

E-Commerce Landscape & Technology Drivers

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Abstract: The business model has been changing in a big way with a boom in startup space & E-commerce has picked up a big way, not only the home grown startups like Flipkart & Snapdeal has seen billion dollar valuation, multinational players like Alibaba, Amazon has also entered the market. However the market addressed is limited to tier 1 & tier 2 cities & the penetration is very limited given the billions more to get online in India, this is a study on the existing footprint of e-commerce, the trust around them & understand what are the commonalities between them, how this new found marketplace are been adopted & does this really bringing value to customer, what are the threats, challenges & opportunities. Moving from people to technology what kind of technologies been adopted by e-commerce players & where they are heading. Research also tries to know that how does trust building happens and what are the difficulties in creating it. Trust is an important issue in e-commerce, because unlike real world transactions, the retailer is not present in person during the transaction and the consumer is not dealing with a real person. It is just dealing with an interface. It is much easier for an entity to set up a website and an electronic payment processing system than a real world storefront. It is cheaper, faster and more transparent. It is also much more difficult for customers to determine the authenticity of websites. This makes it very difficult to trust that the retailers are who they claim to be. Thus, this research will try to study and conclude about trust being one of the most important factors in success of e-commerce business.

it is about the importance and role of trust building in the e-commerce industry. It involves knowing that is trust really a factor which is contributing towards the rapid growth of e-commerce around the world, or is it just a misconception that trust leads to e-commerce success. Research also tries to know that how does trust building happens and what are the difficulties in creating it. In this age of development of new technologies, like web and even e-commerce, when we use it the trust is considered as very important and even as a pre-requisite. Very often, when the consumers do not purchase online or they are reluctant to use this technology, the lack of trust is considered as the main reason. This makes promotion of trust and confidence in the internet as essential. For consumers, security, privacy, functionality, user-friendliness issues are considered to be barriers to online shopping. Moreover, they want their personal data to be private and confidential so that they are not exposed to any fraud. They also want that the technology they are using should enable them to freely operate and take sensible control over it. But they are more flexible and willing towards taking risks with the people or organisations that they trust. The probable risk is higher in e-commerce mainly because of unawareness, proximity and negligible physical interactions. So, in order to see why consumer engage or do not engage in e-commerce, it is important to study their online trust in e-commerce as a marketplace.

Keywords: E-commerce, Trust, Technology, Startup.

1. INTRODUCTION

New technologies today involve change and this change often creates a lot of anxiousness amongst the people. This anxiety originates from lack of knowledge and lack of expertise. Newer technology is considered worthless if people don't understand it. Companies that offer more and more user friendliness are more successful. Younger generation that grows up with the internet today should and will probably get more used to the idea and concept of online shopping today. They adapt to technology more quickly and readily. So, e-commerce and online shopping will perhaps be a very normal way of shopping for most people in future. E-commerce has drastically and efficiently increased during the recent years and will perhaps continue increasing and developing, primarily due to less expensive and better technology. E-commerce involves business communications and transmissions over networks and computers, specifically buying and selling of goods and services, and the transfer of funds through digital communications. In short, e-commerce constitutes a medium for buying and selling of products and information on the internet and for other online services. When used properly, the internet is a powerful tool with significant advantages. The internet usually supports or supplements existing channels of distribution, rather than replacing

them. Also, internet facilitates the salesperson’s efforts and enhances the effectiveness and efficiency of the sales person rather than eliminating them. The internet has enabled consumers to buy products and services online, from both national and international companies. Many consumers seek information online and buy offline.

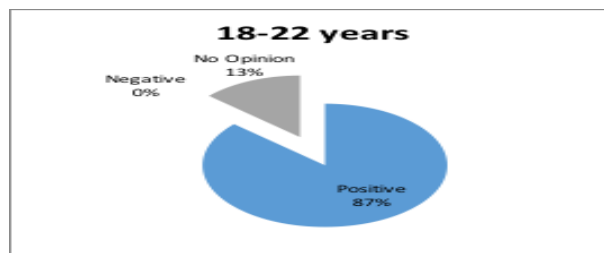
2. TRUST

Online shopping requires more trust since it is more complex than traditional shopping. It is difficult to establish trust among the buyer and consumer. Trust is a mental shortcut that consumers can use when trying to reduce the uncertainty and complexity of transactions and relationships in e-commerce markets. Online it is difficult to connect identities with actual individuals. Trust in online transactions is said to be a key factor for determining the success or failure of e-commerce. It is difficult to define the concept of trust, partly because it is situation specific.

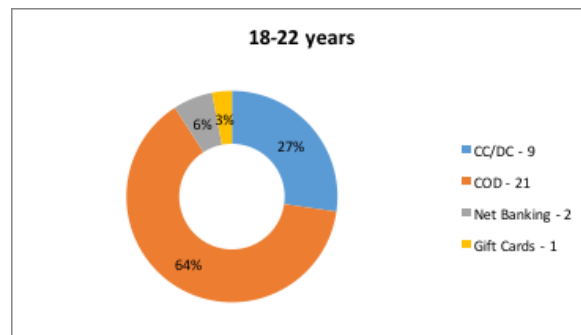
Researchers have not arrived at a suitable definition of trust. One definition may be “the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the truster, irrespective of the ability to monitor or control the other party”. Trust is based entirely on people’s perception of it and on how it is experienced by individuals. A market place can be trustworthy but the participants have to feel the trust before the marketplace can be trusted. Trust is important to us but we cannot easily specify which factors strengthen our trust.

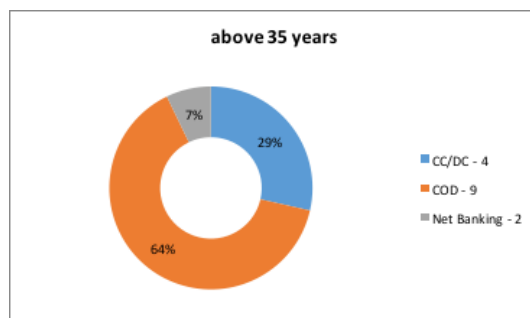
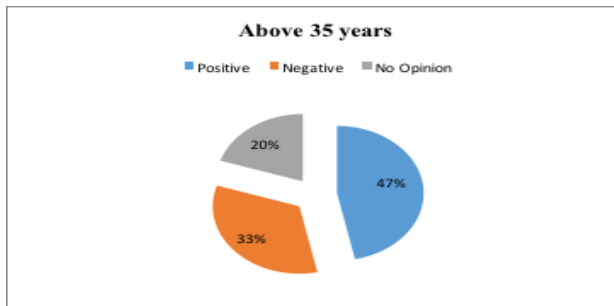
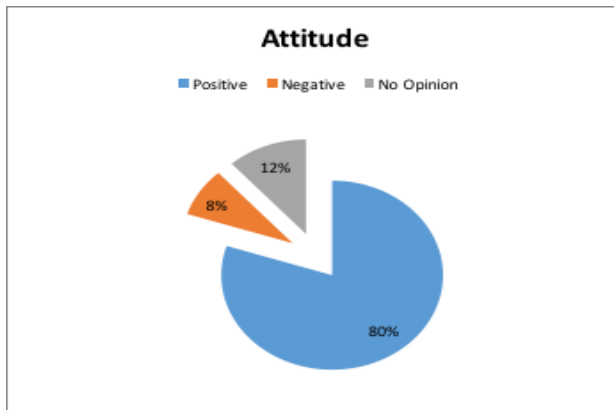
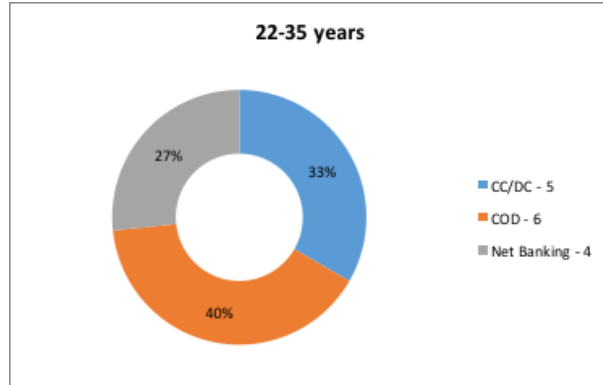
3. RESEARCH WORK:

There are two areas where we dived in first being the trust in e-commerce by a survey in the form of a Questionnaire, which would be the basis of my primary data. The purpose of the questionnaire was to gather information about how consumers perceive the idea of e-commerce and the various factors which influence their trust and belief in e-commerce activities. The questionnaires were surveyed in person and were done till the pre-set sample size of 60 questionnaires was reached. Only the respondents willing to answer the questionnaire were approached so that the survey could be true and meaningful. The questionnaire can be found in the Appendix.



Mode Of Payment





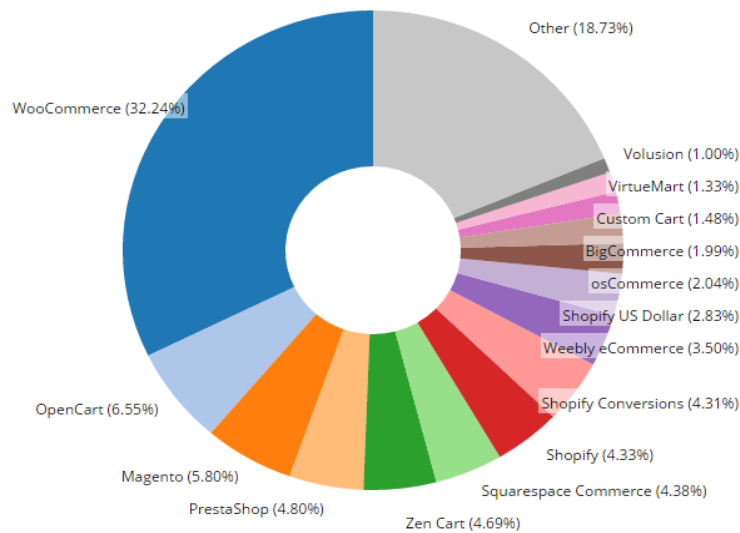
2nd area was to look at the 3 most popular e-tailers & what technology stack they are using, the comparisons was done basis on research done by 7PARK Data, Economics times etc. where we look at brand recall, monthly active users. The key component here is the technology stack, the comparison is been done using builtwith to dive into what kind of technologies these e-tailers are running The common thread between the ecosystem is the underlying technology stack been utilized at each of these organizations.

More & more organizations are adopting open-source technologies & there is a vibrant community of open-source software that is collaborating irrespective of their competitive business, organization has realized they need not to be stuck in with proprietary software & kept on paying premium rather they can collaboratively build enterprise grade software.

Some of the key aspects of the tech stack

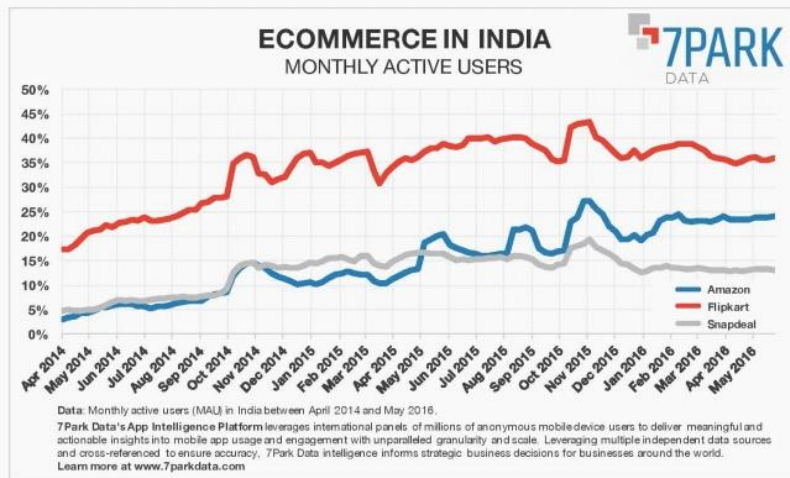
1. Use Open-Source as much as possible
2. Web-Scale Architecture
3. Use API model to integrate
4. Use Cloud-Computing & hosting providers rather than built own datacentre
5. Use distributed computing
6. Use Content Delivery Network
7. Use stateless applications
8. Data Analytics is the key
9. Mobility drives the majority of traffic

Global e-commerce technology distribution



Monthly Active users

1. Amazon
2. Flipkart
3. Snapdeal



4. CONCLUSION

For consumers not purchasing online, an often mentioned reason is the lack of trust. Thus, there is a need for promoting consumer trust and confidence on the internet. Not only in online, but also in offline environment trust is an important factor for transactions to take place. But, trust is multi-dimensional and a bit difficult to define. The level of trust needed to transact is different for different individuals. How the different consumers perceive trust can also be influenced by their past experiences, their expectations, and also their backgrounds. However, in e-commerce, the internet vendor's and their websites can act as trust builders in themselves. Although building trust in e-commerce is a difficult task in itself, it is important for the vendor to know how to build trust in e-commerce.

In the online environment, the physical inspection of the product is not possible which is possible in the traditional way of purchasing in a store, which makes it a limitation of e-commerce, and thus, also making trust building more difficult. Therefore, it is important to consider factors that influence their trust. The marketplace can be trustworthy only when consumers feel trust in transacting in that environment. There were many interesting factors found when the empirical study was conducted through questionnaire. The purpose was to find the important factors that influence the trust.

The 2nd aspect is which e-commerce companies are at the top of their game, what are the commonalities, all the top ones globally are using open-source technology & in part or completely running on Cloud leveraging elasticity, also all of them have been heavily funded by angle investors.

5. FUTURE RESEARCH

Some suggestions for future research can be-

1. Dive Deep on technology stack
2. Webscale Architecture&Serverless Framework

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