

Impact of Digitization on Consumer Buying Behavior with Respect to Consumer Demographic Factors

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Abstract

The aim of this study is to answer a recently raised question that; what is the role of digitization on consumer buying behavior together with consumer demographic factors? In answering this, data was collected conveniently from 300 respondents in the twin cities of Pakistan. Statistical package for social sciences was used to conduct the statistical tests of independent sample t-test; one-way ANOVA, two-way ANOVA and simple regression. The hypothesis tests proved that digitization affected the consumer buying behavior directly and together with consumer demographic factors, meaning to say that the direct and interactive role of demographic factors were found to be crucial like age of consumers affects the relationship between digitization and consumer buying behavior. Moreover, the direct role of other variables such as gender and qualification were found to be significant. The study recommends that while, designing digitized advertisements and packages companies should focus on the Age brackets of their consumers. The study findings provide practitioners and scholars with valuable information. Also, limitations and future research recommendations were discussed.

Key Words: Digitization; Consumer Buying Behavior; Demographic Factors; Pakistan

Background of the Study

Mirjana Tankosic, Dragana Trifunovic (2015) discusses in their study the importance of digitization on consumer behaviors. They emphasize on the notion that business enterprises need to understand and take into account that how rapidly this change is taking place around the world and emphasized that marketing communication with the consumers has turned into almost a new entity of new business media strategy. But unfortunately, Pakistan has been marked by the DDI index as an emerging digital society. Thus, it can be argued that Pakistan is still in the very early stages of digitization Khan et al. (2015), however, the expansion of technology across the country is rapid GSMA (2017), and the response to this is positive which gives us the hope that Pakistan can compete in the region Telenor Pakistan (2016). However, Pakistan needs digitization to excel in the region and to some extent digitization has become a need for Pakistan because it is the need of the time. Like, unlike Pakistan many studies have been conducted in the western hemisphere regarding consumer buying behavior and its relationship with digitization.

On the other hand, there are many factors that could have been explored when discussing the relationship between digitization and consumer buying behavior but lesser studies showed the impact

of digitization on consumer buying behavior in Pakistan with the key role of consumer demographic factors.

Statement of Problem

The revolution of digitization in Pakistan is still thought to be in its early age, due to this, lesser studies have been conducted on digitization, consumer buying behavior and consumer demographic factors Khan et al. (2015).

Research Question

What is the impact of digitization on consumer buying behavior in the context of Pakistan with respect to consumer demographics?

LITERATURE REVIEW

Digitization

Digitization is a process that converts and changes the recorded data into a digital (i.e. computer-readable) format. This results in preserving and securing the data and information which can be a document or a sound, image or an object maybe forever as digitized information can be stored safely and securely indefinitely. It is usually done by converting an analog signal into digital signals which records the information in binary coding or binary numbers in ones and zeroes. This process of converting analog signals to numerical values or numbers is known as "digital convergence" or digitization. This process helps to keep the information intact and there is no loss or degradation of data which preserves the information. A sequence of digital integers can be modified into an analog output that approximates the unique analog signal. Such a transformation is referred to as a digital analog (DA) conversion.

The sampling rate and the number of bits used to signify the integers mix to decide how close such an approximation to the analog signal a digitization will be. Analog signals are continuous electrical signals; digital signals are non-continuous. Analog signal can be transformed to digital signal via ADC. Nearly all recorded music has been digitized. About 12 percent of the 500,000+ films listed on the Internet Movie Database are digitized on DVD. The handling of an analog signal becomes easy when it is digitized due to the fact the signal is digitized before modulation and transmission. Digitization of private multimedia, such as home movies, slides, and images is a popular approach of preserving and sharing older repositories. Slides and photos may additionally be scanned using an image scanner, however movies are more difficult.

Consumer Buying Behavior

Abhijeet Pratap (2017) and Aditya Juyal (2013) discuss in their articles that how the consumer buying behavior is affected by the demographic factors such as age, gender etc. They further elaborate this concept by saying that it may vary from person to person and can be based upon the gender such as male and female and it is important to notice that variation is there regardless of gender. Other demographic factors that mainly affect the consumer buying behavior are the income groups, age brackets and qualification or education level the person has. This study is different in a way that it analyzes the interactive role of consumer demographic factors analyzing them independently that how they are affected in context with digitization hence altering the consumer buying behavior with it. There is a distinctive distinction that can be seen very easily that how the buying behavior is different

in every aspect of the gender, age, income and education level.

Each factor dictates its own terms in its own brackets how a consumer reacts to make a buying decision when these factors are at play. We can observe that a person having lesser income prefers utility over quality or quantity and his/her main aim is to fulfill the needs while the person who has higher income levels does not prefer utility and satisfies his/her wants rather needs. Saying this we should also keep in mind that there are countless other internal and external factors at play that directly or indirectly influence the buying behavior of the consumer as some can be seen clearly while others are hard to observe such as the thinking process of a consumer. In this regard let's not forget that one of the main factors influencing the buying decisions is age because with age the needs and wants change. A child's needs are different from a young person while the needs of an older person are different from the adult.

Impact of digitization on Consumer Buying Behavior (CBB) in relation to social media

The rapid convergence and impact of social media, visuals advertisements and e-commerce are creating this chain reaction of this shift in consumer shopping Aftab et al. (2016) experience (consumer buying behavior), presenting the opportunities that were thought to be impossible before. The key to finding success and an achievement is finding a way to have an effect on these choices via such marketing appraisals that are visually attractive and developing cohesive experiences that combine social media, television and other digital platforms Ahmed Malik and Hadi (2019) such as e-commerce, e-marketing, kiosks, digitized mode of payments (online transactions) (Heini Lipiäinen (2014).

Role of digitized platforms in Pakistan

The concept of user generated content (UGC) is rather significant. Not much thought was given to this idea as the organizations tended to be stuck with the older form of advertisement and marketing campaigns. With the advent of social media it was clearly seen that there was need for user generated content which will not be made by the company itself but rather the users or the consumers will do the trick for the company by advertising for them. Following are the social networking websites that are used as influencing mechanism to motivate and influence the buying behavior of any potential consumer. The most platforms that are used in Pakistan are as follows:

- Facebook
- Twitter
- Instagram
- YouTube
- WhatsApp

The role of these social network and blogs is vital Ahmed Malik and Hadi (2019) and it is important to take them into account seriously in business perspective. It has the potential to influence buying behavior that no other medium can have. Now a days video sharing, picture posting and tweeting is the way of life and it has the business potential of trillions of dollars.

Hypothesis of Study

- **H1:** Digitization affects Consumer Buying Behavior.
- **H2:** Impact of digitization on CBB and is affected by Age.

- **H3:** Impact of digitization on CBB and is affected by Gender.
- **H4:** Impact of digitization on CBB and is affected by Qualification.
- **H5:** impact of digitization on CBB and is affected by Income.

Theoretical Framework

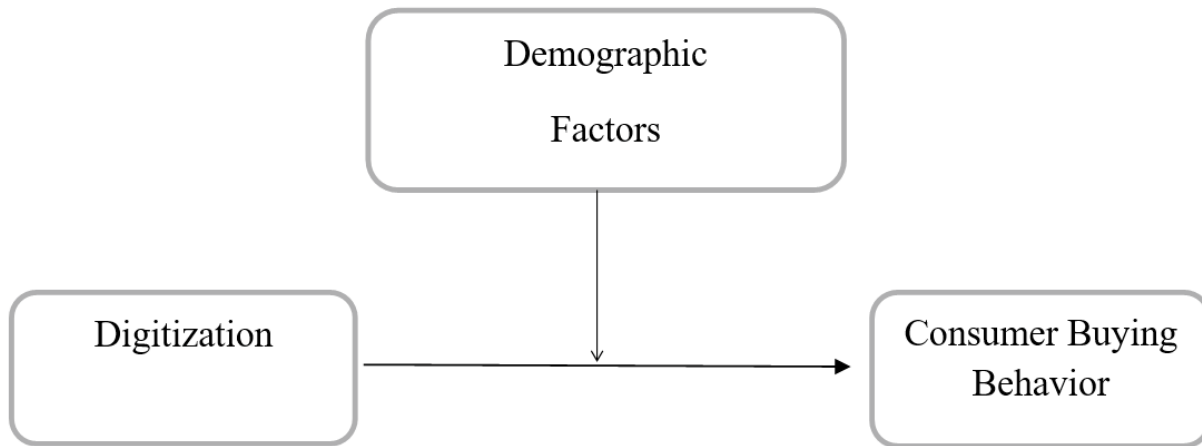


Figure 1: Theoretical Framework

RESEARCH DESIGN AND METHODOLOGY

Quantitative research approach was used in this research, data was conveniently collected from 300 consumers in the twin cities of Pakistan (i.e., Rawalpindi and Islamabad) via self-administered questionnaires. Moreover, the respondents were guaranteed that the data being collected is solely for the purpose of this study. The research instruments used in this study were adapted from Sultan and Uddin (2011); Narayanan (2014) and Aggrawal (2010).

Descriptive statistics

The table below shows a total number of 300 respondents that participated. Majority of the respondents were females comprising of 54.3% (n=163) out of the total. Male respondents conceded of a total sum of 45.7% (n=137), about 8.6% lesser than the female respondents.

Table 1: Gender Statistics

Gender	F	%	Cumulative %
Male	137	45.7	45.7
Female	163	54.3	100.0
Total	300	100.0	

The data obtained depicted in the table below shows us that 125 respondents between age of 20-30 years formed the majority with 41.7% (n=125). The second most majority among the respondents was the age bracket of 30-40 years old comprising of 91 respondents with 30.3% (n=91). Respondents of 15-20 years of age made 11.3% (n=34) of the total while 25 respondents each of 40-50 years 8.3% (n=25) and 50-above 8.3% (n=25) years of age made it to the total of 300 respondents.

Table 2: Age Statistics

Age	F	%	Cumulative
15-20	34	11.3	11.3
20-30	125	41.7	53.0
30-40	91	30.3	83.3
40-50	25	8.3	91.7
50-above	25	8.3	100.0
Total	300	100.0	

The majority of 116 respondents comprised of graduated subjects with 38.7% (n=116). 97 respondents had a masters with 32.3% (n=97) of the total 300 respondents. Respondents which had an education level of high school comprised of 15.3% (n=46). 37 of the respondents had gone to college making them 12.3% (n=37) of the total. Only 4 of the respondents were or had the doctorate or PhD level of qualification making them 1.3% (n=4) of the total.

Table 3: Qualification Statistics

Qualification	F	%	Cumulative
High School	46	15.3	15.3
College	37	12.3	27.7
Graduate	116	38.7	66.3
Masters	97	32.3	98.7
Doctorate/PhD	4	1.3	100.0
Total	300	100.0	

As demonstrated in the table income statistics below majority of the respondents which accumulate to 110 fall into the bracket of 35,000-45,000 PKR income per month respectively. They make up majority percentage of 36.7% (n=110). The second most majority consists of 30.7% (n= 92) respondents who had the income level between 45,000-55,000 PKR. While 49 of the respondents which accumulated to 16.3% (n=49) had an income level of above 55,000 PKR per month. 37 of the respondents making up of 12.3% (n=37) had an income level between 15,000-25,000 PKR. The least number of respondents fell into the income bracket of 25,000-35,000 PKR and accumulated to 4.0% (n=12).

Table 4: Income Statistics (PKR, 000/Month)

(PKR, 000)	F	%	Cumulative
15-25	37	12.3	12.3
25-35	12	4.0	16.3
35-45	110	36.7	53.0
45-55	92	30.7	83.7
55-above	49	16.3	100.0
Total	300	100.0	

Inferential statistics**Table 5:** Simple Regression

		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
	(Constant)	2.778	0.128		21.631	.000
	DIGITIZATION	0.084	0.045	0.108	1.871	.062*

The standard error of digitization in the table of coefficients is 0.045 and beta value lies in the marker of 0.108. The t-value stands at 1.871 while the significance of the constant is 0.000 which is very significant and the significance value of digitization is 0.062, less than 0.5 therefore very significant too.

Table 6: Digitization-ANOVA (one-way)

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5.239	4	1.310	2.563	.039
Within Groups	150.758	295	.511		
Total	155.997	299			

This table above shows that the level of significance is at 0.39 which is far lower than 0.5 which clearly shows that age factor is quite close to changing consumer buying behaviors and is directly affected by digitization

Table 7: Univariate Analysis of Variance (Age)

		Value Label	N
DCAT	.00	LOWD	149
	1.00	HIGHD	151
Age [Years]	1	15-20	34
	2	20-30	125
	3	30-40	91
	4	40-50	25
	5	50and Above	25

Table 8: Tests of between-subjects effects CBB1

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	13.514 ^a	9	1.502	5.356	.000
Intercept	1241.699	1	1241.699	4428.764	.000
DCAT	.164	1	.164	.585	.445
Age	4.442	4	1.110	3.961	.004
DCAT * Age	7.804	4	1.951	6.959	.000
Error	81.308	290	.280		
Total	2039.020	300			
Corrected Total	94.822	299			

The level of significance stands at 0.000 indicating that with age factor consumer buying behavior is directly impacted by digitization and F value stands at 6.959. This result proves that age demographic has the highest significance and importance among the chosen demographic factors when seeing the effect of digitization on consumer buying behavior.

Table 9: Tests of between-subjects effects CBB2

Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	1.216 ^a	3	.405	1.282	.281
Intercept	1905.859	1	1905.859	6026.687	.000
DCAT	.901	1	.901	2.850	.092
Gender	.310	1	.310	.979	.323
DCAT * Gender	.151	1	.151	.478	.490
Error	93.606	296	.316		
Total	2039.020	300			
Corrected Total	94.822	299			

This table shows us that the level of significance for gender is 0.490, lower than 0.5 therefore denoting that digitization does have an effect on consumer buying behavior among the gender of male and female.

Table 10: Tests of between-subjects effects CBB3

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	5.244 ^a	8	.656	2.129	.033
Intercept	653.210	1	653.210	2121.996	.000
DCAT	.585	1	.585	1.899	.169
Qualification Education	3.930	4	.982	3.192	.014
DCAT * Qualification Education	.554	3	.185	.600	.616
Error	89.578	291	.308		
Total	2039.020	300			
Corrected Total	94.822	299			

The table above depicts the significance level of qualification at 0.616 slightly higher than the par value of 0.5. This shows us that qualification levels do not necessarily affect the buying behaviors of consumers when it comes to digitization. The crux being that qualification levels have lesser or very marginal effect by digitization on the consumer buying behavior.

Table 11: Tests of between-subjects effects CBB 4

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	2.592 ^a	9	.288	.906	.521
Intercept	1050.256	1	1050.256	3302.337	.000
DCAT	.753	1	.753	2.368	.125
Income PKR	.619	4	.155	.486	.746
DCAT * Income PKR	1.199	4	.300	.942	.440
Error	92.230	290	.318		
Total	2039.020	300			
Corrected Total	94.822	299			

The table above shows us that income has an effect by digitization on consumer buying behavior. The level of significance here is 0.440 which is less than 0.5. It shows us that income does affect the buying behavior of the consumers.

DISCUSSIONS AND CONCLUSIONS

The descriptive statistics prove that Age and Gender are a binding factor for Digitization in order to have altered consumer buying behaviors. This research work has helped to develop a thinking that there is a big scope of digitization in Pakistan and its magnitude and width is big. The social media websites are a part of a bigger picture of digitization in Pakistan and are no longer a time pass for social interaction; they are a part of the digitization process that is rapidly covering the urban sectors of Pakistan. These social media tools have followers in millions now and rapidly increasing in numbers. If the scope of the study would be increased such as data collection from other parts of the country as well than surely the theory be further thumped that digitization is sweeping across the country changing the buying behaviors of the consumers.

If Age acts as a scale it can be used to know that which Age brackets have a higher response rate towards Digitization which alters their buying behavior. The companies can use this info to tap deeper into the market and get growth in niche markets which were untapped before. As the world gets more and more digitized even the middle aged people and upper middle aged people tend to fall towards digitization more and more which is ultimately more and more beneficial for the companies. The combination and relationship of digitization with the demographic factor of age is quite significant and can certainly increase the sale for the companies and organizations that dig this aspect deeper and alter the consumer buying behavior of their consumers. Not only age but gender also plays a key role in affecting

consumer buying behavior which is directly impacted by digitization. This study has shown us that females have a higher tendency of changing buying behaviors when it comes to digitization and they are more prone towards digitization than males which is significant in its own way in the context of Pakistani market.

The point of focus here is that companies need data to fill the gaps of the market that which Age brackets are more respondent to their Digitization innovations rather than the number of consumers in total. This will help them to get a better overview of which consumers to more focus on and get their attention to realize the full potential of each segment of the market. Not long ago companies used to focus on the buying behaviors of the younger population and how their needs and buying behaviors alter, nevertheless ignoring the fact that every Age bracket is a market of its own and needs to be tapped to its full potential and dividing the market into Age segments helps to demonstrate which segments have the tendency to grow further and which Age segments of the market are not being utilized to their full potential and this study clearly shows that.

The study proves that companies are missing the consumer potential of the 40years and on Age bracket and consumers that fall into this Age segment are more positively respondent towards digitization than other Age groups as per say. Little research work has been done on this segment while many research articles are found on the relationship of digitization and consumer buying behavior while the demographics especially the age are just taken into account as a means of demographic statistics and nothing more. In context of Pakistan even lesser work has been done in the topic on focus here as Pakistan is still in the developing stages of the economic digitization and its consumer base has a lesser know how of digitization than the consumers of the developed states. Yet the interest is there and very much sufficient data proves it. For any country moving steadily towards Digitization with a swift pace is essential especially in today's world and along with younger generation the middle aged generation and its potential shall never be under estimated and this study proves that notion of changing consumer buying behaviors in today's world.

Conclusions

The findings of study convey that the data that was gathered shows that the selected sample were rational and were logical enough to draw a conclusion. It was further analyzed to create general conclusion that demographics especially Age demographic and Gender demographic had an impact on consumer buying behavior regarding digitization. The results of the research work give important constructs about the relationship of digitization and CBB. The study has consequently presented some evidence that not all the demographics that were selected for the purpose of this study have had an impact on the buying behavior except the Age demographic and gender demographic and especially the age bracket between 30-40years, 40-50years and 55 onwards and females. Now in a developing country like Pakistan it is a huge finding that middle aged people and females tend to have more changing buying behaviors due to digitization than the youth or younger generation or males.

The current study has provided a better understanding of the impacts of digitization on consumer buying behavior in regard to the demographics that were involved in this study. Age demographic and Gender demographic had an impact on consumer buying behavior regarding digitization. The results of the research work give important constructs about the relationship of digitization and CBB. The study has consequently presented some evidence that not all the demographics that were selected for the purpose of this study have had an impact on the buying behavior except the age demographic and gender demographic.

The descriptive statistics also prove that consumer behavior is affected by digitization affecting all the demographics in different and unique ways. This reflects that demographics will not be a hindrance in bringing technological and digitization revolution in Pakistan, in fact they will cushion it so the organizations should use social media for better results and increased customer base all around because consumers are easily changing their buying behavior due to it. The study has helped out to find the focusing or key areas for the companies like the telecom sector to focus and tap the market of the middle aged consumer and females consumers because they are the ones most likely to be affected by the changes in the technological world and their buying behaviors are the most vulnerable to the changing buying behaviors. Income demographic had a marginal effect on the consumer buying behavior This could result in Pakistan being at the forefront of technological advancement among all the other South Asian nations. The study shows that there is a positive impact of digitization on consumer buying behavior.

Research Implications

This research will help to fill the gap of the required literature to study the implications of the digitization as fewer such studies have been conducted in this regard. Better understanding of consumer buying behavior and its cultural and societal impact due to digitization will help to understand what further implications are needed to be done in this regard to further evaluate the demographics which this study tried to do. Remarkable growth in the urban areas and access of technology even to the older segment of the demographics regardless of age or qualification is a sign that cannot be ignored. It is the sign of better understanding of digitization and its implications on the market as a whole.

Organizations and companies should focus on the demographic market segments than the geographic market segments as demographic segments provide more insight into the direction the market is headed and what segments are yet to be found out and their potential tapped. This blend of demographics and digitization helps to understand the consumer psyche that what drives the buying behavior of the consumers.

Limitations and Future Research Opportunities

This research work had its limitations in various factors. The study was limited to:

- The study was limited to investigate and find out the impacts of digitization on consumer buying behavior with respect to demographics only while there are many other aspects that need to be investigated and addressed such as geographic constraints, technology constraints, culture and financial viability constraints.
- The study touched the subjects of demographics in detail and also discussing the subject of social media including the subject digitization with respect to its impact on CBB but the discussion as well as the impact of these factors was narrowed down to limited discussion.
- The sample limitation that was due to geographical limitations was there as the study only depicted the sample and its findings from the cities of Islamabad and Rawalpindi. Researches need to be carried out in other parts of the country and other cities as well to gather the full scale of the impact of digitization on consumer buying behavior with respect to other factors as well other than the demographics.
- Another limitation was that the survey conducted and the data collected was only from the urban areas, where as rural studies and surveys should also be conducted to grasp the level of impact of

digitization on consumer buying behavior.

- Due to limited resources and time the sample size was limited. A bigger sample size would have resulted in ample data and a more thorough study could have been conducted.
- Other advanced statistical tests and techniques as well as quantitative effects will improve the overall quality of the model and implications of the study.

Recommendations

- Bigger the sample size from different parts of the country, better the results. It is recommended that sample size be increased to 500-1000 for future researches.
- In light of this study companies need to expand their portfolio of products and services demographically to capture more gains from the market. Marketing managers need to take this in loop that demographics play a very key role about the perception of products and services when devising a marketing strategy.
- Policy makers need to identify the potential gains in the market with respect to demographics and devise consumer friendly policies that in return can help in better understanding of buying behavior.
- Several questions still remain to be answered regarding digitization and consumer buying behaviors as the study was restricted to calculate the role of demographics only. Further research can be carried out to calculate or see the overview of the impact of digitization on industry, social media and other factors on consumer buying behavior. The variable of digitization was only tested on consumer buying behavior. Further research can be done using other models and variables to know the impact of digitization.

REFERENCES

- Abhijeet Pratap (2017, July). Effect of Demographic Factors on Consumer Behavior: Age, sex, Income and Education. Retrieved from <https://www.cheshnotes.com/2017/07/effect-of-demographic-factors-on-consumer-behavior-age-sex-income-and-education/>
- Aditya Juyal (2013, December). Effect of Demographic Factors on Consumer Buying Behavior of Durable Goods. *Indian Journal of Marketing* 43(12):24-33
- Ahmad, Iftikhar and Aatur, Rahman, Chowdhary (2008) "Electronic Customer Relationship Management (Ecrm)" Examined Customers' Perception of Value from Ecrm Features On Airline E-Ticketing Websites" Master Thesis. *Lulea University of Technology*, .Available at www.essays.se.
- Alam, A., Malik, O. M., Hadi, N. U., & Gaadar, K. (2016). Barriers of Online Shopping in Developing Countries: Case Study of Saudi Arabia. *European Academic Research*, 3(12), 12957-12971.
- Ahmed Malik, & Hadi, N. U. (2019). Inspirational Factors of Electronic Word of Mouth: A Case of Social Networking Sites. *Journal of Managerial Sciences*, 13(2), 254-265.
- Amit Aggrawal. (2010, June). Impact of Consumer Perception on Buying Behavior in Apparel Retail Sector, with special reference to Selected Indian Cities. *Dr. D. Y. Patil University, Department of Business Management*. Navi Mumbai.
- Andrea Sartori. (2015, March). Towards an Intellectual History of Digitization: Myths, Dystopias, and

Discursive Shifts in Museum Computing. *University of Florence, Italy. Digital Scholarship in the Humanities. Published by Oxford University Press on behalf of EADH.*

- Anjali. (2017, June). A Study on Impact of Digital Marketing on Customer Buying Behavior. *international journal of emerging issues in management and technology*. (ISSN NO: 2456-2106).
- Arjun Mittal. (2013). E-commerce: It's Impact on consumer Behavior Student Delegates. Delhi School of Economics. Delhi University. *Global Journal of Management and Business Studies*. (ISSN 2248-9878 Volume 3, Number 2).
- Bagozzi, R. P., & Dholakia, U. M. (2002). Intentional social action in virtual communities. *Journal of interactive marketing*, 16(2), 2-21.
- Booz & Company. (2013, April). The Varying Effects of Digitization on Economic Growth and Job Creation – A Global Perspective. Strategyand.pwc. Retrieved from https://www.strategyand.pwc.com/me/home/press_media/management_consulting_press_releases/details/52364755.
- Bradley, S. P., & Bartlett, N. (2011). Social networks: The portals of Web 2.0. Cloud Services Create “digital businesses”. Cloud Republic. Guide to Digital. Retrieved from <https://www.cloudrepublic.com/digitalization-and-its-impact-on-the-economy/>.
- David W. Helin and Stephanie Sadowski. (2017). Banking on Value Rewards, Robo-Advice and Relevance. North America Consumer Digital Banking Survey. *Accenture consulting*. Retrieved from www.accenture.com/consumerbankingsurvey.
- Davis, J. (2010). The new conversation: taking social media from talk to action. *Harvard Business Review Analytic Services*, 1(24), 2-18.
- Dr. Ahmad Chaudhry. (2014, September). Does Culture Influence Our Consumer Behavior? If so, How? Strategic Management & Analytics - Kaiser Permanente. Retrieved from <https://www.linkedin.com/pulse/20140908174823-354556068-does-culture-influence-our-consumer-behavior-if-so-how/>
- Drèze, X., & Hussherr, F. X. (2003). Internet advertising: Is anybody watching? *Journal of interactive marketing*, 17(4), 8-23.
- ERNST&YOUNG. (2011). The digitization of everything How organizations must adapt to changing consumer behavior. *Ernst & Young LLP*.
- European Travel Commission. (2010). World usage patterns & demographics. ETC-New Media Trend Watch.
- Hopkins, W. (n.d.). Quantitative Research Design. Sports.org.sci-hub.bz. Retrieved from <http://sports.org.sci-hub.bz/jour/0001/wghdesign.html>
- George Asamoah. (2012). Factors Which Influence the Buying Behaviours of Customers with Multiple Regular Customer Cards.
- Girshwyn Reddy. (2016, November). Digital Marketing Impact on the Consumer Decision Making Process in Nike's Customer Retail Operations in South Africa. *Gordon Institute of Business Science. University of Pretoria*.
- Gwo-Guang Lee. Hsiu-Fen Lin. (2005). Customer perceptions of e-service quality in online shopping.

- Department of Information Management, National Taiwan University of Science and Technology, Taipei, Taiwan. International Journal of Retail & Distribution Management (Vol. 33 No. 2, 2005 pp. 161-176 q) Emerald Group Publishing Limited (0959-0552 DOI 10.1108/09590550510581485).*
- Haiyan, C. (2010, November). An impact of social media on online travel information search in China. In *Information Management, Innovation Management and Industrial Engineering (ICIII), 2010 International Conference on (Vol. 3, pp. 509-512)*. IEEE.
- Halttunen, Veikko. (2016). Consumer Behavior in Digital Era. General Aspects and Findings of Empirical Studies on Digital Music with a Retrospective Discussion. *University of Jyväskylä.* (ISSN 1456-5390; 235) ISBN 978-951-39-6641-6) (nid.) (ISBN 978-951-39-6642-3 (PDF).
- Hanlon, B., & Larget, B. (2011). Samples and Populations. Retrieved from <http://www.stat.wisc.edu/~st571-1/03-samples-4.pdf>
- Heinrich C. Mayr, Martin Pinzger, Liliane Ableitner, Samuel Schöb, Verena Tiefenbeck. (2016). Digitalization of Consumer Behavior – A Descriptive Analysis of Energy Use in the Shower. Retrieved from <https://www.researchgate.net/publication/308900069>.
- Hira Saeed. (2017). Reasons why Digital Pakistan is the need of time. Retrieved from <https://pakwired.com/reasons-digital-pakistan-need-time/>
- How to Interpret Regression Analysis Results: P-values and Coefficients (2013, July) Retrieved from <http://blog.minitab.com/blog/adventures-in-statistics-2/how-to-interpret-regression-analysis-results-p-values-and-coefficients>
- Heini Lipiäinen. (2014). Digitization of the Communication and its Implications for Marketing.
- James Manyika, Susan Lund, Jacques Bughin, Jonathan Woetzel, Kalin Stamenov, Dhruv Dhingra. (2016, February). Digital globalization: The new era of global flows. Report *McKinsey Global Institute*. Retrieved from <https://www.mckinsey.com/business-functions/digital-mckinsey/our-insights/digital-globalization-the-new-era-of-global-flows>
- Jan Stryjak, Henry James. (2017). Country overview: Pakistan A digital future. GSMA. Retrieved from <https://www.gsma.com/mobilefordevelopment/programme/connected-society/country-overview-pakistan-a-digital-future/>.
- John N. Fotis. (2015, May). The Use of Social Media and its Impacts on Consumer Behaviour: The Context of Holiday Travel. *BOURNEMOUTH UNIVERSITY*.
- Jue Chen. (2012). A Study Investigating the Determinants of Consumer Buyer Behaviour Relating to the Purchase of Organic Food Products in Urban China. *Faculty of Business and Enterprise Swinburne University of Technology*.
- Ke Zhao. (2015). Research on Consumer Online Purchasing Decision and its Influencing Factors in China. *TURKU UNIVERSITY OF APPLIED SCIENCES*
- Laura Hagelberg. (2017, October). Consumer's Attitudes towards Fashion and The Effect of Digitalization on Their Fashion Consumption. Department of International Business Management *Oulu Business School UNIVERSITY OF OULU*.
- Mark Vajčner. (2008). Context and Digitization: Towards a New Model for Archives. *Edith Cowan University*.

- Mrs. K.R. Mahalaxmi. P. Ranjith. (2016,March). A Study on Impact of Digital Marketing in Customer Purchase Decision in Trichy. *IJRST –International Journal for Innovative Research in Science & Technology*(|Volume 2 | Issue 10 |ISSN (online): 2349-601).
- Muhammad Ahsan. (2009,June). DIGITAL DIVIDE AND DIGITIZATION INITIATIVES IN PAKISTAN: A BIRD'S EYEVUEW. *Quiad-e-Azam library, Lahore, Pakistan*.
- Muhammad Umar Sultan. Nasir Uddin. (2011). Consumers' Attitude towards Online Shopping. *Högskolan på Gotland VT2011*.
- Nic Newman. (2014). Newman Research Associate, *Reuters Institute for the Study of Journalism. University of Oxford*
- Number of social media users worldwide 2010-2020 | Statista. (2016). Statista. Retrieved from <https://www.statista.com/statistics/278414/number-of-worldwide-social-network-users/>
- Oliver Tan. (2018, March). How Digital Convergence Changed Consumers. CEO ViSsenze. *Forbes Technology Council*. Retrieved from <https://www.forbes.com/sites/forbestechcouncil/2018/03/07/how-digital-convergence-changed-consumers/#7922f57f73ff>.
- Patrice Muller, Mette Damgaard, Annabel Litchfield, Mark Lewis, Julia Hörnle, (2011) Consumer behaviour in a digital environment. DIRECTORATE GENERAL FOR INTERNAL POLICIES POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY INTERNAL MARKET AND CONSUMER PROTECTION. *European Parliament. IP/A/IMCO/ST/2010-08*
- Per Andersson, Staffan Movin, Magnus Mähring, Robin Teigland, Karl Wennberg (2018) Managing Digital Transformation. *Stockholm School of Economics Institute for Research (SIR)*. ISBN: 978-91-86797-31-7
- Radhika Narayanan. (2014, April). The Impact of Factors Influencing the Buying Behaviour on the Development of Marketing Strategies for Luxury Fashion Products A Study of the Urban Youth in Select Cities of India. *Department of Business Management D.Y. Patil University, Navi Mumbai*.
- REALISING DIGITAL Pakistan. An Internet not for the few, but for the many. (2016, January). Retrieved from <https://www.telenor.com/telenor-pakistan-releases-landmark-digital-pakistan-report/>.
- Ruby Roy Dholakia, (1999), "Going shopping: key determinants of shopping behaviors and motivations", *International Journal of Retail & Distribution Management*, (Vol. 27 Iss 4 pp. 154 – 165).
- Saima Khan Dr. Shazia Khan Mohsina Aftab. (2015, June). Digitization and its Impact on Economy. *International Journal of Digital Library Services*. (Vol.5 Issue-2). (ISSN:2250-1142 (Online), ISSN 2349-302X (Print)).
- Salman Siddiqui. (2017, November). Pakistan Fast Adopting Digital Transactions. *The Express Tribune Business*. Retrieved from <https://tribune.com.pk/story/1550223/2-pakistanis-fast-adopting-digital-transactions/>.
- Saquiab Ahmad. (2017). Creating Momentum For Digital Transformation In Pakistan. Retrieved from <https://www.digitalistmag.com/digital-economy/2017/12/19/creating-momentum-for-digital-transformation-in-pakistan-05642750>
- Scott, D. (2016). *The New Rules of Marketing and PR, How to Use Social Media, Blogs, News Releases,*

Online Video, & Viral Marketing to Reach Buyers Directly. Gildan Media on Dreamscape Audio; Unabridged edition.

- Syed Afzal Moshadi Shah. Muhammad Tahir. Aqeel Ahmed Soomro. Shehla Amjad (2017). Consumers Ethics in Pakistan: Empirically Examining the Muncy & Vitell Scale. *Journal of Managerial Sciences*. (Volume XI Number2).
- Tanja Lautiainen. (2015). Factors affecting consumers' buying decision in the selection of a coffee brand. *Saimaa University of Applied Sciences Faculty of Business Administration, Lappeenranta Degree Programme in International Business*.
- Tarinee Chaipradersak. (2007, July). THE INFUENTIAL FACTORS ON CONSUMERS' PURCHASING DECISION IN BANGKOK PET RETAILING BUSINESS. *Master of Business Administration in Management School of Management Shinawatra University*.
- Thomas Jakob. (2017, May). Asia leads the world in digital transformation. Retrieved from <https://blog.bosch-si.com/digital-transformation/asia-leads-the-world-in-digital-transformation/>
- TJH Research and Strategy. (2011, April). A Survey of Consumer Behavior and Perceptions. *Findings From a Spring 2011 Survey of Primary Household Food Shoppers in Western North Carolina*.
- Tobias Olsson and Emil Uhlin. (2015). Digitalization and New Buyer Behavior is Changing B2B Relationship Marketing. *Department of Production Management. Lund University*.
- Understanding the impact of digitalization on society. In the face of huge societal challenges, how can digital transformation make a positive contribution? Retrieved from <http://reports.weforum.org/digital-transformation/understanding-the-impact-of-digitalization-on-society/>
- Vermeulen, I. E., & Seegers, D. (2009). Tried and tested: The impact of online hotel reviews on consumer consideration. *Tourism management*, 30(1), 123-127
- Weckman, Nina. (2009, June). Customer Buying Behavior Case Study: Algol Technics. *Laurea University of Applied Sciences*.
- Xin Guo. Weijun Yin. (2014, May). Consumers' Purchasing Behavior - The impact of product innovation. *School of Economics and Management . Department of Business and Administration Lund University*.
- Yongfu Huang. (2017, August). How is digitalization changing Asia?. ASIA PACIFICE-COMMERCE. Retrieved from <http://www.atimes.com/digitalization-change-asia/>
- Mirjana Tankosic, Dragana Trifunovic. (2015). The Influence of Digitization and New Media on the System of Companies Marketing Communication, Consumers and Business Enterprises.