

Comparative Analysis of Ecommerce Websites: A Case Study

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Abstract

Due to speedy development in the field of technology, consumers adopted the usage of internet for almost every task. E-commerce brings revolution by providing innovative ways of online shopping to the customers. Customers grab the opportunity to shift towards online from offline shopping due to their tight and busy schedules. While selecting e-commerce website for online shopping, consumers evaluate critically in choosing the best suitable option. This paper aimed to find out the key factors that affect the selection of E-commerce website. A framework is proposed to select a best e-commerce websites among all the alternatives based on the parameters, shortlisted from literature review. Analytic Hierarchy Process is a one of the multi-criteria evaluation method which is used to prioritize the categories and parameters responsible for selection of best e-commerce website. In this paper, Outlook, Operations and Services are the three broader categories identified. This evaluation for three major ecommerce websites has been done with the help of case illustration. This study will help researches and managers to determine the opportunities of better selection of e-commerce website for future.

Keywords- E-commerce Website, Evaluation, Selection, Parameters, AHP, MCDM

Introduction

In the era of advancement of technology, people receive a better solution to simplify their tasks and get relaxed by finishing off their daily jobs on a single click of mouse. In today world, people shifted to offline to online for clear cut benefit of convenience and comfort. The statistics also supports the increase in internet users all over the world (3,424 trillion) as well as in developing countries like India (375 million) as shown in table-1.

Currently, around 40% of the world population is internet users due to its ease of use, availability of desired information and opportunity to access at any time. Usually, the people surf internet for gaining knowledge, for exploring new things and to get connected with friends and family through various social media options. Nowadays, the upcoming trends also showing great increase in online shopping of daily consumables to books to apparels to gadgets to everything, a person can wish offline.

'E-commerce', a well-known term, used for buying and selling of goods and services over the Internet. Ecommerce can be considered as an important component of e-business. The importance of e-commerce for consumers is freedom of choice, save time and effort. Ecommerce gives flexibility to its consumers by offering benefits of procurement and retailing of products and services at any time any place, communicating and collaborating with other organizations and gathering information from real-time databases for future analysis. Some of the successful e-businesses providing products and services are e-ticketing for airlines and railways, banking services, computer hardware, software, electronic gadgets, books, clothing, flowers and gifts etc. that can be purchased online. Ecommerce has capability to reduce costs and potential to generate high revenue for businesses. Moreover, ecommerce also provides a platform to the small and medium enterprises to collaborate with bigger firms for the benefit of cost reduction and to serve huge customer database by taking advantage of value chain integration.

Ecommerce website is an interactive way to fulfill all requirements of individuals for all online purchases. E-commerce sites launch forums for its users where they can express and share their opinions and experience about a particular product or service. Business-to-Consumer (B2C) and Business-to-Business (B2B) are the two main sections of the activities of E-commerce.

Many e-commerce websites serving many domestic and global needs of the consumers within and across the globe. India's e-commerce market was worth about \$22 billion in 2015 due to growing internet population, increased online shoppers and rise in smart phone users (PWC report, 2015). It is expected that by 2020, India will generate revenue of \$100 billion through online retailing out of which \$35 billion will be through fashion e-commerce. About 61% of India's e-commerce market is travel related while e-retailing contributes roughly around 29%. Non-consumer able goods and entertainment related products are the most popular e-commerce categories where people like to shop online. In India, largest e-commerce companies in India are Flipkart, Snapdeal, Amazon, Myntra and Paytm.

Table 1: Overview of Internet Users in India

| Overview | Values |
|--|---------------|
| Number of internet users in India | 375 million |
| Active mobile internet users in India | 303million |
| Gender distribution of internet users in India: male | 71% |
| Internet penetration in India | 18% |
| E-Commerce | Values |
| Digital buyer penetration in India | 24.4% |
| Retail e-commerce sales in India | \$5.3 billion |

(Source: Statistics: The statistics Portal)

In recent years, ecommerce can be considered as the fastest growing sector in India. The main drivers behind this success are contribution from all geographical regions including towns and cities, advancement in technology adoption, rising convergence of online and investors focusing more on increasing their market share rather than profits.

The selection of appropriate ecommerce website depends on various parameters including past experience and learning's with the portal. The outlook or appearance of the website, overall operations starting from order processing till dispatching of order and entire performance of ecommerce companies makes impact on final selection for repeated purchases of consumer. The e-commerce sites need to evaluate their services for their survival and growth and will help in better future prospects by retaining customers for long term.

Although e-commerce websites are growing at very high pace but still many barriers hinders its path to success. Supply chain management and poor infrastructure are huge obstacles which creates difficulties for key players of e-commerce. Further, as in online shopping, customer database seems to be increasing from time to time but customer loyalty is still a matter of concern. People usually prefer COD (Cash On Delivery) option for their online buying but this may create a difficulty of managing post payments to the

owner of goods. Many governments polices like interstate taxation rules, compliance frameworks and regulations creates lot of hurdles for them.

In this paper, Section-1 gives introduction about e-commerce. In section -2, literature review related to e-commerce and various parameters on which different websites will be evaluated and compared are discussed. Section -3 highlights the research methodology used for the paper. In section-4, comparisons of three e-commerce websites are done by using Analytical Hierarchy Process (AHP), by means of a case illustration. In section-5, results are discussed and conclusion of the study has been made.

Review of Literature

Zwass (2012) defines e-commerce as “the sharing of business information, maintaining business relationships, and the conducting business transactions by means of telecommunications networks”. Minoli D. and Minoli E. (1997) gave their view of Internet-based commerce as “Electronic commerce is the symbiotic integration of communications, data management, and security capabilities to allow business applications within different organizations to automatically exchange information related to the sale of goods and services.” In India, ecommerce showed remarkable growth in past years and encouraged the trend of online shopping from traditional one (Sharma and Mittal, 2009). Although, many researchers also highlighted the risk involved in online shopping from internet. Past shopping experience, perceived risk level and future purchase intentions are the key drivers responsible to retain customers (Samadi and Ali, 2010).

The major difference is the way information is exchanged and processed as Traditional commerce and e-commerce. Traditional commerce is face-to-face, telephone lines, or mail systems, manual processing of traditional business transactions, individual involved in all stages of business transactions, but E-Commerce is defined by using Internet or other network communication technology, automated processing of business transactions, individual involved in all stages of transactions, pulls together all activities of business transactions, marketing and advertising as well as service and customer support.

Kim et al. (2002) identified six categories of e-commerce website evaluation through vast literature review. The identified categories are business function, corporation credibility, content's reliability, Web site attractiveness, systematic structure and navigation. Yeung A. and Law (2004) focused on usability and functionality in their study on applied the modified heuristic evaluation technique to compute Usability Hazards Indices of hotel Web sites in Hong Kong. Their study found that due to the strong support and wide operation scale, chain hotels received overall Usability Hazards Indices, which were significantly lowered than independent hotels.

In this paper, 25 parameters are shortlisted from vast literature review and reduce it to 15 after discussing with experts of same area. Further, the parameters are classified into three categories based on the inputs received from experts. The three broader categories in perspective of customer for any e-commerce website is Outlook, Operations and Service.

Outlook is a visual appearance based on the expectation for the future. It includes Appearance, Ease of Use, Content Quality, Navigation and Personalization.

Operations are business operations, which take cares of harvesting of value from assets owned by a business. In the e-commerce website the value derived from a physical asset is not considered. But it is more focused on intangible asset, like an idea, royalty etc. Pricing, shipping, Order Processing, Packaging and Security/Privacy are some of the parameters are used for the evaluation of operations in e-commerce industry.

Service is an action of helping or doing work for someone. A type of economic activity that is intangible is not stored and does not result in ownership. A service is consumed at the point of sale. Services are one of the two key components of economics, the other

being goods. Service includes Product Tracking, Product Assurance, Return Policy, Timely Delivery and feedback Policy. The details are discussed in the table 2.

Table 2 – Synthetic View of Predominantly Ergonomic Evaluations

| Category | Features | Definition | References |
|-----------------|-------------------|--|---|
| Outlook | | Visual Appearance | |
| | Appearance | How website looks. | Park and Gretzel (2007) |
| | Ease of Use | Simple and comfortable to use | Park and Gretzel (2007) Hausman and Siekpe, 2008 |
| | Content Quality | Appropriate information provided to user | De Wulf et al. (2006) Chae et al.(2002) |
| | Navigation | Correct direction to user to browse | Flavian et al. (2009) Zhang et al. (2000) |
| | Personalisation | Relevant information to seek individual | Park and Gretzel (2007) Tsai et al., 2010 |
| Operations | | intangible asset such as idea, royalty etc. | |
| | Pricing | Price of product | Liang and Lai (2002) |
| | Shipping | Delivery of products at desired address on promised time | Song and Zahedi (2005) |
| | Order Processing | Placing , confirmation and completion of order. | Kim et al. (2002) |
| | Packaging | Proper labelling , kitting and packaging of product | Huizingh and Hoekstra (2003) |
| | Security/Privacy | Personal information of user to be protected. | Korgaonkar and Wolin (1999) |
| Service | | action of helping or doing work for someone | |
| | Product Tracking | Facility of getting update on every movement of product throughout the entire supply chain process | Liang and Lai (2002) |
| | Product Assurance | Receiving the same product for which user order | Gefen (2002) |
| | Return Policy | Convenience of returning back of false/undesired product | Liang and Lai (2002) Hausman and Siekpe (2008) |
| | Timely Delivery | Delivery of product on promised time | (Reix, 2003) |
| | Feedback | Process of taking feedback and suggestions from customers | Agarwal and Venkatesh (2002) |

Research Methodology

Satty (1980) developed a multi-criteria decision making method, known as Analytical Hierarchical Process (AHP). A well-defined and structured process which helps in dealing with both quantitative and qualitative techniques. AHP is widely applicable in almost all sectors like healthcare, education, government, supply chain and e-commerce etc. AHP evaluates on set of criteria and then make the final decision of selecting best alternative among all the alternatives taken for study.

In AHP, pairwise comparison matrices are created. The AHP generates final weights corresponding to each evaluation criterion on the basis of the decision maker’s input. Next, for a fixed criterion, the AHP assigns a score to each option according to the decision maker’s pairwise comparisons of the options based on that criterion. The higher the score, the better the performance of the option with respect to the considered criterion. Finally, the AHP combines the criteria weights and the options scores, thus determining a global score for each option, and a consequent ranking. The global score for a given option is a weighted sum of the scores it obtained with respect to all the criteria.

It also provides a methodology to calibrate the numeric scale for the measurement of quantitative as well as qualitative performances. The scale ranges from 1/9 for least valued than, to 1 for equal and to 9 for absolutely more important than covering the entire spectrum of the comparison 9 as shown in table 2. Some key and basic steps involved in this methodology are (Saaty, 1980):

1. State the problem.
2. Broaden the objectives of the problem or consider all actors, objectives and its outcome.
3. Identify the criteria that influence the behavior.
4. Structure the problem in a hierarchy of different levels constituting goal, criteria, sub-criteria and alternatives.

Table 3: Scale for Quantitative Comparison of Parameters

| <i>Option</i> | <i>Numerical value(s)</i> |
|--|---------------------------|
| Equal | 1 |
| Marginally strong | 3 |
| Strong | 5 |
| Very strong | 7 |
| Extremely strong | 9 |
| Intermediate values to reflect fuzzy inputs | 2, 4, 6, 8 |
| Reflecting dominance of second alternative compared with the first | Reciprocals |

5. Compare each element in the corresponding level and calibrate them on the numerical scale. This requires $n(n - 1)/2$ comparisons, where n is the number of elements with the considerations that diagonal elements are equal or ‘1’ and the other elements will simply be the reciprocals of the earlier comparisons. 6. Perform calculations to find the maximum Eigen value, consistency index CI, consistency ratio CR, and normalized values for each criteria/alternative.

$$CI = (\lambda_{max} - n)/(n - 1)$$

Where λ_{max} is the maximum eigenvalue of the judgment matrix. This CI can be compared with that of a random matrix, RI. The ratio derived, CI/RI, is termed the consistency ratio, CR. Saaty suggests the value of CR should be less than 0.1.

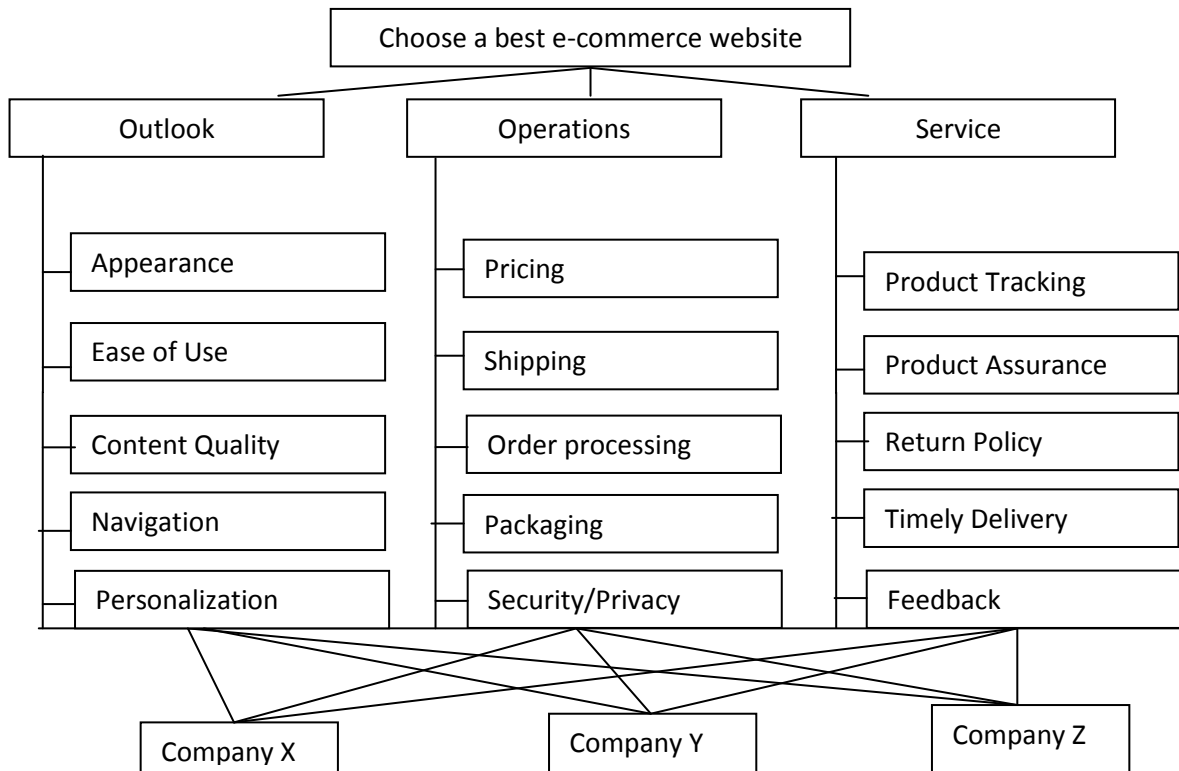
| | | | | | | | | | | |
|------------------|-----------|------|------|------|------|------|------|------|------|------|
| RI values | n | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
| | RI | 0.00 | 0.58 | 0.90 | 1.12 | 0.12 | 1.32 | 1.41 | 1.45 | 1.51 |

7. If the maximum Eigen value, CI, and CR are satisfactory then decision is taken based on the normalized values; else the procedure is repeated till these values lie in a desired range.

Proposed Framework

A user when access any e-commerce websites then three major categories are main reasons responsible for his/her selection of website. From literature review, outlook, operations and service are considered to be three broader categories for selection. Further, from past scholarly articles, it has been observed that Appearance, Ease of Use, Content Quality, Navigation and Personalization are responsible to evaluate outlook or appearance of any website. Operations is said to be one deciding factor for attracting and retaining customers for long term. After discussing with experts and from literature, it is found that Pricing, Shipping, Order processing, packaging, security/Privacy are important features under operation. Service is something which worked as order winner rather than order qualifier. Organizations usually give utmost preference to serve customers with best quality. Product Tracking, Product Assurance, Return Policy, Timely Delivery, Feedback are the main parameters which should include under service as justified from past studies also.

Fig.1. Proposed Framework for Selection of Best e-Commerce Website



Case Analysis

Three e-commerce websites are considered for a case illustration in which the websites are compared on the basis of parameters retrieved from vast literature review.

X Ltd.

It was the oldest e-commerce website among the three taken for study, launched by Alumnus of IIT. The organization has its headquarter in Bangalore but registered in Singapore. In 2016, the company manifests its investment value to \$11 billion. This e-commerce website enriched to facilitate their customer database with high range of categories of various products. It includes electronic products, home appliances, personal care, health care, kitchen-ware, computer hardware and books etc.

Due to strong technology background they are capable enough to offer small transaction size at low initial costs. Currently, the organization is collaborated with various courier service providers and Indian postal services as well. The organization can differentiate with its competitors in terms of accurate and timely delivery to provide healthy online shopping and post sales experience to the customers.

Y Ltd.

It was the largest Internet-based retailer in the United States. The initiation of this organization is recognized as a platform to buy online books later diversified to DVDs. It also deals with apparel, jewelry, food, electronics, computer games, furniture and toys etc. It is the world's largest provider of cloud infrastructure services (IaaS) and also sells certain low-end products.

In 2015, there are more than 304 million active customer accounts of Y ltd across the globe. It grow with very fast pace and catch quickly by consumers due to its well-known global brand Image. The most important attractive component of this organization is excellence in return policy and delighting customers with vigorous shopping experience.

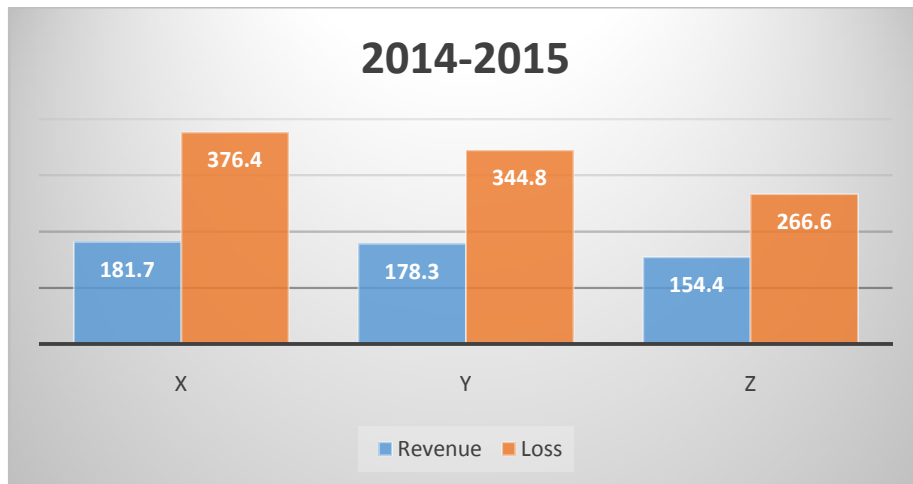
Z Ltd.

It is well known name in the sphere of e-commerce website in India. It shows phenomenal growth in short span of time by creating a remarkable journey of various successful stories. It begins with their deals and expands their business by providing online market platform to procure any product of their choice.

There are more than 50,000 sellers sells around 5 million products of different categories. The category includes Kitchenware, Electronics, Health care, Shoes & Footwear, Clothing, Fashion and Hardware etc. Its USP is to provide excellent customer service and have a vast network in all major cities, covering almost the entire nation. It offers wide array of deals and transactions to the customers by providing huge opportunity to choose from the pool of product mix.

The comparative sheet of revenue and losses for year 2014-2015 of the company X, Y and Z ltd is shown in figure 2.

Figure 2: Comparison of Revenue and Losses for 2014-2015



Findings and Results

In this analysis, the identified parameter from literature under Operations, Outlook and Service category are prioritized by using AHP methodology as discussed in section 3. The data for the study is collected from 100 consumers. The findings of the evaluation by using AHP are shown in this section. In Table 4 the pair wise comparison matrix of three major categories required for selection of best ecommerce website is shown.

Table 4: Evaluation of Weights for Three main Categories

| | Operations | Outlook | Service | Weighted Sum |
|------------|------------|---------|----------|--------------|
| Operations | 0.65 | 0.62 | 0.66 | 3.007 |
| Outlook | 0.13 | 0.12 | 0.11 | 3.001 |
| Service | 0.21 | 0.25 | 0.22 | 3.002 |
| | | | Lambda = | 3.003 |

CR is 0.003, which is acceptable. According to our findings by using AHP, Operations (3.007) is most important category for selection of e-commerce website. Operations are followed by service (3.002) and then outlook (3.001). The results are in lined with past studies. It can be easily validated from past studies and also looking at shopping trends, users give first preference to ease of operations then to service and give last preference to outlook of website.

Table 5: Evaluation of Weights for Parameters under Operations

| Operations | Pricing | Shipping | Order Processing | Packaging | Security/Privacy | Weighted Sum |
|------------------|---------|----------|------------------|-----------|------------------|--------------|
| Pricing | 0.38 | 0.20 | 0.51 | 0.33 | 0.41 | 5.64 |
| Shipping | 0.13 | 0.07 | 0.02 | 0.05 | 0.05 | 5.06 |
| Order Processing | 0.05 | 0.20 | 0.07 | 0.14 | 0.08 | 5.21 |
| Packaging | 0.05 | 0.07 | 0.02 | 0.05 | 0.05 | 5.13 |
| Security/Privacy | 0.38 | 0.47 | 0.37 | 0.43 | 0.41 | 5.35 |
| | | | | | Lambda = | 5.27 |

CR is 0.062, which is acceptable According to our findings by using AHP, Pricing (5.64) is most important parameter for selection of e-commerce website under operations category. As shown in table-5, Security/Privacy, Order Processing, Packaging and Shipping having weights 5.35, 5.21, 5.13 and 5.06 respectively.

Table 6: Evaluation of Weights for Parameters under Outlook

| Outlook | Appearance | Ease of Use | Content Quality | Navigation | Personalisation | Weighted Sum |
|------------------------|------------|-------------|-----------------|------------|-----------------|--------------|
| Appearance | 0.07 | 0.03 | 0.11 | 0.05 | 0.04 | 5.04 |
| Ease of Use | 0.20 | 0.10 | 0.11 | 0.16 | 0.07 | 5.09 |
| Content Quality | 0.33 | 0.52 | 0.54 | 0.47 | 0.63 | 5.37 |
| Navigation | 0.07 | 0.03 | 0.06 | 0.05 | 0.04 | 5.12 |
| Personalisation | 0.33 | 0.31 | 0.18 | 0.26 | 0.21 | 5.28 |
| | | | | | Lambda = | 5.17 |

CR is 0.040, which is acceptable According to our findings by using AHP, Content Quality (5.37) is most important parameter for selection of e-commerce website under outlook category. As shown in table -6, Personalization, Navigation, Ease of Use and appearance having weights 5.28, 5.12, 5.09 and 5.04 respectively.

Table 7: Evaluation of Parameters under Service

| Service | Product Tracking | Product Assurance | Return Policy | Timely Delivery | Feedback | Weighted Sum |
|--------------------------|------------------|-------------------|---------------|-----------------|----------|--------------|
| Product Tracking | 0.12 | 0.17 | 0.05 | 0.10 | 0.14 | 5.22 |
| Product Assurance | 0.36 | 0.52 | 0.74 | 0.48 | 0.24 | 6.20 |
| Return Policy | 0.36 | 0.10 | 0.15 | 0.29 | 0.43 | 5.44 |
| Timely Delivery | 0.12 | 0.10 | 0.05 | 0.10 | 0.14 | 5.32 |
| Feedback | 0.04 | 0.10 | 0.02 | 0.03 | 0.05 | 5.09 |
| | | | | | Lambda = | 5.45 |

CR is 0.096, which is acceptable, according to our findings by using AHP, Product assurance (6.20) is most important parameter for selection of e-commerce website under service category. As shown in table -7, return policy, timely delivery, product tracking and feedback having weights 5.44, 5.32, 5.22 and 5.09 respectively.

Table 8: Local and Global Weights with Ranking of all Parameters.

| Parameters | Local Weights | Weightage | Global Weights | Rank |
|--------------------------|----------------------|------------------|-----------------------|-------------|
| Appearance | 5.0381439 | 3.00131796 | 15.12107171 | 15 |
| Shipping | 5.0577471 | 3.00714508 | 15.20937918 | 14 |
| Ease of Use | 5.0850085 | 3.00131796 | 15.26172734 | 13 |
| Feedback | 5.0866312 | 3.00262697 | 15.27325588 | 12 |
| Navigation | 5.1183678 | 3.00131796 | 15.36184906 | 11 |
| Packaging | 5.1302027 | 3.00714508 | 15.42726388 | 10 |
| Order Processing | 5.2064682 | 3.00714508 | 15.65660533 | 9 |
| Product Tracking | 5.2215661 | 3.00262697 | 15.67841521 | 8 |
| Personalization | 5.2790369 | 3.00131796 | 15.84406822 | 7 |
| Timely Delivery | 5.316283 | 3.00262697 | 15.96281473 | 6 |
| security/Privacy | 5.3490028 | 3.00714508 | 16.08522749 | 5 |
| Content Quality | 5.3701159 | 3.00131796 | 16.11742539 | 4 |
| Return Policy | 5.4404711 | 3.00262697 | 16.33570514 | 3 |
| Pricing | 5.6391173 | 3.00714508 | 16.95764395 | 2 |
| Product Assurance | 6.2004457 | 3.00262697 | 18.61762547 | 1 |

In table 8, the local and global weights of all parameters under all the categories are shown in decreasing order of their weights. From the analysis, it is find that product assurance is the most important parameters which users consider while selecting e-commerce website for shopping. Pricing is second important component considered. Return, policy, content quality, security and privacy are next important parameters prioritized by business professionals at the time of selection. The ranking of all the 15 parameters are evaluated and shown in table 8.

Table 9: Evaluation of Parameters under Categories for e Commerce Websites

| Category | Parameters | X | Y | Z |
|-------------------|-------------------|---------------|---------------|---------------|
| Outlook | Appearance | 0.5189 | 0.5838 | 0.5189 |
| | Ease of Use | 0.5892 | 0.6219 | 0.5892 |
| | Content Quality | 0.5877 | 0.6222 | 0.5877 |
| | Navigation | 0.4613 | 0.4942 | 0.4942 |
| | Personalisation | 0.6117 | 0.5777 | 0.6117 |
| | Average | 0.5538 | 0.5800 | 0.5603 |
| Operations | Pricing | 0.6056 | 0.6412 | 0.6056 |
| | Shipping | 0.5751 | 0.6071 | 0.5751 |
| | Order Processing | 0.5920 | 0.6249 | 0.5920 |
| | Packaging | 0.6158 | 0.5510 | 0.6158 |
| | security/Privacy | 0.5407 | 0.5407 | 0.5407 |
| | Average | 0.5858 | 0.5930 | 0.5858 |
| Service | Product Tracking | 0.5745 | 0.6064 | 0.5745 |
| | Product Assurance | 0.6443 | 0.7580 | 0.7201 |
| | Return Policy | 0.6651 | 0.6651 | 0.6319 |
| | Timely Delivery | 0.5525 | 0.6499 | 0.5525 |
| | Feedback | 0.5908 | 0.5908 | 0.5597 |
| | Average | 0.6054 | 0.6541 | 0.6077 |

In table-9, the data has been taken by the consumers on defined parameters for all the e-commerce websites considered for study. It is found that company Y Ltd. is performing outstanding in Outlook, Operations and Service category as compared to other alternatives. Out of all, content quality under outlook category attracts the customer most for selection of website. Under operations, pricing is the first priority considered by customers while purchasing online. Product assurance is the most important parameter observed under service category by the consumers.

Table 10: Final Ranking of e-Commerce Websites

| Category | X | Y | Z |
|-------------------|--------------|--------------|--------------|
| Outlook | 0.554 | 0.580 | 0.560 |
| Operations | 0.586 | 0.593 | 0.586 |
| Service | 0.605 | 0.654 | 0.608 |
| Average | 0.582 | 0.609 | 0.585 |
| Rank | 3 | 1 | 2 |

In table 10, Y Ltd is the most preferred e commerce website as compared to others on the basis of outlook, operations and service categories. The decision of selection of best e commerce website is based on choice and importance of parameters given by consumer. The final average as shown in table 10 is a cumulative result compiled from the results as shown in table 4-9.

Conclusion

AHP is a more convenient approach suitable for this study. The parameters responsible for selection of e-commerce websites are identified through vast literature review. Based on experts' discussions, 15 parameters are finalized under three categories. Operations, Outlook and service are the three broader categories which make impact on final decision of selection of e-commerce website. The pairwise comparison matrices for all categories and parameters are generated on the basis of expert opinion. Then, by using AHP, the local and global weights for all parameters are calculated. Based on the results, Operations is found to be most important category among all. Product assurance is found to be most important parameter considered while selecting e-commerce website. Pricing is second important criteria desired by users. Then users also give importance to return policy and content quality as well. Y Ltd is the preferred e-commerce website among all alternatives on the basis of parameters considered for study. Although the results discussed in table 10 reflects minor difference in average values. All the e-commerce websites are doing good, But Y Ltd. shows excellence in product assurance, return policy, timely delivery, pricing, content quality and ease of use. The study is very useful for decision makers to plan and design their websites as per the ranking shown in results. This study can be extended by considering more categories and parameters.

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