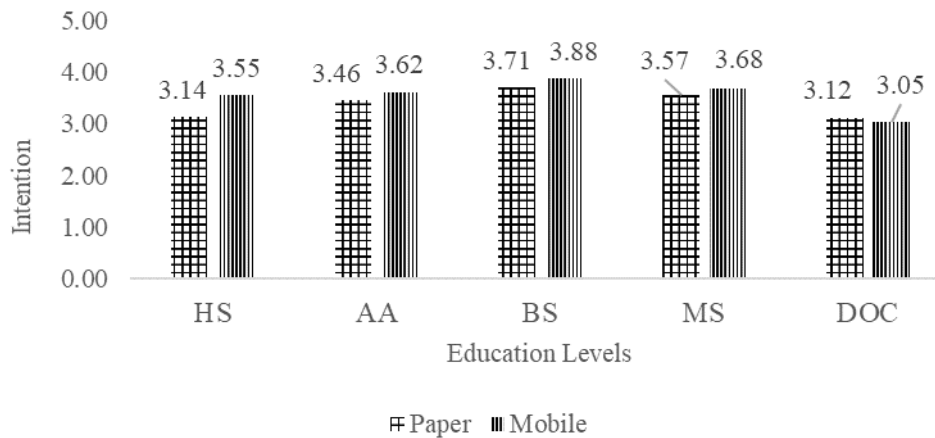


Figure 11: Interaction effect of education

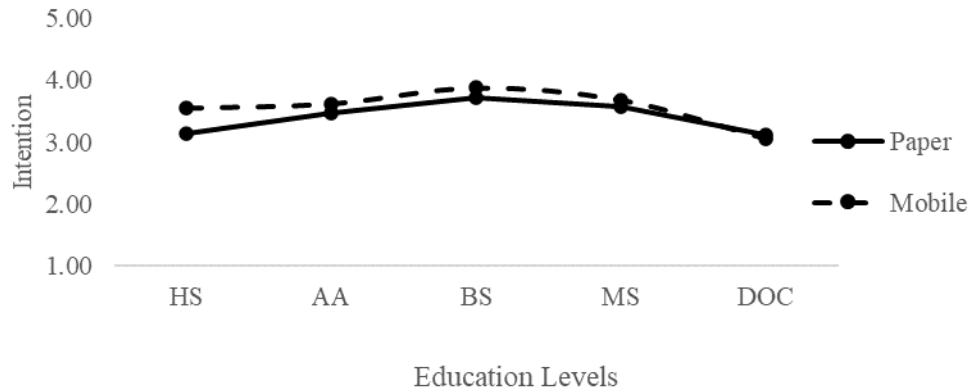
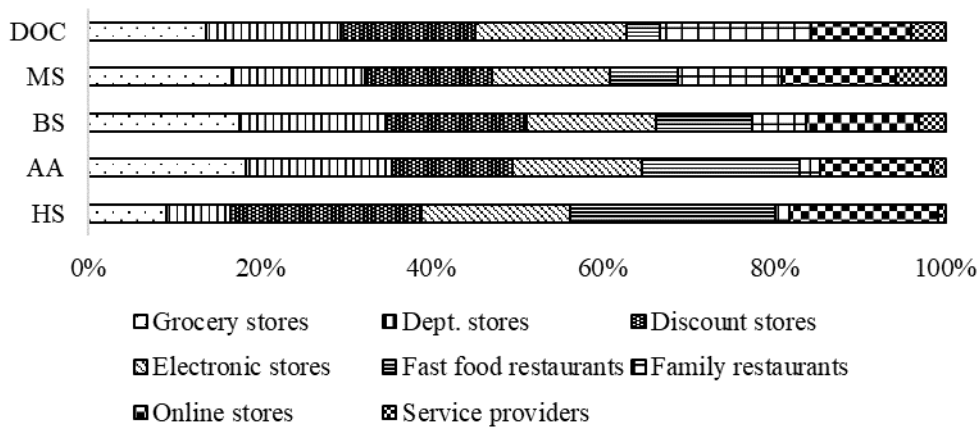


Figure 12: Outlet selection by education



Race and ethnicity

The interaction effect of ethnicity is significant ($F = 10.34, p = .000$), which signals that consumer’s usage intention between mobile and paper coupons differs because of difference in their ethnicity (Table 9). Thus, hypothesis H_{5a} is accepted. Asians have the highest intention to use mobile coupons and Caucasians have the highest intention to use paper coupons (Figure 14). Native Americans have the lowest intention for both mobile and paper coupons. It shows that Native Americans do not like any types of coupons. Consumer’s ethnicity plays a significant role in outlet selection for coupon usage because a significant ($F = 12.32, p = .000$) difference was found among different ethnic groups for outlet selection. Grocery stores are liked the most by Caucasians, African-Americans, and Native-Americans, while Hispanics and Asian-Americans

do not like the grocery stores much (Table 10). Fast food restaurant is the top priority for Hispanics (26%), while Asian-Americans do not like fast food restaurants much but they equally like online stores (18%), discount stores (18%), and electronic stores (18%) (Figure 15). It demonstrates that their outlet selection for coupon usage differs because of differences in their ethnicity. Thus, hypothesis H_{5b} is accepted. Table 11 Summarizes the results of all hypotheses testing.

Table 9: Usage intention based on race and ethnicity

Coupon Type	Race and Ethnicity				
	Cauc	Hisp	Asian	African	Native
Paper	3.46	2.89	3.13	3.05	2.28
Mobile	3.82	2.51	3.97	3.12	2.21

Table 10: Outlet distribution based on race and ethnicity

Outlets	Race and Ethnicity									
	Caucasian		Hispanic		Asian		African		Native	
	Count	%	Count	%	Count	%	Count	%	Count	%
Grocery stores	53	16%	11	7%	36	15%	63	24%	7	23%
Dept. stores	49	15%	22	14%	40	17%	28	11%	3	10%
Discount stores	44	14%	41	25%	41	18%	46	18%	3	10%
Electronic stores	43	13%	18	11%	41	18%	23	9%	4	13%
Fast food restaurants	41	13%	42	26%	22	9%	51	19%	7	23%
Family restaurants	46	14%	14	9%	8	3%	14	5%	2	7%
Online stores	44	14%	12	7%	42	18%	31	12%	3	10%
Service providers	4	1%	2	1%	3	1%	6	2%	1	3%
Total	324	100%	162	100%	233	100%	262	100%	30	100%

Figure 13: Comparison based on race and ethnicity

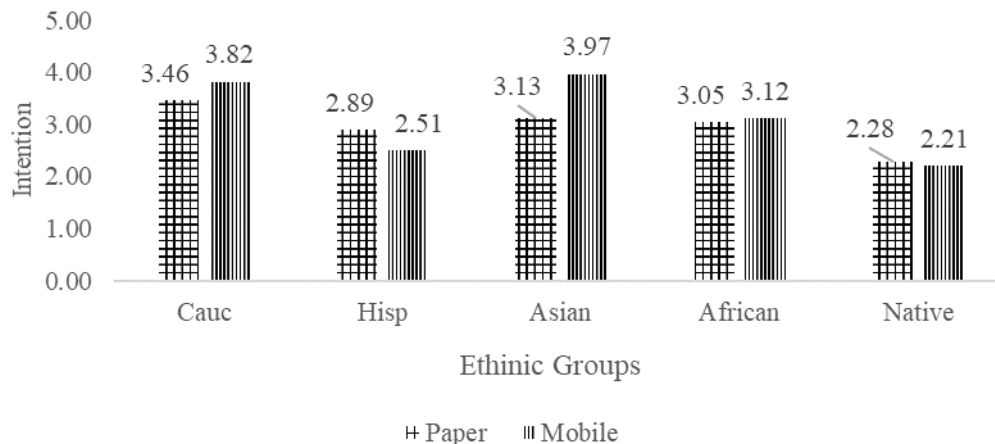


Figure 14: Interaction effect of race and ethnicity

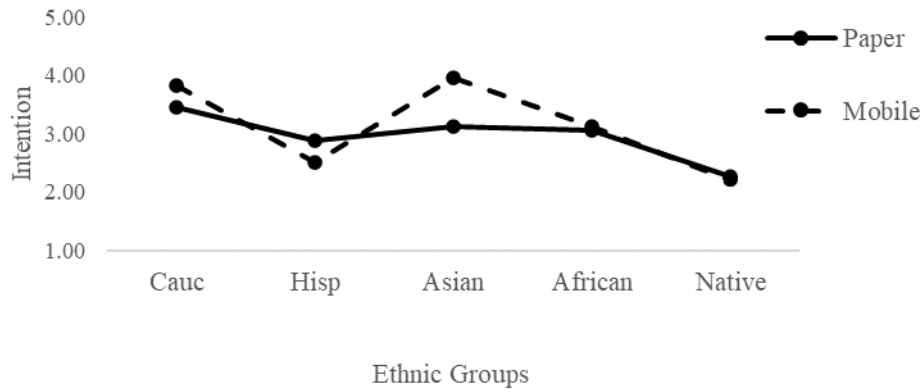


Figure 15: Outlet selection by race and ethnicity

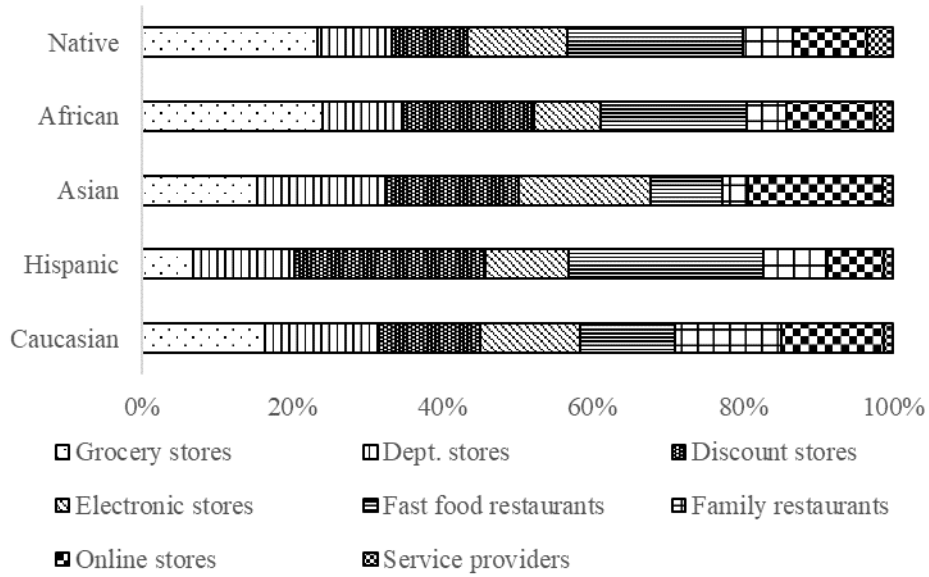


Table 11: Summary of results of hypotheses testing

No.	Hypothesis	Summary Result
<i>H_{1a}</i>	Consumer's usage intention between mobile and paper coupons differs because of difference in their gender.	Supported
<i>H_{1b}</i>	Consumer's product outlet selection for coupon usage differs because of difference in their gender.	Not Supported
<i>H_{2a}</i>	Consumer's usage intention between mobile and paper coupons differs because of difference in their age.	Supported
<i>H_{2b}</i>	Consumer's product outlet selection for coupon usage differs because of difference in their age.	Supported
<i>H_{3a}</i>	Consumer's usage intention between mobile and paper coupons differs because of difference in their level of income.	Supported
<i>H_{3b}</i>	Consumer's product outlet selection for coupon usage differs because of difference in their income.	Supported
<i>H_{4a}</i>	Consumer's usage intention between mobile and paper coupons differs because of difference in their level of education.	Not Supported
<i>H_{4b}</i>	Consumer's product outlet selection for coupon usage differs because of difference in their education.	Supported
<i>H_{5a}</i>	Consumer's usage intention between mobile and paper coupons differs because of difference in their race and ethnicity.	Supported
<i>H_{5b}</i>	Consumer's product outlet selection for coupon usage differs because of difference in their race and ethnicity.	Supported

DISCUSSION

Gender differences in coupon selection

Male prefers mobile and female prefers paper coupons

Between the two genders, female prefers paper coupons, while male prefers mobile coupons. Within male participants, mobile coupons are noticeably preferred over paper coupons, but among female, paper coupons are slightly preferred over mobile coupons. There is a crossover interaction between male and female in coupon selection. This implies that intention goes up for male when it switches from paper to mobile coupon. Conversely, intention goes down for female for the same switch of coupon type. This finding has been supported by several previous studies, such as Kwon and Kwon (2007) reported that women use more coupons than man do. Harmon and Hill (2003) also found similar findings for coupons for food delivery services. For outlet selection, male and female do not differ significantly. Overall, their priorities are the same for both groups. For female, department stores (19%), discount stores (19%), grocery stores (18%), and online stores (17%) are the most preferred coupons, while for male, department stores (19%), grocery stores (17%), online stores (16%), and discount stores (15%) are the favorite ones. Therefore, consumer's gender cannot be used as a valid basis of segmentation for outlet selection for couponing.

Age differences in coupon selection

Older generations prefer paper coupons and younger generations prefer mobile coupons

Among the four age groups, silent generation's intention to use the paper coupons is the highest, followed by baby boomer, generation X, Y and Z. Generation Z has the lowest intention to use paper coupons. For mobile coupons, this situation is completely opposite. Generation Z has the highest intention to use the mobile coupon, while silent generation has the lowest intention. Interaction effects exist for all five age groups in coupon selection. When coupon type is changed from paper to mobile, intention drops for silent generation and baby boomer, while it jumps for X, Y, and Z generations. The highest shift in intention takes place in silent generation and generation Z but in opposite directions. It clearly demonstrates that the younger generations such as X, Y, and Z prefer mobile coupons, while older generations such as silent generation and baby boomer prefer paper coupons. Silent generation likes paper coupons very much but dislikes mobile coupons the most, while generation Z likes the paper coupons most and does not like the mobile coupons. The finding of this study is not surprising because the younger generations are more likely to have technology exposure than the older generations. Especially, generation Z grew up with mobile phones thus it is expected that they would prefer mobile coupons over paper coupons. Accordingly, silent generation and baby boomer feel more comfortable with the traditional and old-school couponing option, that's why they prefer paper coupons over mobile. A noticeable difference was found between the older and the younger generations when it comes to the selection of product outlets. Older generations including silent, boomer and generation X prefer family restaurants, department stores, and grocery stores, while younger generations (Y and Z) would like to receive coupons from online retailers, electronic stores, and fast-food restaurants. Interestingly, family restaurants, grocery stores, and department stores are not on their priority list. Accordingly, the top three outlets of generation Y and Z are not on the priority list of older generations.

Differences in income group in coupon selection

Low-income people prefer paper coupons, middle and high-income people like mobile coupons

Among the three income groups, middle-income people expressed their intention to use mobile coupons the most, while low-income people preferred the paper coupons the most. However, the difference in intention to use between mobile and paper coupons in all three income groups is not substantially high. Interaction effect exists for these three income groups. When the coupon type is changed from paper to mobile, intention goes up for middle and high-income people, while it drops for low-income people. With the increase of people's level of income, the intention to use mobile coupons increases while that decreases for paper coupons. It indicates that people's level of income has an impact on their coupon preferences, even though that impact is not considerably high. Couponing is one of the ways to save some money in people's purchase so it is expected that low-income people would like to use more coupons than other income groups. Surprisingly, the finding of this study does not support conventional

wisdom. It reveals that middle-income people would like to use more coupons than low-income people. Additionally, high-income people also expressed their interest in using coupons.

Like age, consumer's income also plays a significant role in selecting product outlets for coupon usage. Low-income consumers prefer discount stores (18%), grocery stores (18%), fast food restaurants (17%), and electronic stores (16%), while high-income consumers prefer online stores (27%), family restaurants (26%), and electronic stores the most (16%). Medium-income consumers also prefer grocery stores (19%), electronic stores (17%), fast food restaurants (16%), department stores (16%), and discount stores (16%). There are similarities between low-income and medium-income consumers in outlet selection, however high-income consumers have completely different preferences. This indicates that consumer's outlet selection for coupon usage differs because of difference in their level of income.

Differences in education level in coupon selection

People with bachelor's degree have the highest level of intention to use both types of coupons.

Bachelor's degree holders have the highest intention to use both paper and mobile coupons and doctorate degrees holders have the lowest intention to use those coupons. Since no interaction effect was observed in this case, consumer's intention does not switch because of the change of coupon type. For all groups with different education levels except doctorate degree holders, intention increases with the change of coupon type from paper to mobile. Interestingly, the terminal degree holders have the opposite trend in intention when the coupon type changes from paper to mobile. Their intention slightly drops when coupon type is changed to mobile. Overall, participants of all levels of education have reasonably high intention to use both mobile and paper coupons. Thus, people's level of education does not have any impact on their usage intention between mobile and paper coupons. This study reveals that people's level of education does not have much impact on their coupon type selection. The trend of people's intention to use both types of coupons is same. The intention to use mobile coupons is higher than that of paper coupons for all four groups except doctorate degree holders. However, the difference between paper and mobile coupon usage intentions for doctorate degree holders is very insignificant (3.05 vs. 3.12). This implies that people's preference between mobile and paper coupons does not change because of the differences in their level of education.

Interestingly, consumer's outlet selection varies significantly because of the difference in their level of education. Consumers with high school degrees prefer fast food restaurants (24%), discount stores (22%), and online stores (17%). These preferences are significantly different for consumers with doctorate degrees. They prefer family restaurants (18%), electronic stores (18%), department stores (16%), and discount stores (16%). Store priorities between these two groups are significantly different. There are some similarities among customers with associate degrees, bachelor's degrees, and master's degrees. Grocery stores and department stores are the top two choices for all these three groups. The top three store preferences of customers with bachelor's and master's degrees are the same. However, customers with associate degrees prefer fast food restaurants, which is not in the priority list of customers with bachelor's and master's degrees.

Race and ethnicity differences in coupon selection

Asian-Americans like mobile coupons and Caucasians like paper coupons

The highest level of intention to use the mobile coupons was demonstrated by Asians, while that of the paper coupons was expressed by Caucasians. Native Americans are least interested in using both type of coupons. When coupon type was changed from paper to mobile, the usage intention goes up for Asian, Caucasian, and African-American, while it goes down for Hispanic and Native American. That indicates all three ethnic groups prefer mobile coupons over paper coupons except Hispanic and Native American.

Interestingly, this study reveals that people's ethnicity plays a significant role in selecting their products for coupon usage. This study found some similarities and differences among the five major ethnicities in outlet selection for coupon usage. Grocery stores, department stores, discount stores are in the priority list of all five ethnic groups. Family restaurants are preferred by only the Caucasians and Fast food restaurants are selected only by Hispanic, Africans, and Native-Americans. It establishes that people differ in their product outlet selection for coupon usage because of their differences in their racial and ethnic origin.

MANAGERIAL IMPLICATIONS

The knowledge acquired from the finding of this study can help marketers in numerous ways. This study recommends marketers implement a differentiated strategy for each type of coupon grounded on customer's demographics profiles. The recommended differentiated strategy will help marketers decrease costs by eliminating waste and avoiding redundant promotions, find appropriate products and promotions for the target customers, and effectively allocate their marketing resources. These are possible through effective segmentation, targeting, and positioning strategies, communication strategies, distribution strategies, and product selection strategies.

Segmentation-Targeting-Positioning (STP) strategies

The major contribution of this study is helping marketers with their STP strategies. Marketers will be able to accurately segment the market based on the findings related to each of these five demographic factors and identify their target customers accordingly. After precisely detecting their target market, marketers will be able develop an efficient positioning strategy for their products and services. This positioning strategy will help them identify the right product for the right customers that meet their expectations. It will also help them include the right product features and benefits for their target customers.

Communication strategies

This study will also help marketing practitioners in improving their communication strategies. Marketers may use these five demographic factors and customize their communication

messages according to customer's preferences. A generalized communication message may not be equally attractive to all groups of people as it was found that their preferences differ based on their gender, age, income, and ethnicity.

Distribution strategies

This study suggests that distinct distribution strategies should be developed based on their gender, age, income, and ethnicity. This study reveals that younger customers, such as generation X, Y, and Z prefer mobile coupons, thus marketers should distribute the mobile coupons to those customers and send paper coupons to older customers, including silent generation and baby boomers.

Product selection strategies

Another significant contribution of this study is the identification of retail outlets for couponing. This study discloses that not all retail outlets are equally preferred by all customers. Their preferences of outlets vary depending on their age, income, education, and ethnicity. For example, Asian-Americans do not like to receive coupons from grocery stores, while Caucasians and African-Americans prefer that coupon the most. Similarly, silent generation and baby boomers would like to receive coupons from family restaurants, although generation Y and Z do not like that coupon at all. Likewise, high-income people would love to receive coupons from online stores and family restaurants, in contrast low- and middle-income people would prefer coupons from grocery and electronics stores. Fast food restaurants should send their coupons to the customers who have less educational attainment, whereas grocery stores, department stores, and discount stores should target people who have higher levels of education. Retailers from various outlets can utilize this knowledge to identify the appropriate target customers for their potential coupon candidates.

ACADEMIC IMPLICATIONS

The present study provides evidence for a direct relationship between consumer's coupon usage intention and their demographic factors. It expands the body of the theoretical knowledge by uncovering the influence of consumer's demographic factors on their preferences between mobile and paper coupons. This study reveals that consumer's coupon usage preferences differ because of their differences in age, gender, income, and ethnicity. This study adds valuable knowledge to existing coupon literature by examining a new unexplored area of consumer coupon usage with the light of differences in their demographic make-up. Additionally, it also examined different types of outlets from which consumers would prefer to receive coupons. Several surprising preferences of outlets were discovered in this study. This study revealed that coupons for all retail outlets are not equally suitable for all customers. People differ in their coupon preferences, and they have their priorities while selecting retail outlets. This difference is influenced by their age, income, education, and ethnicity. This study discovers something new that had never been discovered before. All the five factors of consumer's demographic make-up

have not been examined in one study in the light of consumer's coupon usage behavior. To the best of the author's knowledge, this is the first study that investigated the impact of consumer's demographic factors on their coupon preferences. This study will help future researchers expand their understanding of consumer coupon usage behavior. It discovers how consumer's demographic factors influence their product selection and it will also develop a better understanding of the impact of promotional tools on consumer behavior.

LIMITATIONS AND OPPORTUNITIES FOR FUTURE RESEARCH

This study was designed as a cross-sectional study that examines a particular phenomenon at a given time. A longitudinal study could be an opportunity for future researchers to confirm the findings of this study in an extended time. This study also suffers from some limitations related to selection of participants in the first phase. Data in that phase were collected from university students thus, the possibility of sampling biases may exist in this study. Data in the second phase were collected through the crowdsourcing of Amazon Mechanical Turk (MTurk), where the researcher did not have any control over the participant selection. Convenient sampling was utilized in data collection of this study. Future studies with probability sampling may overcome this limitation. Only five demographic factors were used in this study. It did not use some other demographic factors such as employment status, marital status, occupation, location, religion, family size, etc. Future researchers may include those demographic factors to examine how consumer's coupon behavior changes because of these new factors. This study included eight retail outlets. Adding more outlets from different product types and industries could lead to additional findings as well. This study did not perform any comparative analysis among multiple cultures or countries thus, a cross-cultural or cross-country research study could be an opportunity for the future researchers. Despite the limitations mentioned above, this study does not contain any fundamental flaws since it strictly followed the proper research methodology.

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APPENDIX A: LIST OF IMPORTANT COUPON ARTICLES

Authors	Key Concepts Examined	Findings	Coupon Type
Suryani, Rahayu, & Dirgantari (2023)	Consumer attitudes toward location-based mobile coupons and their usage intention of the location-based coupon.	Hedonic motivation and smart-shopper perception have positive effect towards usage intention of location-based coupon through location-based coupon attitudes.	Mobile
Li, Z., Guan, X., & Mei, W. (2023)	Omnichannel coupon promotion strategies considering consumers' time sensitivity in redeeming coupons.	Omnichannel retailer's motivation to provide online or offline coupons depends on retail price and a higher retail price leads to a stronger promotion motivation.	Mobile
Liu, Liu, & Jiang (2022)	Redeeming intention, sharing intention, perceived coupon value, situational product involvement	Perceived coupon value and situational product involvement positively influence redeeming and sharing intentions.	Mobile
Zhang & Zhang (2022)	Functional value, emotional value, social value, usage intention, government issued mobile coupons (GIMCs)	Functional value, emotional value (and social value positively influence consumer's attitude toward government issued mobile coupons (GIMCs) and their intention to use GIMCs.	Mobile
Ladhari et al (2022)	Intention, attitude toward coupons, fear of spam, ease of use, perceived risk, proneness, usefulness, utility	Fear of spam influences m-coupon usefulness, perceived privacy risks, m-coupon proneness, ease of use, and perceived product utility.	Mobile
Duan, Liu, & Mao (2022)	Online reviews, online coupons in e-commerce platforms, perceived usefulness, product price	Negative impact of negative online reviews on sales is moderated by price, and consumers are more tolerant of negative reviews of high-priced products.	Mobile
Gabel & Guhl (2022)	Loyalty programs, loyalty program rewards, targeted coupons	Both loyalty program (LP) point redemptions and individually targeted coupons increase shopping trip incidence, kiosk access, and expenditures.	Mobile & Paper
<u>Luo, Li, & Chen (2021)</u>	Mobile coupons, Geo-location targeting, asymmetric competition, mobile accessibility, price discrimination	Retailers engage in targeting promotion only when the marginal cost of targeting is not too high.	Mobile
Jiang, Y., Liu, F., & Lim, A (2021)	Platform selection, digital coupon, delivery effort, operating cost	Retailers can be better off paying a higher participation fee to the third-party platform.	Mobile
Nayal, Pandey, & Paul (2021)	Intention to redeem, coupon proneness, perceived convenience, repeat usage behavior, perceived risk.	High repeat usage behavior of mobile coupon redemption diminishes the influence of perceived risk.	Mobile
Li et al. (2021)	Omnichannel retailing, pricing, coupon promotion, distribution model, channel integration	The distribution of coupons does not always lead to increased market share, rather market volume may be reduced if the competition between different channels is intense.	Mobile & Paper
Authors	Key Concepts Examined	Findings	Coupon Type
Mills and Zamudio (2018)	Net price range, reference price, coupon value, brand loyalty, competitive intensity, and number of coupons.	Coupon value does not have any effect on coupon redemption for new customers and it has a very low effect for loyal consumers.	Mobile
Kim et al. (2017)	Familiarity, coupon proneness, trust, and intention to use location-based services.	Coupon proneness, familiarity, and trust positively affect people's intention to use location-based services.	Mobile

Gonzalez (2016)	Coupon propensity, enjoyment, and intention to redeem mobile coupons.	The two subcomponents of coupon proneness - coupon propensity and enjoyment - have direct effect on redemption intention.	Mobile
Liu et al. (2015)	Perceived value, personal innovativeness, coupon proneness and intention to accept mobile coupon applications.	Coupon proneness, personal innovativeness, and perceived value positively influence consumers' mobile coupon adoption intention.	Mobile
Im and Ha (2015)	Coupon proneness, spamming, intention to grant permissions.	The evaluation process of a transaction through utilizing mobile coupons was confirmed.	Mobile
Khajehzadeh et al. (2015)	Hedonic and utilitarian products, intention, shopper's motivation, customer's location.	For hedonic product, customer's shopping motivation impacts more on redemption intention. For utilitarian product, customer's location is more impactful on their redemption intention.	Mobile
Ha and Im (2014)	Enjoyment, compatibility, attitudes toward coupon adoption, usefulness, perceived ease of use, and intention.	Compared to perceived ease of use and perceived usefulness, compatibility and enjoyment influence customer's attitudes towards mobile coupon adoption much stronger.	Mobile
Achadinha et al. (2014)	Attitude, intention to redeem	Consumers' attitude is the most important influencing factor for their intention to redeem mobile coupons.	Mobile
Im and Ha (2013)	Attitude, perceived risk, subjective norm, redemption intention	Customer's attitude, perceived risk, and subjective norm affect their mobile coupon redemption.	Mobile
Danaher et al (2015)	Expiry length of coupon, store location, time of delivery, redemption intention	The location and time of delivery of the mobile coupon has significant influence in the redemption of the mobile coupons.	Mobile & paper
Kondo and Nakahara (2007)	Three types of coupons: ordinary mail, hyperlink mail, and telephone reservation mail	All three types of coupons caused positive impact on the shop visit for new customers.	Mobile & paper
Kondo et al. (2007)	Store visit probability, direct mail vs. mobile coupon	A paper coupon sent on a post card positively affected the probability of customers' store visit, while a mobile coupon did not.	Mobile & paper
Harmon & Hill (2007)	Gender and coupon usage	Perception toward coupon and the usage differ between male and female significantly.	Online & paper

APPENDIX B: DEMOGRAPHIC DISTRIBUTIONS

Factors	Values	Frequency	%
Gender	Male	495	49%
	Female	516	51%
Age	18 – 25 (Born in 1997-2005) – Gen Z	253	25%
	26 – 41 (Born between 1981 & 1996) – Gen Y (Millennials)	314	31%
	42 – 57 (Born between 1946 & 1964) – Gen X	293	29%
	58 – 76 (Born between 1928 & 1945) – Baby Boomer	121	12%
	77-94 (Born between 1981 & 1996) – Silent Generation	30	3%
Income	Less than \$50,000 - Low Income	465	46%
	\$50,000 - \$80,000 – Medium Income	415	41%
	Above \$80,000 – High Income	131	13%
Education	High Scholl or Equivalent	121	12%
	Associate Degree	212	21%
	Bachelor’s Degree	364	36%
	Master’s Degree	263	26%
	Doctoral Degree	51	5%
Race and Ethnicity	Caucasian	324	32%
	Hispanic or Latino	162	16%
	Asian American	233	23%
	African American	262	26%
	Native American	30	3%