

How data can solve business problem and increase market share in e-commerce industry.

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K.M Nafiul Haque Lecturer,

BRAC Business School,

BRAC University

Subject: <u>Submission of the Internship Report on "How data can solve business problem and increase market share in e-commerce industry."</u>

Dear Sir,

I would like to express my gratefulness to you for your guidance and support throughout the entire course of preparing this report. It is an amazing privilege for me to submit my internship report on the topic "How data can solve business problem and increase market share in ecommerce industry" to you. I tried to use all the information, knowledge in the report that I gathered from my work experience at Bagdoom.com.

I, therefore, pray and hope that you would enlighten me with your valuable thoughts and views regarding this report.

Sincerely yours,

Shayar Rahman,

ID - 14204086,

BRAC Business School,

BRAC University

Letter of Endorsement by the Supervisor Faculty

This is to certify that Shayar Rahman, ID-14204086, a student of BRAC University of BRAC Business School has completed the internship report titled: "How data can solve business problem and increase market share in e-commerce industry" under my supervision. His internship placement was at Bagdoom.com. I am pleased to state that he has worked hard in preparing this report and he has been able to present a good picture of the concerned organization. The data and findings presented in the report seem to be authentic. I wish him every success in life.

.....

K.M Nafiul Haque

Lecturer

BRAC Business School

BRAC University

Acknowledgment

It was a great experience doing internship in a company like Bagdoom.com. This report has reached its completion due to the joint effort of many individuals. So, I have to express my gratitude to everyone involved in this process.

Firstly, I would like to thank my supervisor, Mr. K.M Nafiul Haque for all the guidance and support he has given me throughout the preparation of the report. He has given me valuable advices to improvise my report in every step.

I am also very thankful to Bagdoom.com for letting me do my internship at their organization. The learning and hands on experience I gained during my working period there has given me a broader view of the working field. They help me understood how I should deal with problems in the current technologically advanced world.

In addition, I would like to thank Mr. Mirajul Huq CEO of bagdoom, Mr Imranul hasan deputy manager of sale and business development and whole bagdoom team for their support. My successful completion of internship program in Bagdoom would not be possible without the support of these people.

Finally, I would like to thank BRAC business school and office of Career Serviced & Alumni Relation (OCSAR) for giving me the opportunity to develop my interpersonal skills through these Hands on experience.

Executive Summary

At the beginning, the report provides a brief overview of Bagdoom and the services offered. Then, the importance of the study has been expressed with some important factors. After that, the topic "How data can solve business problem and increase market share in e-commerce industry." has been thoroughly described from the major factors like data can solve business problem. It explains how Data helps different e-commerce companies in decision-making, marketing sales and every other situation. The report also showed some scope and limitation regarding data also various reference of data analytical tools mostly google analytics. Due to confidentiality, I was not able to show Bagdoom analytics data but I showed googles demo account data. The report tried to establish the effectiveness of Data driven decision making and business for e-commerce company. During this short period, it was difficult to gather enough data with accuracy. Although, Bagdoom team gave me their best provision to finish the internship report. Despite all the difficulties, I believe that the report could effectively explain How data can solve business problem and increase market share in e-commerce industry

Contents

Organizational Overview:	1
Mission and vision:	2
Service offered:	2
Introduction:	4
Research Questions:	5
Limitation of the study:	6
Literature review:	7
Methodology of the study:	8
Analysis and interpretation of the data :	9
How data can solve business problem and increase market share in e-commerce industry	9
Data analytics team:	9
Sales team:	10
Marketing:	11
Finding of the study:	12
Recommendations:	14
Conclusion:	15
References:	16
Appendix:	18

1. Organizational Overview:

BAGDOOM(BAGDOOM.com, registered as Akhoni.com) is one of the leading e-commerce platforms in Bangladesh, catering to a large number of consumers through a nationwide distribution network. The range of products includes consumer electronics, lifestyle and fashion items for women and men, home and office supplies, home décor, and daily consumables. What distinguishes BAGDOOM.com from other e-commerce sites in Bangladesh, is its unique business model of offering display space for small-medium businesses/enterprises and suppliers to showcase their products through BAGDOOM e-marketplace. While BAGDOOM maintains a significant portion of inventory for its fast-moving goods/items, it also leverages the inventorystocking capacity of various vendors/suppliers. Bagdoom undertakes an inspection after collecting the product at the company's warehouse from the merchants, and only after giving a quality control seal, that it meets the quality conditions, is the product allowed to be shipped to consumers. There are almost eight departments in Bagdoom. At first, the CRM department receive an order after that the order number goes to the supply chain department they collect or receive those order from the merchant receives the order. Then after checking the order that is delivered by their own or third-party delivery people. Bagdoom presents simple, casual or luxurious; trendy, unique or traditional, item for their customer. Daily lives, occasions, needs and necessities, celebrations, desires and wish lists – Bagdoom checks it all off.

Bagdoom's prime focus is the youth, referred colloquially as the "Bagdoom generation" and we are here to be a part of their lives, not just by selling the brands which rest under their hood but also by writing a part of their daily life stories.

Bagdoom is that little spark of fun springing out of a droning afternoon, that unconscious twist of hair made while losing yourself in thoughts of wonderland, rocking the floor with confidence being no one but yourself or the three sips of tea turning into a moment of a lifetime with the right people – it is all Bagdoom. They follow this moto and this is also mentioned in their Facebook profile.

Mission and vision:

BAGDOOM wants to increase its inventory of products from such home-textile, home-décor, electronics, lifestyle products and grocery products, by introduction of improved design, logistics and raw material supply integration for the targeted customer. In addition, Bagdoom wants to maintain and improve its current customer retention rate as well as customer satisfaction. The vision of the company is to capture maximum market share in a certain category and become market leader.

Service offered:

Merchant corner: Bagdoom offers a separate merchant section where they get a specific page to showcase their product and customer can access their product directly. There are almost 1400+ active merchant and every month they are grwoing at the rate of 70%. Merchants can sponsor bagdoom to highlight their product in different occasion. They also offer digital marketing service to their merchants also on their behalf.

B2B:

As ecommerce Bagdoom key service is to sell products to the customers. There are several courier service and logistic partner of bagdoom whom collect and deliver products to customer doorstep. There is a unique service provided by bagdoom is to collect order from the office thus they do not have to pay any delivery fee. Additionally customers can also get products delivered to any corner of Bangladesh. There are wide variety of goods and merchants available at bagdoom website.

B2C:

Bagdoom to also process order for corporate or to businesses that needs products in bulk amount. To cater bulk amount of order there is a dedicated person so that order gets processed in a short amount of time as well as customer get retail pricing.

Women empowerment:

Bagdoom initiated a project which is call Krishti which later became a part of bagdoom. Through Krishti Bagdoom aims to support a large number of mainly women lead MSEs in the hometextile and jute diversified products sector, by offering them individual product display pages through their websites and offering them design improvement, marketing and inventory development support. BAGDOOM wants to increase its inventory of products from such hometextile, home-décor and JDP producers, by introduction of improved design, logistics and raw material supply integration for the targeted MSEs.

2. Introduction:

Online shopping has now become very easy in our country thanks to all Electronic commerce or e-commerce Company who are using their technology and intelligence to make this a common phenomenon. They have come a long way since 2013, many of us now regularly or occasionally use e-commerce to buy anything or at least were hit by their add campaign on social media or email. E-commerce Company now can know the preference about their customer and make decision based on it. All these have become possible by the help of data.

Now a days internet services has become very common in Bangladesh. According to a report published by Daily star Bangladesh hit 9.05 crore active internet connection in August 2018. This great number of users are mostly the potential customer of e-commerce companies. The market has crossed 17 billion taka according to e-Commerce Association of Bangladesh (e-CAB). The market is growing at a remarkable pace so the potential of mining data and using it to support consumer has become much important. Nevertheless sometime those vast amount of data become overwhelming and turns to be difficult to make sense or use it more efficiently. All those data help e-commerce to grow and helps in every decision making event. In this report I tried to find out how people use data, implement those and help customer concentrating mainly on the e-commerce industry.

To know more about how e-commerce uses those data we need to find out what type of data they collect throughout the process. According to my research, there are mainly seven types of data that they need to store and use regularly. First of all, when a customer visits a website's landing page there is a signup pop-up there a customer can get some discount in exchange for signing up. That is a lead for a company after someone signs up. That signup information is one of the first stages where an e-commerce collects data about their potential customer. After that, there comes product information that is another data which is stored in the e-commerce database. From there a customers quarry is visualized to them. That product data is also linked with the inventory information. Thereafter comes the sales data. Through this data e-commerce can monitor their most sold item, item that are in demand, items that are most searched also sales projection. Then comes invoice and bookkeeping, all those entity is linked towards an unique customer ID so that

business can make query about e-commerce revenue, Transactions, Avg. Order Value and Customer lifetime value (CLV) which are very important for every business not only for e-commerce.

Till now e-commerce sector is one of the biggest player in the market who uses data so extensively. They use it to make any decision and to establish good customer support moreover their whole business is supported by this agenda. Therefore knowing this process is very important for overall understanding. On the other hand it is very important for me to implement the concept I have learnt from doing my CIM courses through this research. The courses are strongly related and supported by research. My fascination about the topic which was inspired by my previous faculty of several CIM courses as well as my current supervisor K.M Nafiul Haque sir.

Research Questions:

- 1. How often do you use data mining tools?
- 2. How often do you use any data analytical tools?
- 3. Are you aware of big data?\
- 4. How often do you use e-commerce to purchase any good?
- 5. To what extent do you agree e-commerce Company provides better customer satisfaction than traditional companies do.
- 6. Do you agree data can improve customer satisfaction in a e-commerce Company?
- 7. How often do you make decision based on data?
- 8. Data helps to forecast sale. Do you agree?
- 9. More data mining can give an e-commerce company competitive advantage. To what extent do you agree or disagree?
- 10. Data helps to identify customer's preference better. Do you agree?
- 11. Targeting customer has become more accurate by the help of data. Do you agree?
- 12. By forecasting previous sales data has helped in efficient inventory management. Do you agree or disagree?
- 13. Do you agree by investing in different data analytical tools has helped business to become more efficient?

- 14. How often do you feel e-commerce companies are breaching data policy?
- 15. CRM, ERP and Social analytical tools are blessing for e-commerce Companies. Do you agree or disagree?
- 16. Do you agree data has solved many business challenges?
- 17. How easy it is for companies to do data query, modeling and visualization?
- 18. How optimistic do you feel about the future of big data?

<u>Limitation of the study:</u>

As the report is based on research but there was number of difficulties I had to face. Main limitations are :

- 1. Very few sample size because of the report topic
- 2. It was hard to find people who I meant to target for this research
- 3. As a intern I had limited access to the internal data of Bagdoom.
- 4. Due time constraint it was hard to gather information

3. Literature review:

What is Data: simply data has no meaning it is a collection of text, number and symbol that does not necessarily mean anything this are mainly referred to raw data. This raw data is then refined and processed to make meaningful representation. After this analyze data become information that we can study and use to make any business decision. When data become processed it becomes significant and interpretable. Therefore when a user makes any interaction in a website that is tracked. There is a unique tracking code (mainly user IP address) sending information to analytics which is called hit. Hit is basically an URL string that contains data about the user language, device, resolution of the device, behaviour, analytics ID, user area and page they are visiting.

Why data is so important: By collecting accurate and reliable data can give business advantage in making decision as well as in business development. The information business collects from its customers that can be repurposed to serve its customer much better and make service more consumer friendly. Meaningful information that gathered from data can give us much more detailed insight about business performance and target customers by their behaviour. If something can be measured that can be controlled and monitored therefor data gives ecommerce that access than any physical store. Through accurate data a business can set target and be more accurate in risk management as well as business performance. Data also help business to find solution to any problem more easily than ever. Data visualization helps to find relationships between what is going on in different area, teams and systems.

The process of mining data: Data mining includes investigating and breaking down vast amount of data to gather significant examples and patterns. It very well may be utilized in different types of ways, for example, database advertising, credit card fraudulent, misrepresentation, spam Email, or even to perceive the feeling or assessment of clients. There are five simple steps of data mining. In first step and ecommerce or any organization collect data after therefore store it in their dedicated database. After that they manage those data

at their own server which may be at their own facilities or rent a cloud server to store it. Thereafter business analyst, IT team and management team access to those data, manage those and use those accordingly. Then database application short those data according to the user result. Lastly any user or authority uses those data in a meaningful or visualize it to share. Data mining is a integral part of any ecommerce business that helps to make any business decision from customer acquisition to overall business development.

4. Methodology of the study:

This report is based on secondary and primary data collection. Furthermore, I implemented some regular observation during my job.

Primary data: For primary data collection I used online survey. There I made 18 questionnaire and send those survey link to people who are related to e-commerce industry or anyone who is a data enthusiast. I surveyed among my colleagues and friends working in similar industry. Furthermore, I also shared my survey link to a Facebook group of e-cab (e-commerce association of Bangladesh). From that group I collected a considerable amount of data. My sample size was quite narrow therefor I was able to collect 54 respondent during my survey. Additionally, I took some expert opinion as well as small group interview to get an Idea of this topic. I had an interesting conversation with my CEO Mirajul Huq he told me different aspects of data model and business insight tool. I also had chat with Bagdoom's IT and marketing team regarding this topic.

Secondary data:

• Different online article, Books, Blog, statical reports and research paper.

5. Analysis and interpretation of the data:

How data can solve business problem and increase market share in e-commerce industry.

Data is the most important element of a business either be it ecommerce or any business. Those who have more data can have lead in the business and capture market very easily. In this era of competition every e-commerce wishes to become number one in the market and tries to capture as much market share as possible. There are different database management model used by different e-commerce company but all of them have a similar pattern. Relational database management is the most widely used database management system most of them follows. There are also different database management software used in the process like Magento database, Amazon simple BD ,SQL Server by Microsoft, Oracle database and many more. In Bagdoom there are eight different department almost every department need to work with data. Almost every e-commerce process more or less the same way. Among all the department data analytics team, sales team and digital marketing uses data majority of the time. Those team are continuously involved in data monitoring as well as making decision based upon it. Each department uses data in different way. Therefore each team store and collect information in different way. Data helps in various ways and help business to become ahead of the competition and give customer a better support.

Data analytics team:

The main role of a data analytics team is to architect expert technology user. They are mainly responsible for data mining, data processing, and executing technical application of any projects. Moreover, member of this team will often maintain all database solutions, from design to maintenance. They are expert with relational databases and querying data with languages for instance SQL, or R, Python. They are involved in troubleshooting, recognizing inconsistencies and tracking problems during data gathering and storing. One of the major role of data analytics team is to use statistical tool and different tools and technologies for decrypting data. They also

involved in identifying trends and calculating performance as well as monitoring the performance of the website in a regular basis. In my research I had particularly asked few question targeting those individuals who are involved with this department. I asked a question abut How often do you use data mining tools? About 58.8% said they use very often 11.8% said moderately often and rest of the people said slightly often. Another question I asked How often do you use any data analytical tools? About 52.9% Very often,29.4% said Moderately often and 11.8% said Slightly often. From those above questioner results we can see that majority of the people involved in this sector uses those metric as a regular basis.

Sales team:

E-commerce sales team are mostly data driven they make sales decision based on data. They follow a sales pattern to make prediction and maintain sales record. Searching and finding lead needs many trial and error. Finding what product and communication channels get the best response and following those paths is very important step for sales team. For instance from google analytics data they can compare sales data that worked previously and follow that step for future. They can Maximize Customer Lifetime Value (CLV) easily for google analytics data to take necessary step to increase that. By knowing the information about what my current customers are buying, or not buying, gives option to explore and add features, service or product that may work in the future. Buy watching google analytics behavior section it is very easy to predict target market behavior and buying pattern. Customer who bought or who intended to buy can give us more predicted idea about a curtain product. Measuring KPI (Key Performance Indicators) has become very easy by the help of data and SAAS. This gives a detailed information about sales progress and target for reaching goals. During my survey, I asked whether Data helps to forecast sale do you agree. 70.6% Agreed on the topic that they used data only 23.5% remained neutral. Similarly I asked by forecasting previous sales data has helped in efficient inventory management. Do you agree or disagree? 58.8% Agreed and 29.4% stayed neutral. This gives us the idea that sales and business development in a ecommerce is vastly depended upon data

Marketing:

E-commerce marketing is largely consist of digital marketing mostly SEO, social media marketing and google adwords. On the other hand there is very small portion used in traditional media. Additionally Marketing really does not began at the developing stage of product nevertheless, it starts for the need for a product or service. I like to divide marketing of e-commerce in three stage

- 1. **Behavior analysis**: Understanding customer buying pattern and quarry we can analyze their behavior. Google analytics and e-commerce's very own database helps to understand it. For instance if a user has interest in electronic item he or she will search and try to find product similar to that so targeting that group of customer those type of product will increase conversion rate as well as will make marketing way easier to those people more easier and effective. On the other hand, a user bought a gadget item from a certain e-commerce site then targeting him or her to buy product similar to that product will also increase conversion. E-commerce has that historical data to precisely target those individual more easily and marketing communication gets more fruitful. In my survey I asked "Targeting customer has become more accurate by the help of data. Do you agree?" Almost 41.2% agreed with fact 29.4% strongly agreed and 23.5% remained neutral.
- 2. Content analysis: For an e-commerce content is the most important set of marketing and communication element. Quality content is very important to grab traffic into the page. If the visitor does not find a landing page informative or appealing, he/she is likely to search for another e-commerce or move on. Good illustration is important for quality digital content. However, writing SEO friendly content with proper keyword research is also important. I would like to divide content into two main type one is product content and content marketing. Data helps a lot to improve product content of a website we can test whether a particular web content is doing well for a content or not. There is meta content for each product which helps to rank website according to search result. We can figure out this content based upon user's quarry or google keyword planner both which is a set of data tool that helps us to find the perfect content for a particular product. Another content is marketing content that we regularly see in our social media. Those content write-ups are also based on data. We can measure the performance of a post that

- reached what amount of user. If a posts content work really well that is sure to work in the future as well.
- 3. **SEO & social media marketing:** SEO or Search Engine Optimization is the greatest effective form of e-commerce marketing. It guarantees the visibility of a e-commerce on the search engine. It helps an e-commerce to let people know that they are out there in the ocean of online marketplace. Primarily, SEO helps an e-commerce bring traffic to the site as well as convert them to leads organically Those organic search results is very important for a website for sustainability. This SEO is fully based upon data analysis and keyword research. On the other hand social media marketing is mostly based upon targeting & retargeting based upon social media data. This team use different data analytical tools like Google Analytics, Google search console, Mixpanel, Facebook Insights, YouTube Analytics, Instagram Insights etc. During my survey I asked Data helps to identify customer's preference better. Do you agree? 58.8% agreed with this topic, 23.5% strongly agreed and rest of them stayed neutral. I also asked similar question targeting this team is that "CRM, ERP and Social analytical tools are blessing for e-commerce Companies. Do you agree or disagree?" 58.8% Agreed, 17.6% Strongly agreed, 11.8% stayed neutral and rest disagreed.

Though data is used extensively there are some problems that needs to be addressed.

- 1. Data policy:
- 2. Understanding big data:
- 3. Inaccurate data:

Finding of the study:

During my study and internship period I found few challenges that are commonly faced by many e-commerce. Though according to my research topic which was "How data can solve business problem and increase market share in e-commerce industry" there are three main challenges that need to addressed. Not every business problem can be solved even though having data.

- 1. Data policy: E-commerce companies store a large amount of data that need to be governed and need a proper data policy. To build the framework how data can or cannot be used is possible by having the control over those data. Most important priority is to find alignment between what can be done with those data, what is good for business and how that can give most benefit to customers. Also business need to understand what types of data usage customers are contented with and if that is constant with business concept and ethics. Transparency is very important for data policies. This creates a trustworthy bond between customer and e-commerce business. Therefore, e-commerce should have much concentration this topic. Some of them lack a proper data policy or some fail to follow it properly. Implementing a proper framework for data policy is a challenge for this companies
- 2. Challenges regarding big data: Challenges regarding big data: Year after year the number of e-commerce users are increasing rapidly. Therefore, the amount of data for per user is increasing every year. As a result, volume of the data, velocity of the data and variety of the data is increasing day by day. The first challenge for an e-commerce is to store those data. Most of them uses different cloud services to store those data but in case of some emergency it can be problem so that data need to be backed-up. Some of them uses in-house database but that also becomes costly. This storing of data becomes overwhelming rather processing it. Second challenge arises after this the velocity of the data as there are new data every moment that needs to responded in real time. Lastly comes the Variety of data. Data exist in many different formats therefore it needs to be arranged in a way that it makes the most sense and efficient to use. It is also a challenge for e-commerce to create relation out of it.
- 3. Inaccurate data: There are many cases that the data represented is not that accurate one. Data maybe fake or misrepresented which can give wrong result at the end. If every element of the data set is not set properly there may be inaccuracy. As a result, decision making get hampered as well resources gets wasted. Often it is seen that customer provide fake information which also becomes challenging

Recommendations:

E-commerce companies should harness data more and more so that they can improve customer service better. They could be able to personalized or even hyperactive personalize product for individual customer by better implementing website and analyzing data. They also need to concentrate on training employees to get better understating about different analytical tools so that every part of the business becomes efficient and data focused rather guessing anything. Additionally, they need to give more concentration over data and user policy as this is the very part that prevent user protection of data as well as its ensures protection of their own data as well. The focus of e-commerce is price centric every wants to give best price possible but sometime they lack in ensuring product standard so they should need to give more effort user review and product fulfillment. To make the whole business process more efficient every e-commerce need to implement more and more automation system so that the margin of error gets lower and people could focus more in innovation.

Conclusion:

To conclude in the modern era where most of us are finding the most convenient and profitable way of doing business we tend forget the root why we initially started. But as far our Bangladeshi Tech companies they mainly focusing on customer satisfaction then anything. Therefore, data is the most important to ensure customer satisfaction in those industries. E-commerce is growing at a rapid pace so as the database therefore maintaining ethical business has also become most important. Though those factors are not used by every company. I am very optimistic about the future of big data as well as how services will get much user centric and customized in the future by the help of data.

Through my internship period I tried to learnt about the business process of e-commerce. It was an interesting journey from university to leading an e-commerce to get in hand experience. This research was an exploratory research and I tried to find the potential of data analytics in e-commerce industry. I tried my best to express the issue and thought through this research paper.

References:

Rashid, A. (2018). IDL monthly business review. Assistant General Manager, 06-13. Retrieved from https://idlc.com/mbr/images/public/hPqVdqDxw1d36dRsjxGrbN.pdf

V. Kumar, Veena Chattaraman, Carmen Neghina, Bernd Skiera, Lerzan Aksoy, Alexander Buoye, Joerg Henseler, (2013) "Data-driven services marketing in a connected world", Journal of Service Management, Vol. 24 Issue: 3, pp.330-352, https://doi.org/10.1108/09564231311327021

Wu, X., Zhu, X., Wu, G. Q., & Ding, W. (2014). Data mining with big data. IEEE transactions on knowledge and data engineering, 26(1), 97-107.

Underwood, R. A. (2003). U.S. Patent No. 6,633,878. Washington, DC: U.S. Patent and Trademark Office.

Brynjolfsson, E., Hitt, L. M., & Kim, H. H. (2011). Strength in numbers: How does data-driven decisionmaking affect firm performance?. Available at SSRN 1819486.

Labrinidis, A., & Jagadish, H. V. (2012). Challenges and opportunities with big data. Proceedings of the VLDB Endowment, 5(12), 2032-2033.

10 Significant Steps for Data Driven Marketing strategy Success | edu CBA. (2018, October 25). Retrieved from https://www.educba.com/data-driven-marketing-strategy

Iyer, S., Mansuri, S., & Davies, B. (2016, April 29). Big Data Analytics: Challenges And Opportunities. Retrieved from https://www.knowledgehut.com/blog/big-data/big-data-analytics-challenges-and-opportunities

Menon, R., Tong, L. H., Sathiyakeerthi, S., Brombacher, A., & Leong, C. (2004). The needs and benefits of applying textual data mining within the product development process. *Quality and reliability engineering international*, 20(1), 1-15

Gefen, D., & Straub, D. W. (2000). The relative importance of perceived ease of use in IS adoption: A study of e-commerce adoption. Journal of the association for Information Systems, 1(1), 8.

Gefen, D., & Straub, D. W. (2004). Consumer trust in B2C e-Commerce and the importance of social presence: experiments in e-Products and e-Services. Omega, 32(6), 407-424.

Molla, A., & Licker, P. S. (2005). eCommerce adoption in developing countries: a model and instrument. *Information & management*, 42(6), 877-899.

Azam, M. S. (2007). Implementation of B2C E-commerce in Bangladesh: The effects of buying culture and E-infrastructure. *Advances in Global Business Research*, *3*(1), 55-81.

Cox, J., & Dale, B. G. (2001). Service quality and e-commerce: an exploratory analysis. *Managing Service Quality: An International Journal*, 11(2), 121-131.

Evans, M. P. (2007). Analysing Google rankings through search engine optimization data. *Internet research*, 17(1), 21-37.

Appendix: Questioner: Report topic: How data can solve business problem and increase market share in e-commerce industry. 1. How often do you use data mining tools · Extremely often · Very often · Moderately often · Slightly often · Not at all 2. How often do you use any data analytics tools · Extremely often · Very often · Moderately often · Slightly often · Not at all 3. Are you aware of big data? ·Yes · No 4. How often do you use e-commerce to purchase any good? · Extremely often · Very often · Moderately often · Slightly often

5. To what extent do agree e-commerce Company provides better customer satisfaction than

· Not at all

traditional companies do.
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree
6. Do you agree data can improve customer satisfaction in e-commerce Company?
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree
7. How often do you make decision based on data?
· Extremely often
· Very often
· Moderately often
· Slightly often
· Not at all
8. Data helps to forecast sales. Do you agree?
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree

9. More data mining can give an e-commerce company competitive advantage. To what extent
do you agree or disagree?
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree
10. Data helps to identify customer's preference better. Do you agree?
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree
11. Targeting customer has become more accurate by the help of data. Do you agree?
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree
12. By forecasting previous sales data has helped in efficient inventory management. Do you
agree or disagree?
· Strongly agree
· Agree

· Neutral
· Disagree
· Strongly disagree
13. Do you agree by investing in different data analytical tools has helped business to become
more efficient?
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree
14. How often do you feel e-commerce companies is breeching data policy?
· Extremely often
· Very often
· Moderately often
· Slightly often
· Not at all
15. CRM, ERP and Social analytical tools are blessing for e-commerce Companies. Do you
agree or disagree?
· Strongly agree
· Agree
· Neutral
· Disagree
· Strongly disagree
16. Do you agree data has solved many husiness challenges?

· Agree
· Neutral
· Disagree
· Strongly disagree
17. How easy is for companies to do data query, modeling and visualization?
· Extremely often
· Very often
· Moderately often
· Slightly often
· Not at all
18. How optimistic do you feel about the future of big data?
· Extremely often
· Very often
· Moderately often
· Slightly often
· Not at all

· Strongly agree





