Journal of Electronics, Computer Networking and Applied Mathematics
ISSN: 2799-1156
Vol: 04, No. 02, Feb-Mar 2024
http://journal.hmjournals.com/index.php/JECNAM
DOI: https://doi.org/10.55529/jecnam.42.19.32

Factors Affecting Two-Wheeler Purchase Decision among College Students

Susmita Timilsina[1*], Govinda Jnawali[2]

[1]Lumbini Banijya Campus, Tribhuvan University, Butwal, Nepal.*
[2]Assistant Professor, Lumbini Banijya Campus, Tribhuvan University, Butwal, Nepal.

Email: [2]jnawali.govinda@gmail.com
Corresponding Email: [1]timilsinasusmita75@gmail.com*

Received: 22 October 2023 **Accepted:** 08 January 2024 **Published:** 20 February 2024

Abstract: ***The study focuses on the Generation's Z student's preference factor for purchase decision of two wheelers in Butwal sub -metropolitan studying in community and public colleges This paper focuses on the behavioral intentions of the z generations students for acceptance of new technological products, i.e (two-wheeler) and the factors considered to be vital for the purchase of two wheeler. The primary sample of 395 structure questionnaires was collected from Z youth (18-25). The Descriptive statistics and chi squared test through IBM SPSS 25 is adopted to find the empirical fit with the hypothesis framed. The chi square analysis was done to examine association between demographic variables and purchase decisions of two wheelers. The results of chi square analysis indicated that buyer's marital status, occupation, religion, mode of payment, purpose of two wheeler purchase, number of family members and annual family income are significantly associated with purchase decision. The various categories of demographic characteristics analyzed in the study influence buyer two wheeler brand purchase decision. The results for the marketers of two-wheeler focusing on the z generation. The finding suggest the manufacturer's credibility, reliability, price of vehicle, band image, mileage, cost of maintenance, resale value and the facility conditions influences the purchase decision of the buying the two wheelers.***

Keywords: Z Generation, Chi Square, Buying Behavior.

1. INTRODUCTION

1.1 General Background

A consumer's actual purchasing selections are heavily influenced by their buying intentions. Direct inquiry of customers about their future purchase plans resulted in a significant forecasting success for the demand for exclusive consumer items. (Armstrong 1971). Surveys provide information about respondents' current views, beliefs, and behavior, which is the usual

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hypothesis in consumer research (Fitzsimons, 1996). When producers use "intention to purchase" to measure purchase intent, they must develop a means to communicate product information to potential customers (Hosein 2002). Understanding buyer behavior is the driving force behind any marketing strategy, and this process includes understanding why and how individuals decide to purchase a certain product or brand loyalty. Nowadays, greater emphasis is being placed on researching the significance of customer behavior in marketing. The business climate is rapidly changing, making it challenging for organizations to compete for customer and market share (Khaniwale 2014). Frequently, consumers do not rate products based on their core attributes (i.e., the primary utility they provide), but rather on the so-called real product (i.e., the qualities of a specific product) and the extended product, which represents the set of intangible factors that confer a desired perceived advantage on the consumer - including image, consultancy, and after-sale service (Foret & Procházka, 2007).

1.1.1 Buying Process of Individual

The buying process of an individual, also known as the consumer decision-making process, is a complex and multifaceted journey. It involves several stages, from recognizing a need to evaluating alternatives and finally making a purchase decision.

Problem Recognition

Recognizing the need is the first step in the purchasing process – after recognizing the need problem or need, the buyer creates the difference between actual and desired conditions Status. Cravings can be triggered by internal or external stimuli. Internal stimulation can be one of human needs: hunger, thirst, sex. A person's needs are also possible activated by external stimuli. External stimuli become active when encountered by a person different products or services (Kotler & Keller, 2016).

Information Search

When the need is identified, customers start searching more and more information about the desired state. If the client's desired state is strong and if the product or service offered is right for them, the customer is likely to buy it. If it does not satisfy it, the client can store its demand in memory. . Customers get information from many sources. It includes personal sources such as family, friends, neighbors, acquaintances and business sources such as advertising, seller, reseller, packaging, display, and website; Public sources also including mass media, customer review organizations and most preferred. Sources of experience such as handling, testing, and using products. Affection these sources of information vary according to the different products offered to the purchaser (Peter & Olson, 1999).

Evaluation of Alternatives

The evaluation of alternatives begins when the information search has been completed by client. To finalize all brand choices, customers use collected information how do customers evaluate different brands? Customers Use different evaluation processes in different purchasing situations. So that's all the evaluation process can affect customers reach their attitudes towards different brands through reviews procedure. Evaluating alternative purchasing options depends on the individual customer and specific purchasing situation. In

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some cases, customers are very careful calculation and logical thinking. At other times, the same customer does not rate alike. They even buy regularly because they trust their intuition. Sometimes Customers make their own purchasing decisions; sometimes brings the weight of age advice from friends, family and work group, sometimes it is the product design that can attract customers or buying advice from the seller (Hawkins & Mothers Baugh, 2010).

Purchase Decision

During the evaluation phase, customers rate different brands and form their purchase intention. Usually, the customer's purchasing decision will buy the preferred brand, but there are two factors that can interfere between purchases purchase intention and decision. The first factor is the attitude of others originates from the environment. In case the father asks his son to buy the lowest price bicycle, the chances of getting an expensive bicycle will decrease (Engel, Blackwell, & Miniard, 1995).

Post-Purchase Evaluation

After the purchase, the individual assesses their satisfaction with the decision. This evaluation can lead to repurchase, positive word-of-mouth, or brand loyalty. (Oliver, 1980).The second factor concerns unforeseen situational factors. Customers can form purchase intention based on external factors such as expected income, price, and Product benefits. However, unforeseen events can change the intention to purchase. Customers may lose their jobs, another purchase may become more urgent, or a friend may report that he is frustrated with his favorite bike or a close competitor reducible. Thus, preferences and even purchase intentions do not always correspond leads to a real choice (Kotler & Keller, 2016)

1.2 Nepalese Context

The Nepalese car industry distributes a significant number of two-wheelers rather than four-wheelers because individuals in Nepal are forced to buy two-wheelers owing to a lack of efficient transportation management, overcrowded roads, and a lack of suitable methods of mass transit. According to TEPC (Trade and Export Promotion Center) (2017), the import of cars with multiples of 000' NRS was 49,386,015 in fiscal year 2014/15, 66,630,557 in fiscal year 2015/16, and 79,775,455 in fiscal year 2016/17. This demonstrates that the Nepalese automobile sector has consistently performed successfully. In addition, the two-wheeler market in Nepal is seeing amazing expansion due to increased requirements in both urban and rural regions. According to 2016/17 statistics, Nepalese two-wheeler usage has increased dramatically in recent years, since the majority of Nepalese, particularly the youth, prefer motorcycles to vehicles. In the Nepali market, there is a wide range of two-wheelers noted for their modern technology, fast speeds, performance, durability, design, and superior mileage. Bikes and scooters account for a significant portion of Nepalese two-wheeler consumption. Bikes are popular among the younger generation as a mode of transportation since they allow for convenient mobility (Rehman, 2013).

There are several brands of two-wheelers available in Nepal these days. Some brands have recently been introduced, while others have been there for a long time. For example, UM is a new brand, although Honda is one of Nepal's oldest. There may not be as many brands as in neighboring India, but the Nepalese two-wheeler sector is developing by the day as the desire

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for two-wheelers has surged among Nepalese people, particularly among Nepalese young. Honda, Hero, Bajaj, Yamaha, Suzuki, TVS, Royal Enfield, Aprilia, Ducati, Benelli, UM, Rieju, Mahindra, CF Moto, KTM, Vespa, Hunter, Runner, and Tekken are some of the two-wheeler manufacturers available in Nepal.

1.3 Definition of Gen Z

The term "generation" comes from the Greek word "genos," which means "to get out of the best possible presence." The expression refers not just to biological/conceptual birth, but also to the ever-changing origin across time. To put it another way, it represents the birth of something new in civilizations (Clarke, 2012).
Generation Z refers to those born between 1995 and 2009, when the Internet became widely available in China. They were also influenced by the rapid diffusion of smartphones and tablets, since their growth schedule corresponded to it (Duffett 2020
While this concept is being defined, it is considered that there are groups of people who were born at the same time, in the same age ranges, and have the same cultural and historical background (Weingarten, 2009).

Along with diverse assessments in the literature, the consensus view for generation classifications on four generations has been accumulated: they may be classified as follows (Cooman & Drics, 2012);
The Silent Generation (1925-1944)
Baby Boom (1945-1964)
Generation X (1965-1979)
Generation Y (1980-1994)
Generation Z (1995 -...)
Generation Z's features differ from those of preceding generations. Globalization and the rapid expansion of the Internet throughout the world have had a huge influence on their particular structure. Technology and the Internet are critical for our generation, which has grown up with computers and technological advances. They are constantly connected to the Internet, social media, and their tools, such as mp3 players, text messaging, smart phones, PDAs, the internet, IPADs, and media technologies. The "mobile generation" is another term for this (Kapil & Roy, 2014).
In another description, Generation Z, sometimes known as the "selfie generation," is supposed to be less egotistical than Generation Y. They choose to spend less since they experience world conflicts and recessions in the economy more frequently than others. Previous generations were more hopeful about their health. They recognize that the planet needs to be "better to able to live (www.cyfar.org).

2. RELATED WORK

2.1 Theoretical Review

The Black Box Model of Consumer Buying Purchasing Decision
Individual purchase decisions vary, and the rationale may be found in the elements that drive consumer purchasing behavior. One of these aspects is the buyer's traits, which influence what

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happens in the buyer's black box. The buyer's black box is the consumer's mind, which processes stimuli and makes purchases. The black box model describes the interplay of numerous variables or stimuli that influence individual purchasing decisions Chauhan (2013) the black box model represents the interaction between stimuli, consumer characteristics, and consumer decision-making and response processes. We can distinguish relationships between individual's arousal (between people) or intrapersonal arousal (within people) Marketing incentives are planned and handled by companies, while environmental incentives are given by social factors, based on the economic, political and cultural circumstances of society. The buyer's black box contains the buyer's characteristics and decisions process that determines the buyer's response.

2.1.1Empirical Review

Demographic variables influence consumer purchasing decisions and can produce deviations from broad patterns of consumer decision making. As a result, marketers want thorough information on customers in order to understand their behavior and demands. Marketers, obviously, cannot modify or control these demographic aspects linked with customers. However, with a greater grasp of these aspects, companies may create their offers in a way that is appealing and meets the actual demands of consumers (Vilcekova & Sabo, 2013).

Rahim et al., (2017) investigated the effects of demographic factors such as age, gender, income, education background, and employment on customers' green product purchasing intentions. The study's findings revealed a statistically significant difference between genders in customers' intentions to purchase green products. Meanwhile, ANOVA findings revealed that there are no significant variations in customers' green product purchase intentions based on age, income, academic background, or employment.

Jain (2015) stated that research is to determine the degree of satisfaction of Yamaha's two-wheeler consumers. She has carried out descriptive study. She gathered primary data using a questionnaire. Her respondent count was 100, the target region was Delhi, and the frequency test was employed. She finds that Yamaha bikes are widely recognized for their design and performance, and satisfaction is high in all other aspects except mileage, and that youth is Yamaha's target market, if Yamaha pleased its consumers with mileage and free servicing.

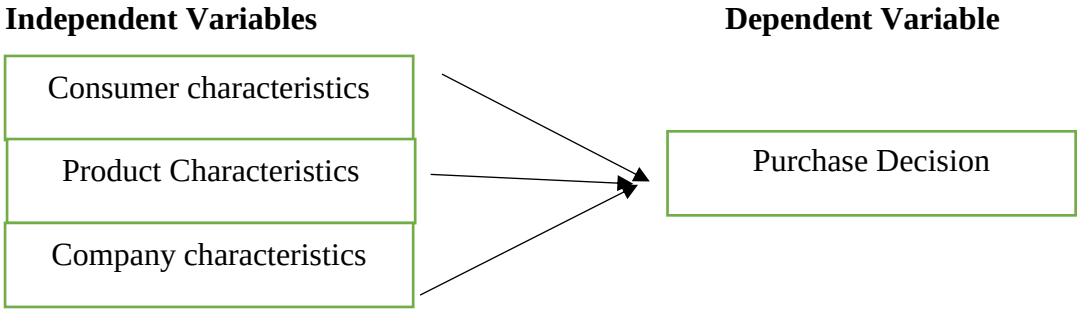
Vijayalakshmi et al., (2015) investigated the relationship between respondents' socioeconomic profiles and brand choosing. They gathered primary data from 250 respondents using a questionnaire. Using Simple Percentage Analysis, Chi-square, t-test, and ANOVA, they discovered that the satisfaction with the quality of the selected five brands is extremely high. As a result, the company manager must focus on monitoring and comprehending the aspects that influence client happiness, which will go a long way toward establishing a superior brand for the chosen brand of two wheelers.

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2.2 Research Framework

Figure 1 Research Framework



Note: Adopted from Jagtap (2018)

2.3 Statement of the Problem

The purchase decision is influenced by a variety of factors, including personal and professional needs, attitudes and values, personality traits, social, economic, and cultural background, age, gender, professional status, and various social influences exerted by family, friends, colleagues, and society. The combination of these elements aids the customer in selecting. Furthermore, psychological elements such as individual consumer demands, perceptions, attitudes, the learning process, and personality traits work across different types of individuals and impact their behavior. In this context, it is critical to understand the motivations for purchasing two wheelers, as well as the many brands of two wheelers and the determinants of two-wheeler purchase (Selvan, 2018).

There are many studies which have been concluded so far on Nepalese Automobile industry and two-wheeler industry. Very few attempts have so far been made for the study of two-wheeler industry in Butwal Sub metropolitan city. Hence, the present study is a sincere effort to fill up this gap. Only customer's point of view is studied by many authors, but the side of gen z students is not much focused

2.4 Research Question

Following the consideration of important concerns and challenges in the preceding section, the following research questions for the study project are developed:

- Is there any association between customer, product and company characteristics with demographic variables of two-wheeler users of Z generations?
- Is there any impact of consumer characteristics purchases of two-wheeler?
- Is there any impact of product characteristics on buying behavior two-wheeler?
- Is there any impact of company characteristics on buying behavior of two-wheeler?

2.5 Objectives of the Study

The prime aim of this research is to understand the buying behavior of community and public college z gen students studying in bachelor level. Next, is to identify whether the variable like Consumer characteristics, product characteristics and company characteristics will affect the

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buying behavior of the students. So putting together, this study intends to achieve the following goals:

- To measure the association between consumer, product and company characteristics with demographic variables.
- To examine the consumer characteristics effect on purchase decision.
- To examine the product characteristics effect on purchase decision.
- To examine the company characteristics effect and purchase decision

2.6 Hypothesis of the Study

A hypothesis statement usually refers to a conjectured assertion or educated guess on the link between variables and forms the basis of an experiment to determine whether the relationship is real. Some research has been found negative relationship and some were found positive relationship towards buying behavior so, non-directional hypotheses are set up.
The hypotheses of this study are mentioned below:
H_1: There is an association between consumer, product and company characteristics and demographic variables.
H_2: There is effect of consumer characteristics on purchase decision.
H_3: There is effect of product characteristics on purchases decision.
H_4: There is effect of company characteristics on purchase decision.

3. METHODOLOGY

The research design is used in this study is descriptive and causal comparative in nature as it describes the collected data in relation to their particular characteristics such as gender, age group, qualification, no, of the family, annual family income, influenced group etc. This research design was used to examine data related to buying behavior of gen Z students in Butwal sub metropolitan. This study survey is based all gen Z students studying bachelor's level owing two wheeler and enrolled in community and public college in Butwal. In Butwal city there are two community college and one public college offering bachelors. The questionnaire was collected through google documents using social site and through physical questionnaire. Sample size depends according to the research questions (Saunders. 2011)
Regarding the suitable sample size for unknown population study, at 95% level of confidence the formula developed by (Cochran 1997)

$=PQ\frac{Z_\alpha{}^2}{e^2}$ (Cochran's formula)

Where,
S = Sample size, Z = Z-Score (1.96 determined on Confidence level of 95 %.)
P = Population proportion (assumed to be 50%= 0.5), e = Margin of Error 0.0493

Sample size = $(0.5\times 0.5)\frac{1.96^2}{0.0493^2}$= 395

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Therefore, 395 respondents are given the questionnaire. With the assumption of non-response from 395 respondents, i.e considering some error in response, 350 questionnaire were distributed and valid responses are 317 were collected from face to face interaction and 78 were collected from Google documents and all together total respondent are 395.

4. RESULTS AND DISCUSSION

4.1 Consumer Characteristics

In all 395 respondents were presented with eight parameters and were asked to rank between1 to 5. (1-low importance, 2 unimportant, 3 moderate important, 4- important, 5 very important)
H_0: There is no association between consumer characteristics and buying behavior
H_1: There is a association between consumer characteristics and buying behavior
Statistical test: Friedman chi square test
Level of significance $\alpha = 0.05$

Table 1. Association between Consumer Characteristics and Buying Behavior

Test Statistics	
N	395
Chi-Square	285.186
Df	6
Asymp. Sig.	.000

Note: Author output from IBM SPSS Software version 25

Since the p value (0.000) is less than the level of significance (0.05) the null hypothesis is rejected. Hence it is concluded that consumer characteristics is associated with buying behavior.
In order to identify where the difference lies in customer's expectations, we refer to ranks table

Table 2. Mean rank

Parameters	**Mean Rank**
Friends and relatives	5.7
Television	4.06
Local mechanics	4.31
Internet/social media	5.02
Hoarding boards	3.69
Newspaper /magazine	3.72
Showrooms	4.64
Peers group	4.80

Note: Author output from IBM SPSS Software version 25

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Since the data is mean rank, the larger value indicates more favorable responses. From the data analysis it can be observed that friends and relatives, peers group, showrooms, high among 8 parameters and have positive impact on sales of two wheelers.

4.2 Product Characteristics

In all 395 respondents were presented with eight parameters and were asked to rank between1 to 5. (1-least influential,2- limited influential,3- moderate influential,4- influential,5-most influential)

H_0: There is no association between product characteristics and buying behavior

H_1: There is a association between product characteristics and buying behavior

Statistical test: Friedman chi square test.

Level of significance $\alpha = 0.0$

Table 3. Association between Product Characteristics and Buying Behavior

Test Statistics[a]	
N	395
Chi-Square	288.129
Df	11
Asymp. Sig.	.000

Note: Author output from IBM SPSS Software version 25

Since the p value (0.000) is less than the level of significance (0.05) the null hypothesis is rejected. Hence it is concluded that product characteristics is associated with buying behavior. In order to identify where the difference lies in customer's expectations, we refer to ranks table.

Table 4. Mean rank

Parameters	**Mean Rank**
Mileage	7.98
Price of vehicles	7.42
Style and aesthetics	6.11
Pick up	6.15
Cost of maintenance	5.99
Comfort	6.88
Color	6.46
Safety	7.23
Model	6.29
Weight	5.20
Brand	6.61
Resale Value	5.69

Note: Author output from IBM SPSS Software version 25

Since the data is mean rank, the larger value indicates more favorable responses. From the data analysis it can be observed that mileage, price of vehicles, safety high among 12 parameters and have positive impact on sales of two wheelers

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http://journal.hmjournals.com/index.php/JECNAM
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4.3 Company Characteristics

In all 395 respondents were presented with eight parameters and were asked to rank between1 to 5. (1-not important at all,2- less important ,3-important ,4- important ,5- extremely important)

H_0: There is no association between company characteristics and buying behavior
H_1: There is a association between company characteristics and buying behavior
Statistical test: Friedman chi square test
Level of significance $\alpha = 0.05$

Table 5. Association between company characteristics and buying behavior

Test Statistics[a]	
N	395
Chi-Square	420.299
Df	14
Asymp. Sig.	.000

Note: Author output from IBM SPSS Software version 25

Since the p value (0.000) is less than the level of significance (0.05) the null hypothesis is rejected. Hence it is concluded that company characteristics is associated with buying behavior. In order to identify where the difference lies in customer's expectations, we refer to ranks table.

Table 6. Mean rank

Parameters	**Mean Rank**
Brand Image	9.26
Fuel economy/mileage	9.44
Driving comfort	9.24
Safety	9.79
Pick up	8.33
Color	7.87
Latest Technology	8.14
Reliability	8.06
Internal Storage Space	6.55
Style Aesthetics	7.18
Maintenance Cost	7.82
Resale value	6.68
Service Network	7.17
Accessories	7.05
After sale services	7.42

Note: Author output from IBM SPSS Software version 25

Since the data is mean rank, the larger value indicates more favorable responses. From the data analysis it can be observed that safety, fuel economy/mileage, brand image high among 15 parameters and have positive impact on sales of two-wheeler.

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4.4. Correlation and Regression Analysis:

4.4.1 Correlation

Correlation is used to measure the relationship between The Pearson's correlation analysis was performed to measure the direction and strength between different variables. The result are shown in table

Table 7. Correlation

		Purchase decision	Consumer	Product	Company
Purchase decision	Pearson Correlation	1	.264**	.254**	.373**
			(0.000)	0.000)	0.000
Consumer	Pearson Correlation	.264**	1	.180**	.221**
	Sig. (2-tailed)	0.000		0.000	0.000
Product	Pearson Correlation	.254**	.180**	1	.494**
	Sig. (2-tailed)	0.000	0.000		0.000
Company	Pearson Correlation	.373**	.221**	.494**	1
	Sig. (2-tailed)	0.000	0.000	0.000	

Note: Author output from IBM SPSS Software version 25
** Correlation is significant at the 0.01 significance level.

Table reflects the results of Pearson's correlation analysis which shows that all variables are significant at 0.001 level. Consumer, product and company characteristics are found positive and statically significant with purchase decision because their p value are less than 0.05.

4.4.2 Regression analysis:

Regression analysis is used to test the significant effect of independent variables on dependent variables. The results obtained from the analysis is

Table 8. Coefficient Table

	Unstandardized Coefficients(b)	Standard error	t	Sig.	VIF
(Constant)	1.384	0.263	5.265	0.00	
Consumer	0.152	0.038	3.972	0.00	1.056
Product	0.075	0.053	1.407	0.16	1.329
Company	0.354	0.064	5.543	0.00	1.348

Note: Author output from IBM SPSS Software version 25

From regression analysis consumer and company characteristics are significant because p-values are less than 0.05 but product characteristics is insignificant concerning purchase decisions. There is no presence of multicollinearity among independent variables because VIF is less than 5.
Thus the required regression model is

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Purchase Decision = 1.384 + 0.152 (Consumer Characteristics) + 0.075(Product Characteristics) +0.354(Company Characteristics)

4.4.3 ANOVA Table:

The ANOVA table shows the overall fit of the regression model. The overall fit of the regression model is significant because the p-value is less than 0.05. The variation in dependent variables explained by independent variables is only 18.3%.

Table 9 ANOVA Table

Source of variation	Sum of Squares	Degree of freedom	Mean Square	F	Sig.
Regression	24.095	3	8.032	28.183	0.00
Residual	107.726	378	0.285		
Total	131.822	381			

Note: Author output from IBM SPSS Software version 25
Note: R^2= 0.183 ie 18.3%, Standard error of estimate (Syx) =0.5338

Discussion

The descriptive mean values of friends and relatives is 4.35 with standard deviation is 0.952 among all other variables that means on an average friends and relatives have higher influence on consumer characteristics. Likewise, the mean value of mileage 4.60 with standard deviation 0.646 among all other variables that means mileage have higher influence on product characteristics. And the mean value of safety is 4.45 with 0.770 standard deviation that means mileage have the higher influence on company characteristics. And the mean value of I bought two-wheeler as public transport is not reliable is 4.13 with standard deviation 0.969 which means that it has higher influence on buying behavior of the gen z students.

The chi square test interdependence was performed to examine the relation between the associations between variables. The association between friends and relatives, television, local mechanics, internet and social media, showrooms, mileage, comforts, models, color, and pick up with marital status are significant and other variables are not significant with marital status. The association between peers' group and newspapers with religion are significant other variables are no significant with religion. The association between friends and relatives, hoarding boards, peers' group, resale value, brand image and television with occupation are significant and other variables are not significant with occupations. The association between internet and social media, reliability, price of vehicle with annual family income is significant and other variables are not significant with annual family income. The association between television, internal storage space, internet/ social media with mode of payment are significant and other variables are not significant with mode of payment. The association between showrooms, resale value with average daily travel are significant and other variables are not significant with average daily travel. The association between peers' group, newspaper, mileage with prefer to purchase are significant and other variables are not significant with other variables. The association between internet and social media, accessories, and brand image with no of days dealer visit before actual purchase are significant and other variables are not significant with no of days dealer visit before actual purchase. The association between safety,

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DOI: https://doi.org/10.55529/jecnam.42.19.32

style and aesthetics and peers' group with no of family member are significant and other variables are not significant with no of family members. The association between pick up with no of year two-wheeler using is significant and other variables are not significant with no of year two-wheeler using. And the association between safeties with purpose of two-wheeler purchase is significant and other variables are not significant with purpose of two-wheeler purchase. Consumer characteristics, product characteristics, and company characteristics variables were statistically significant at 5% level. Consumer characteristics is significant, with a p value of less than 0.05(i.e 0.000<0.05) according to hypothesis there is association between consumer characteristics and buying behavior. Product characteristics is significant, with p value of less than 0.05 (i.e 0.000<0.05) according to the hypothesis there is association between product characteristics and buying behavior. Company characteristics is significant, with p value of less than 0.05 (i.e 0.000<0.05) according to the hypothesis there is association between product characteristics and buying behavior. All the independent variables consumer and company characteristics have significant effect on purchase decision because the p value is less than 0.05 but the product characteristics is insignificant because the p value is more than 0.05. The correlation is highly significant with consumer, product and company characteristics and purchase decision because their p values are less than 0.05. It suggests that this independent variable has higher impact on buying behavior of students. This results consists with Thapa (2018), Ahluwalia, Singh, and Kumar Meet, (2023),Jagtap (2018) which reveals that there is significant relationship between demographic characteristics and buyers purchase Decision of two wheeler.

5. CONCLUSIONS

This research study concludes that consumer characteristics (friends and relatives, peers group, internet/ social media, showrooms) and company characteristics (brand image, fuel economy, driving comfort, pick up latest technology and maintenance cost) have significant impact on the purchasing decision of Gen Z's purchase decision. Similarly demographic variable, marital status occupation, no of family member, mode of payment, and numbers of dealer visit before actual purchase of two wheeler are significantly associates with consumer, product and company characteristics.

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Journal of Electronics, Computer Networking and Applied Mathematics
ISSN: 2799-1156
Vol: 04, No. 02, Feb-Mar 2024
http://journal.hmjournals.com/index.php/JECNAM
DOI: https://doi.org/10.55529/jecnam.42.19.32

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