



Online Deal Portal: Factors to Consider for an Effective Design

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Abstract: In this research paper we discuss about the relationship between online deals portals and consumers and how it affects an efficient deals portal design. Consumers from all over the globe now order products online, in order to help people, save time and money. The deal portals make this possible by finding best online deals easily. The main purpose this work is to propose factors of design that an online portal should have and will attract consumers using it to find the best deal quickly. A portal that collect deals and discount offers on daily basis from all over the world should satisfy many important factors, such as customer previous online experience, transaction secureness, site usefulness and also product attributes. An online survey was done and it was found that portal ease of use, usefulness and product & company attributes are main influencing factors for making an online purchase decision by a consumer. Also, an analysis of web portals of deal offering sites is given with details of factors that e-commerce site designers should consider while developing a worldwide deals portal site.

Keywords: online, shopping portal, consumers, sales, discount and online shopping

I. INTRODUCTION

The influx of internet in general and smart phones in particular has increased the levels of communication and informational exchange. The use of smart phones with internet has produced convenience and ensured ability to transmit information at high speed with robust capacity. The concept of shopping online has gained importance in the general public and the demand for online shopping is set to increase substantially in the future [1].

The internet has served as an effective communication medium for consumers to find out information about various items in terms of buying and also drawing parallels with other brands have to offer to overall consumers [2]. Market for online shopping among European Union member Countries has shown immense growth opportunity and potential. From 2014 to 2015, the consumers who used internet for shopping show an increase from 22% to 34% among all the European Union Member Countries. The study in [3], containing respondents who did purchase of products or services online, shows market is mature in advanced countries, which consists of countries like Germany, United Kingdom and Nordic countries, the of online costumers is approximately at 80%. It was also examined that among whole Concentration of online customers, the majority were mostly young people who spend most of their money on shopping online.

The young individuals tend to make their choices using various mediums depending on their socialization needs, personal identification needs and personalities [4]. The young consumers were over 70% of the age group purchasing

product or services online. The age group that showed increased level of online shopping was from the age group 40 to 49 years [5].

In report for the commission of European communities, leisure and travel places were found to be prominent choice among individuals for online shopping which constitute 42% of the age group and the next was electronic items which constitute 25% of young individuals who purchased products on online mediums [6]. The other potential advantage of online shopping is that customers can get their preferred products or services at their door steps which save them a lot of time in terms of physically going to a marketplace and making a purchase [7]. To make a purchase through online stores for any product provides considerable advantage in terms of reduction in time and cost of visiting a marketplace to buy a product [8]. For supplier also, the internet become a unique relationship between consumers and suppliers, and for consumers, Internet has become gaining up to date information on products and discounts [9]. Online Deal and discount portals are also become very popular these days., many retailers all over the globe such as Walmart, Hyperstar, and Bigbazar use discount deals to attract consumers [10].

In conclusion, the influx of internet has brought the novel concept of online shopping to fore and has made items a very essential part of everyone life especially young people. The field of electronic is now going through rapid stage of evolution due to increase in consumption of products on daily basis.

II. LITERATURE REVIEW

We will discuss the three key factors affecting consumer choices: behavior, technology, and product perception, as identified in the studies [11-12].

A. Consumer Behaviour

[13-15] investigated the elements affecting purchasing persistence of any deal and discount offer online. One thousand seventy seven participants were surveyed through questionnaire, multiple analyses procedures were used and the results said that influencing elements on consumers while purchasing online are Deals and Discount offers, Reliable Enterprise, Reliable brand, Refer from friends and family, Product guarantee, Payment safety, user friendly home page, vast varieties of products and companies and shopping accessibility, cost cutting products, engaging and revealing, clever and surfer over the internet. [14] studied possibility of deal aggregators sites, where many deals are combined from many sites in a single portal's features site.

[16] Investigated the online consumer behavior in Pakistan for electronic products. For the methodology, survey questionnaire was used, and t-test was used to evaluate the raw data. Sample comprised of 240 active internet consumers who filled the questionnaire, and the findings were that consumer do concern about prices, accessibility and time saving. They show that consumer in Pakistan are concerned about prices and deal and discount offers and saving of time as much as they can while shopping online. Major choice influence on people indecision making is the best price offer.

B. Technology Factor

To ascertain the factors in web quality used four empirical evidences to elaborate on the important elements related to quality of web and how it can have impact on customer buying intention and attitude. A study put emphasis on the creation of a web portal for Business to Consumer (B2C) in which he found three important issues such as convenience for users to use the portal, time consumed in surfing the page and use of splendid visual to lure customers [17]. The focus should be more on ensuring robust systems that ensure maximum security for customers while developing a particular web portal [18].

Studies [19-23] revealed that design of web portal into should focus different factors such as simplicity, motivator and media richness. According to [19] five belief constructs "perceived price, perceived service, information interpersonal influence, self-efficacy and resource" may influence the web design elements. As revealed in [21] the simplicity factor includes elements that are linked to processes and service side of web portal. In terms of web designing it could relate to consumer privacy and their concerns in terms of transaction security, informative content and convenient information in formulating a website. Motivator factors consist of five elements that include web appearance, process of web content, empowerment, reliability and entertainment. Another research [20] added a new element into the earlier two categories, media richness, that is enriching content to give more prominent visual appeal to audience.

C. Product Perception Factor

The online shopping behavior of consumers is determined by a number of product features which includes various goods, quality of product, product uncertainty, product accessibility, product presence requirement, social presence requirement and product customization [24-28].

The first step is that product is classified by using difference between most searched items against most renowned goods [24]. The information on prices could determine that how much price sensitive a customer is for undifferentiated products and services [25]. A study [26] identified that increase in range of products made accessible and available in the online market can provide advantage for consumers and produce numerous gains. The researchers in [27] mention an example on online book store where the number of books available at Amazon is quite big in terms of the number of books available on the Barnes & Noble store and much greater than ordinary bookstore. They figured out that increase in the range of products for online bookshops did saw an increase in customers and revenue.

For our research, the specific emphasis on electronic product market in terms of online shopping as it concerned with product examination. To focus on the product perception have divided them into four different factors such as product quality, price, availability and variety.

III. MATERIALS AND METHODS

To study about deals portals design, its features, and what consumer think about the idea of deals and discount portal and on which types of products and brands they want with deals and discount offers. The author will use traditional study by mathematical and statistical means a "quantitative research" as primary data. While many studies previously done by many researchers on "online consumer behavior". So in order to study about consumer behavior and factors influencing on consumers, the author will track secondary data.

A. Research Instruments

In this study research instruments are divided into two categories, first one is to study about the consumer's point of views and second one is to investigate current deal portal's websites in order to decide what are the key success factors pointed by the previous research studies are being addressed on current deal portals. For consumer's point of view about Daily Deal Portal, the author designed questionnaire, then selected the suitable respondents and examined the findings in SPSS. In order to find key success factor, select top five deal portals which are currently offering deal and discount offers and examines and compare their features are shown through charts in Excel.

B. Methodology

Data collection is done though an online survey form and also directly from the field. The purpose of this form is to get the information from the online buyers about their approaches and motivations towards online deals and discounts portals. For this study two formats of online questionnaires were sent to every respondent. The one format is the word file that was attached via email so they just can fill it and send back. The

second format was a google form so that user can fill in the questionnaire.

Sample size used in this study was 220 respondents. First it asked how many of the respondent made online purchase. If answered yes then what kind of products did, and how often they bought products online during last 12 months, if they don't purchase online what are the reasons behind it, if there is some price cutting deals and discount offers on products online would they like to purchase it, there should have any online portal which updates them about the current deals and discount information from all over the globe.

Data was collected, researched and analyze from the markets as well. It gathered the detail of how many consumers go to these portals and what choices affect their decisions and how portal design is important. For example, in home page design every deal which is trending and most likes by consumers should be highlighted on portal with features deals and features stores in the middle of the home page. Figure.1 shows a conceptual frame work of administrator's role and consumers' browsing access, using UML use case diagram. In this consumer can browse this portal with its user authentication account or just by a guest user. Consumer can select region, browse complete deals and discount information, search for deals, popular deals, deals by categories, add, modify or delete posts, like deals, and read/write reviews on deals or discount offers.

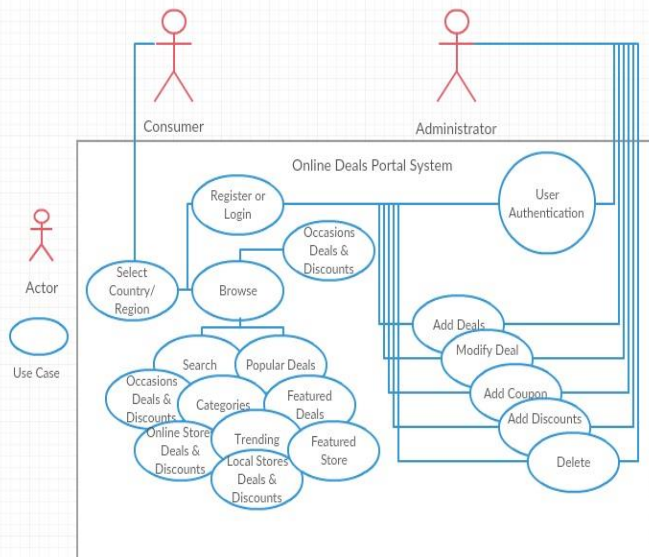


Figure 1: Conceptual Framework

IV. DATA ANALYSIS

A. Online Consumer Analysis

91.7% respondents who purchase products online and 8.3% respondents said they don't, results are show in the figure 2. which indicates that that there is a huge difference between online buyers and non-buyers, the online consumer ratio will be the influencing factor for e-marketers to market their deals and discounts offer online

B. Categories of Purchases

The success of portal lies in prioritizing deals or discounts offers on products which liked by most of the consumers. Choose right category of product before offering any deal or discount offer.

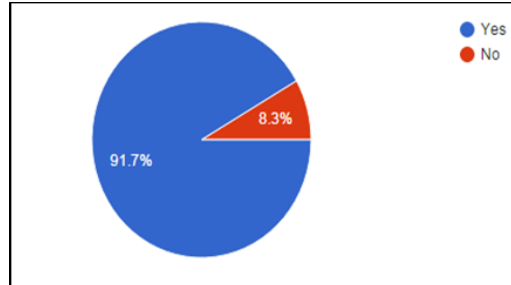


Figure .2: Online Purchase Response

Figure 3 shows the categories liked by consumers, 47.6% of respondents use internet to buy fashion and clothing products, 27.1% of respondents bought accessories online, 10% respondents purchased Mobiles, Laptops or Computer and Electronic, 7.6% of respondents bought products of Kids Fashion and 7.6% respondents bought Home Appliances online.

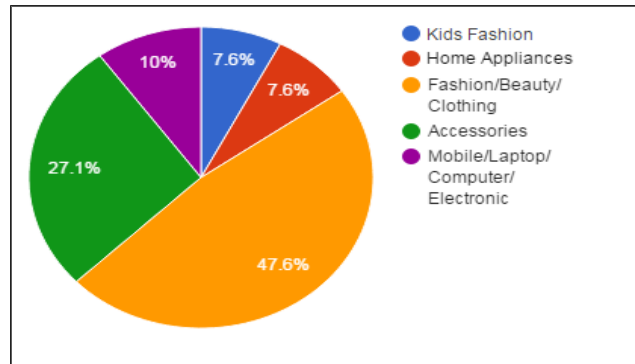


Figure.3: Online Purchase Categories

C. Purchasing Consistency

Purchasing consistency analysis is important for e-marketers for verifying, whether consumer is just browsing a deal, or an offer or they are actually buying it. Figure 4 indicates the respondents who are actually buying products during past 12 months and how many times they are ordering products online. About 50% respondents bought products 1 to 2 times in past year, 41.7% respondents bought more than 5 times and 8.3% respondents bought products 3 to 5 times.

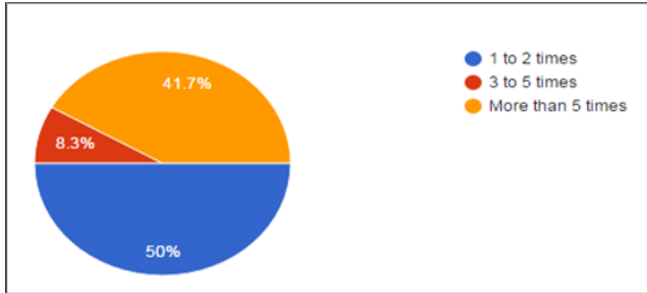


Figure.4: Online Purchasing Behavior Analysis

D. Descriptive Analysis

In this section, descriptive analysis of the data will be discussed. Collected data should be converted into significant and understandable form that researcher can easily interpret it [33]. Approximately all variables "57 Statements" were well above the neutral position on Mean value ($M > 2.5$), except variable X (Charge via Credit Cards) with means value of 2.75 which indicates slightly above then neutral. Descriptive statistics for measurements for each variable will be discussed next.

H1: Product and Company Attributes are important:

Thirteen variables measured for this hypothesis. Factors such as, offering good value for my Money (S), Well known to the Public (M), Well known to Myself (L), Having Good-Will (J), With sufficient information available on the Internet, to judge the product quality (U) and Brand Name I Trust (Q) are with means over 4.5 it indicates these attributes are equally important to the respondents. Results are summarized in the table 1.0.

Table 1: Product and Company Attributes Analysis

Variable	Product and Company Attributes	Mean	Standard Deviation
S	Offering good value for my Money	4.91	0.294
M	Well known to the Public	4.65	0.478
L	Well known to Myself	4.62	0.487
J	Having Good-Will	4.59	0.493
U	Portals should have sufficient information about the product	4.57	0.497
Q	Brand Name I Trust	4.56	0.663
P	Popular Brand Name	4.28	0.809
K	Companies With Permanent Physical Address	4.16	1.289
R	Brand name I have previously used	4.15	1.286
O	Recommend by a Friend or Relative	4.14	0.856
N	Operating good Business for a long time	3.81	1.339
T	Available only on Internet	3.76	0.906
V	Product endorsed by Popular People	3.72	1.364

H2: Transactions security is important for a customer:

There are fifteen variables in the risk factor is measured for this hypothesis. Variables involving in Charge agreed and correct amount only (AD), Cash on Delivery Available (AA), Money Back Guarantee if product is not being fully satisfied (AG), and various alternatives of Payment (Z) are responded with strong agreement rated high by respondents with means above 4.4. Variables measuring Different from what being ordered (AB), the product purchased is good and effective as advertised (AI), Quality of a Product being purchased is fully guaranteed (AH), Personal information being used by any unauthorized person (AE), the product purchased is exactly same as pictures seen (AJ) are with means over 4.2 also rated highly. Charge via credit cards indicates towards low mean 2.75 on variable (X) on the other end respondents agreed that they don't like to make payments via credit cards in variable (Y) with mean of 4.05. Table 2, summarizes the results on transactions perceived risk.

Table 2: Perceived risks of a Transaction Analysis

Variable	Perceived Risk (PR)	Mean	Standard Deviation
AD	Charge agreed and correct amount only	4.91	0.294
AA	Cash on Delivery Available	4.81	0.393
AG	Money Back Guarantee if product is not being fully satisfied	4.61	0.636
Z	Various alternatives of Payments	4.49	0.691
AB	Different from what being ordered	4.43	0.708
AI	The product purchased is good and effective as advertised	4.41	1.331
AH	Quality of a Product being purchased is fully guaranteed	4.34	1.034
AE	Personal information being used by any unauthorized person	4.21	0.763
AJ	The product purchased is exactly same as pictures seen	4.21	1.363
AF	It might not safe: to delivering a product by a stranger	4.06	0.908
Y	Should not pay off Via Credit Cards	4.05	0.902
AC	Product being delivered later than expected date	4.03	0.691
AK	Able to return the product purchased if not fully satisfied	4.02	1.521
AL	Easy and convenient procedure for product return process	3.99	1.511
X	Charge Via Credit Cards	2.75	0.798

H3: Ease of Use and Usefulness is important for users.

There are 20 variables measuring this concept. Respondents rated highly for all the variables involving in ease of use and usefulness in understanding of the portal's layout when buying deals online. In this, highly involved variables such as online product picture display is clear (AV), fast and convenient information searching system (AP), Deal information must not be too long but should be complete (AS), Character font size must be easy to read (AT), Online

purchasing procedure is simple (AR), Product usage is easily read and understandable (AU) have mean above 4.5. Important variables for deal portal like Easy and convenient online Deals layout (AM), Larger Discounts offered (BF), Not wasting time in finding the deals (AX), Conveniently fixed and secured product delivery date (AQ), Wider range of Deals on different products to choose from (BC), Deals Portal's homepage is clear and easily understandable (AO), Provided rich and varied information (AZ), Lower price than conventional stores (BE), Finding deals must be Being fun and exciting (AY), Deals for products from domestic and abroad should be available to shop (BB), Product delivery should be fast, same date of placement of online order (AW), Varied choice of companies providing Deals and Discounts (BD), are also rated highly with means of above 4.1 by consumers, table 3 summarizes these results.

Table 3: Analysis of Perceived Usefulness Importance

Vari able	Perceived Usefulness	Mean	Standard Deviation
AV	Online product picture display is clear	4.92	0.276
AP	Fast and convenient information searching system	4.87	0.334
AS	Deal information must not be too long but should be complete	4.87	0.334
AT	Character font size must be easy to read	4.79	0.408
AR	Online purchasing procedure is simple	4.72	0.448
AU	Product usage is easily read and understandable	4.66	0.474
AM	Easy and convenient online Deals layout	4.49	0.502
BF	Larger Discounts offered	4.49	0.821
AX	Not wasting time filling too much in finding the deals	4.46	0.819
AQ	Conveniently fixed and secured product delivery date	4.44	0.728
BC	Wider range of Deals and Discounts on different products to choose from	4.44	0.498
AO	Deals Portal's homepage is clear and easily understandable	4.43	0.662
AZ	Provided rich and varied information	4.36	0.808
BE	Lower price than conventional stores	4.35	0.821
AY	Finding deals must be Being fun and exciting	4.33	0.802
BB	Deals for products from domestic and abroad should be available to shop	4.27	0.744
AW	Product delivery should be fast, same date of placement of online order	4.16	1.074
BD	Varied choice of companies providing Deals and Discounts	4.11	0.719
AN	Product information is difficult to look up	4.02	1.019
BA	More reliable information than from sales person	4.01	1.021

H4: Consumer Internet Experience is a factor in online purchases:

Eight variables use for the measurement of consumer's experience. As skillful in Internet as other communication tools (BJ) Trendy (BG), Frequent Internet surfer (BK) frequent searchers of information on the Internet (BL), is rated highest by the respondents with means of above 4.1. That indicates that these variables affected their decision when buying a product online. While Spend much time searching Deals and Discount Offers over Internet (BN) is the lowest mean with 3.11. It is evident in the table 4 below that none of these variables are rated lower than 2.5 which is a neutral mean. So, consumer's experiences using the internet are the factors that encourage consumer to shop products over the internet.

Table 4: Analysis of Consumer Internet Experience Factor

Vari able	Consumer Experience	Mean	Standard Deviation
BJ	As skillful in Internet as other communication tools	4.27	0.744
BG	Trendy	4.24	1.309
BK	Frequent Internet surfer	4.20	0.763
BL	Frequent searcher of information on the Internet	4.11	0.719
BH	Like to try new things	4.04	1.252
BI	Skillful, efficiency in surfing the Internet	3.94	0.665
BM	Always looking for Deal and Discount offers on Internet	3.60	1.282
BN	Spend much time searching Deals and Discount Offers over Internet	3.11	1.103

V. RESULTS AND DISCUSSION

Consumer previous experience (H4) and Perceived transaction risk (H2) indicate that they do not have a direct effect on the purchase intention for deals on products. Whereas, Product and company attributes (H1) and perceived ease of use and usefulness (H3) of a web site have a direct influence on a consumer to make purchases online. These associated findings and final results are summarized in the table 5.

Also, analyzed deals from five top web portals [29-30], summarized in the table 6. It is evident that design for deals-daily are according to our study. Features like worldwide deals; deals for travelers are the two main features to attract consumers from all over the globe. The author include feature Post by users and post by portal is for making sure that all the deals consumers having here were posted by administration of the portals and users can also post any deals they saw from other portal to our deal portal. And features like category, added here to sort deals into categorize form so consumer can easily browse them by categorize, deals rating feature is for users to rate their favorite deal and trending features is to make trend on the deals according to yearly occasions. These sixteen

factors are the most influencing factors on consumer intentions to motivate them for making purchases online. And the factors are: trusted brand name, trusted company, offering good value for my money, recommend by a friend or a relative, large discounts offered, various alternatives of payments, simple purchasing procedure, delivery assurance, easy to understand homepage, wider range of deals, different products to choose from different companies, shopping convenience, cheaper products price, entertaining and informative web portal, like to try new things, and frequent internet usage. These factors can be used by e-marketers and deal portal designers, such as [31-32], to predict intention and behavior of consumers online when purchasing deals.

Table 5: Final Hypothesis Results Analysis

No.	Hypothesis Support	Support
H1.1	Product and company attributes will be directly influence on intention to buy Deals online.	✓
H1.2	Product and company attributes will directly affect perceived risk.	✓
H2.1	Perceived risk will directly affect the intention to buy Deals online.	X
H2.2	Perceived risk will directly affect perceived ease of use.	✓
H2.3	Perceived risk will directly affect perceived usefulness.	✓
H3.1	Perceived ease of use will directly affect intention to buy Deals online.	✓
H3.2	Perceived ease of use will directly affect the perceived usefulness.	✓
H3.3	Perceived usefulness will have a direct effect on the intention to deals online.	✓
H4.1	Customer experience will have a direct effect on the intention to buy Deals online.	X
H4.2	Customer experience will have a direct effect on the perceived usefulness.	✓
H4.3	Customer experience will have a direct effect on the perceived ease of use.	✓

VI. CONCLUSIONS

The main aim was to find factors influencing the design and development of a comprehensive worldwide deal portal based on three factors consumer behavior, technology and product perception. Data was collected through a quantitative study and analyzed. It clearly indicates the consumer behavior affected by a site ease of use, usefulness and also by product and company attributes. Whereas, transaction perceived risk, though important, is less important and also customer previous internet experience mattered little. Also, main contributing factors identified by comparing five different deals sites, which also showed importance of trusted brand and company and other factors important for e-commerce sites or worldwide deal portals.

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REFERENCES

- [1] D Benjamin, R. & Wiegand (2016). "Electronic Markets and Virtual Value Chains on the Information Superhighway," Sloan Management Review, Vol. 36, Nr. 2 Winter, pp. 62 - 72. RESOURCES, E. (2016).Convenience Sampling. Retrieved 3 29, 2012,from Experiment Sampling: <http://www.experimentresources.com/convenience-sampling.html>.
- [2] Bartos, R. 1986, Qualitative Research: What It Is and What It Came From, Journal of Advertising Research, vol. 26, RC3-RC6.
- [3] Jill Mosteller, Naveen Donthu, SevginEroglu (2015) The fluent online shopping experience Journal of Business Research Vol. 67, Issue 11, November 2014, Pp 2486–2493.
- [4] Sejin Ha, Leslie Stoel, (2012) "Online apparel retailing: roles of e - shopping quality and experiential e - shopping motives", Journal of Service Management, Vol. 23 Iss: 2, pp.197 - 215.
- [5] Jumin Lee, Do - Hyung Park, Ingoo Han, (2011) "The different effects of online consumer reviews on consumers' purchase intentions depending on trust in online shopping malls: An advertising perspective",Internet Research, Vol. 21 Iss: 2, pp.187 - 206.
- [6] Chin - Lung Hsu, Judy ChuanChuan Lin, HsiuSen Chiang, (2013) "The effects of blogger recommendations on customers' online shopping intentions", Internet Research, Vol. 23 Iss: 1, pp.69 - 88.
- [7] Ling (Alice) Jiang, Zhilin Yang, Minjoon Jun, (2013) "Measuring consumer perceptions of online shopping convenience", Journal of Service Management, Vol. 24 Iss: 2, pp.191 - 214.
- [8] Hasslinger, A. (2007). Consumer Behaviour in Online Shopping.18-22. Spiller, P., and Lohse, G.L., 1997-8. A Classification of Internet Retail Stores. International Journal of Electronic Commerce 2(2), 29-56.
- [9] Alam, S. S., &Yasin, N. M. (2010). An Investigation into the antecedents of customer satisfaction of online shopping. Journal of Marketing Development and Competitiveness, 5(1), 2010.
- [10] Authority, T. I. (2009).National mail order association. Retrieved from DirectMarketing, Mail Order, and E-commerce News from the National Mail OrderAssociation: <http://www.nmoa.org/articles/dmnews/keynote.htm>.
- [11] Byambaa, B., & Chang, K. (2012). The influence of factors of online purchase on customer satisfaction in Mongolian Airlines. Retrieved on 22 February 2014 from <http://www.ipedr.com/vol57/015-ICBMG2012-B00031.pdf>. DOI: 10.7763/1PEDR.
- [12] Ashwin, K., Daley, J, & Taylor, C. 2000, WWW: The Race to Scale, McKinsey Quarterly, issue 4, pp. 21-25.
- [13] Gallagher, J. M., Auger, P., &Barnir, A. (2000). Revenue streams and digital content providers: an empirical investigation. Information and Management, vol 38, pp 473-485.
- [14] Shergill, S.G., & Chen. Z.B (2005). Web-based shopping: consumers' attitudes towards online shopping in New Zealand, Journal of electronic commerce research, 6(2), 81-94.
- [15] Ayass, T. (2009).Investigation of the antecedents of an e-commerce trustmodel. USA: ProQuest.
- [16] Bashir, Adil: Consumer behavior towards online shopping of electronics in Pakistan. 2013, Seinajoki University of Applied sciences, p.52-60
- [17] Surowiecki, J. (2010, December 20). Groupon clipping. The New Yorker, 46.
- [18] Kim, H.H., & Kim, J. (2008). The effect of offline brand trust and perceived internet confidence on online shopping intention in the integrated multi-channel context. International Journal of Retail & Distribution Management, 37 (2), 126-141.

[19] Pedersen, P. E. (2002, 2 22). Search mode and purchase intention in onlineshopping behavior. 1-35.

[20] Balasubramanian, S. 1998, Mail Versus Mail: A Strategic Analysis of Competition Between Direct Marketers and Conventional Retailers, Marketing Science, March-June, vol. 17, issue 3, pp. 181-195.

[21] Basch, C.E. 1987, Focus Group Interview: An Underutilized Research Technique for Improving Theory and Practice in Health Education, Health Education Quarterly, vol. 14, pp. 411-448.

[22] Gilbert A Churchill, D. I. (2009). Data Collection Secondary Data. In D. I.GilbertA Churchill, Marketing Research: Methodological Foundations (p.264). USA:Cangage Learning Inc.

[23] O’Cass, A. (2000). An assessment of consumer’s product, purchase decision, advertising and consumption involvement in fashion clothing. Journal of Economic Psychology, 21, 545-576.

[24] K. L. JAMES. (2010). The Internet A user’s guide. Delhi: Asoke K Ghoshi, Learning Private Limited, M-97.

[25] Liang, X., L. Ma, L. Xie, and H. Yan (2014). The informational aspect of the group-buyingmechanism. European Journal of Operational Research 234 (1), 331{340.

[26] Wilson, C. (2013). SA’s online spending habits revealed. Retrieved on 17 November 2013 from <http://www.techcentral.co.za/sas-online-spending-habits-revealed/41491/>.

[27] Deb, R. and M. Said (2013). Dynamic screening with limited commitment. Mimeo, Olin Business School, Washington University in St. Louis.

[28] Kim, D & Benbasat, I., (2003). Trust-related arguments in internet stores: A framework for evaluation, Journal of Electronic Commerce Research, 4(2), 49-64.

[29] Paim, N. D. (2011). Students’ Online Shopping Behavior: An Empirical Study. Singapore: IPEDR.

[30] Delafrooz, N., Paim, L. H., & Khatibi, A., Understanding consumer’s internet purchase intention in Malaysia. African Journal of Business Management, 5(3), 2010, 2837-2846.

[31] M. Bilal et al, “Exploring Industrial Demand Trend’s in Pakistan Software Industry Using Online Job Portal Data”, in USJICT, Vol 1, Issue 1, October 2017.

[32] S. Saeed et al, “Evaluating the Quality of Point of Sale (POS) Software”, in USJICT, Vol 3, Issue 2, April 2019.

[33] Bentler, P.M. 1995, EQS Structural Equations Program Manual, Encino, CA: Multivariate Software.

Table 6: Comparison Table

No	Top 5 Web Portals	Worldwide Deals	Deals for Travelers	Post by Users	Post by Portal	Categorize	Deals Ratings	Trending
1	Slickdeals.com	X	X	✓	X	X	✓	✓
2	Fatwallet.com	X	X	✓	X	X	✓	X
3	Dealsplus.com	X	X	✓	X	X	X	X
4	Dealnews.com	X	X	X	✓	X	X	X
5	Pricegrabber.com	X	X	✓	X	✓	X	X
6	DealsDaily.com	✓	✓	✓	✓	✓	✓	✓