

An e-Commerce portal for online Medicine trading

Sumanta Chatterjee, Somsubhra Gupta, Tanusree Saha

Abstract— E-commerce short for electronic commerce is trading in products or services using computer networks, such as the Internet. The proposed e marketing model here is an e-commerce portal for online medicine trading and searching providing customers the list of nearby medical shops where the particular medicine is available and also online purchasing facility for that medicine. This model is basically proposing a new idea in E-marketing to supply medicines online and the customer can search the medicine's availability in nearby medical shops. The purpose behind making such e-commerce portal is providing customers a 24*7 availability of medicines. The shopkeepers will register over the portal and will let their medicine to be sold online. This will play a very important role in providing rare medicines at remote places where there is unavailability of medicines and also there will be a detailed list of medicines available in the stock. After implementing the proposed model, B2B and B2C transactions and sales would be increasing in coming years and it has a major impact of usability on e-marketing strategy of electronic business.

Index Terms— Demand analysis, B2B & B2C transactions; EDI Technology.

I. INTRODUCTION

As the world entered the twenty-first century, business conducted over the Internet with its dynamic, rapidly growing, and highly competitive characteristics, promised new avenues for the creation of wealth. Established firms are creating new online businesses, which are providing new opportunities to the internet providers as well as customers.

E-commerce adoption of network structure is divided into Intranet and extranet. External information systems is achieved through the website, including pharmaceuticals, consumables and other supplies, equipment, and other online purchases, the customer's online information services, personalized services, telemedicine as well as network services marketing activities. The e-commerce portal for online medicine trading and searching is a new model with a unique idea in which customers can search the availability of the medicine they need in nearby medical shops. This model is also proposing the E-marketing idea in which the customers can register themselves to the website and can order the medicine they need online with online payment facility. The purpose behind making such website is providing customers a 24*7 facility of medicines. The shopkeepers can also register over the website and became the member of the e-commerce portal will let their medicine to be

sold online. This will play a very important role in providing rare medicines at remote places where there is unavailability of medicines and also there will be a detailed list of medicines available in the stock.

II. CONCEPT OF E-COMMERCE & E-MARKETING

E-Commerce-Electronic commerce or e-commerce is a term for any type of business, or commercial transaction that involves the transfer of information across the Internet. It covers a range of different types of businesses, from consumer based retail sites, through auction or music sites, to business exchanges trading goods and services between corporations. It is currently one of the most important aspects of the Internet to emerge.

Ecommerce allows consumers to electronically exchange goods and services with no barriers of time or geographical locations. Electronic commerce has expanded rapidly over the past five years and is predicted to continue at this rate, or even accelerate. B2B businesses often deal with hundreds or even thousands of other businesses, either as customers or suppliers. Carrying out these transactions electronically provides vast competitive advantages over traditional methods. E-commerce is faster, cheaper and more convenient than the traditional methods of bartering goods and services. Electronic transactions have been around for quite some time in the form of Electronic Data Interchange or EDI. EDI requires each supplier and customer to set up a dedicated data link, where e-commerce provides a cost-effective method for companies to set up multiple links. Electronic commerce has also led to the development of electronic marketplaces where suppliers and potential customers are brought together to conduct mutually beneficial trade. E-marketing is marketing strategy done online via websites or other online tools and resources. It can include paid services while other methods are virtually free. A wide variety of e-marketing methods are available, including: direct email, SMS/text messaging, blogs web pages, banners, videos, images, ads, social media, search engines, etc.

III. B2B & B2C ARCHITECTURE.

Business-to-business (B2B): Business-to-business, usually abbreviated B2B, refers to a situation where one business makes a commercial transaction with another. This typically occurs when a business is sourcing materials for their production process. A business needs the services of another for operational reasons; a business re-sells goods and services produced by others e.g. a retailer (retailer is the person who sells consumer goods or services to customers through multiple channels of distribution to earn a profit). Business-to-Business (B2B) Gateways integrate data from back-end systems enabling

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information exchange across trading partners. B2B Gateways also provide a centralized point for transformation of multiple data sources through interoperability standards such as XML (Extensible Markup Language), CXML (Commerce XML) and EDI (Electronic data interchange). B2B Gateways provide businesses an e-commerce platform for integrating with key suppliers and customers quickly and easily. The platform often is a component of a company's Service-Oriented Architecture (SOA) architecture. Other capabilities of the B2B Gateway include trading partner management and security control. B2B Gateways help to bridge the collaboration gap across the supply chain partners and transform the data flow between companies from a batch oriented manner into a real time process. B2B Gateways continue to be in high demand for organizations of every size.

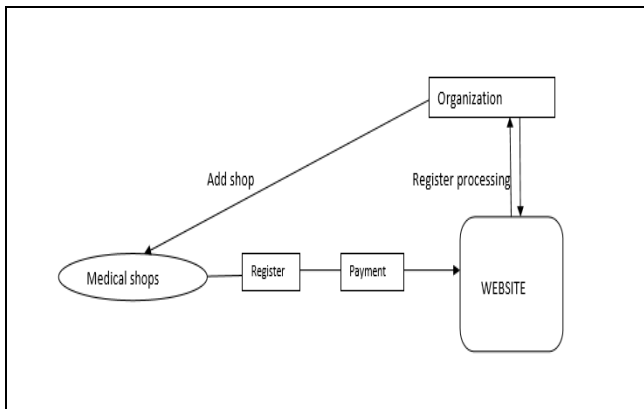


Fig1: B2B Transaction

Business-to-customer(B2C)-"Business-to-Consumer," usually abbreviated B2C, is a phrase that has become attached to electronic business activities that focus on *retail* transactions rather than activities conducted between two businesses; the latter, business-to-business, is called B2B. These uses appeared along with Internet commerce in the 1990s and have been current since then. The usage has expanded so that, in the mid-2000s, B2C is also used as a handy abbreviation in talking about retail trade where electronics is just one component of the transaction and other cases where simply "retail trade" is meant.

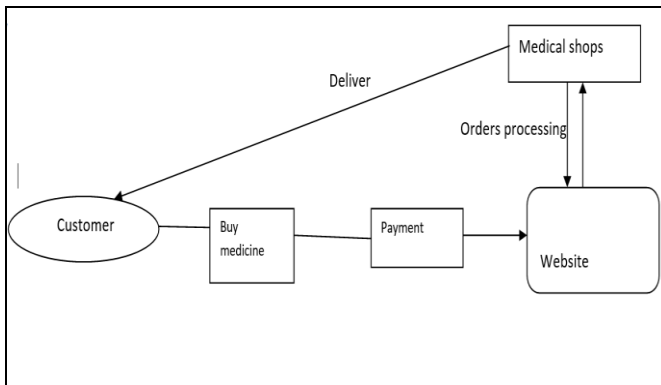


Fig2: B2C Transaction

Electronic Data Interchange (EDI) is an electronic communication method that provides standards for exchanging data via any electronic means. By adhering to the same standard, two different companies or organizations, even in two different countries, can electronically exchange documents (such as purchase orders, invoices, shipping notices, and many others). EDI has existed for more than 30 years, and there are many EDI standards, some of which address the needs of specific industries or regions. It also refers specifically to a family of standards. The National Institute of Standards and Technology defined electronic data interchange as "the computer-to-computer interchange of strictly formatted messages that represent documents other than monetary instruments. EDI implies a sequence of messages between two parties, either of whom may serve as originator or recipient. The formatted data representing the documents may be transmitted from originator to recipient via telecommunications or physically transported on electronic storage media." It distinguishes mere electronic communication or data exchange, specifying that "in EDI, the usual processing of received messages is by computer only. Human intervention in the processing of a received message is typically intended only for error conditions, for quality review, and for special situations. For example, the transmission of binary or textual data is not EDI as defined here unless the data are treated as one or more data elements of an EDI message and are not normally intended for human interpretation as part of online data processing." EDI can be formally defined as the transfer of structured data, by agreed message standards, from one computer system to another without human intervention.

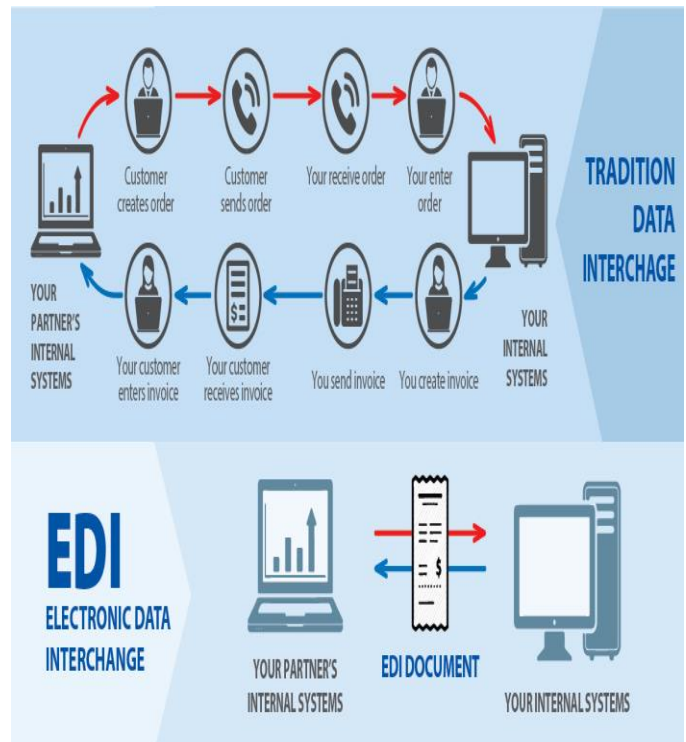
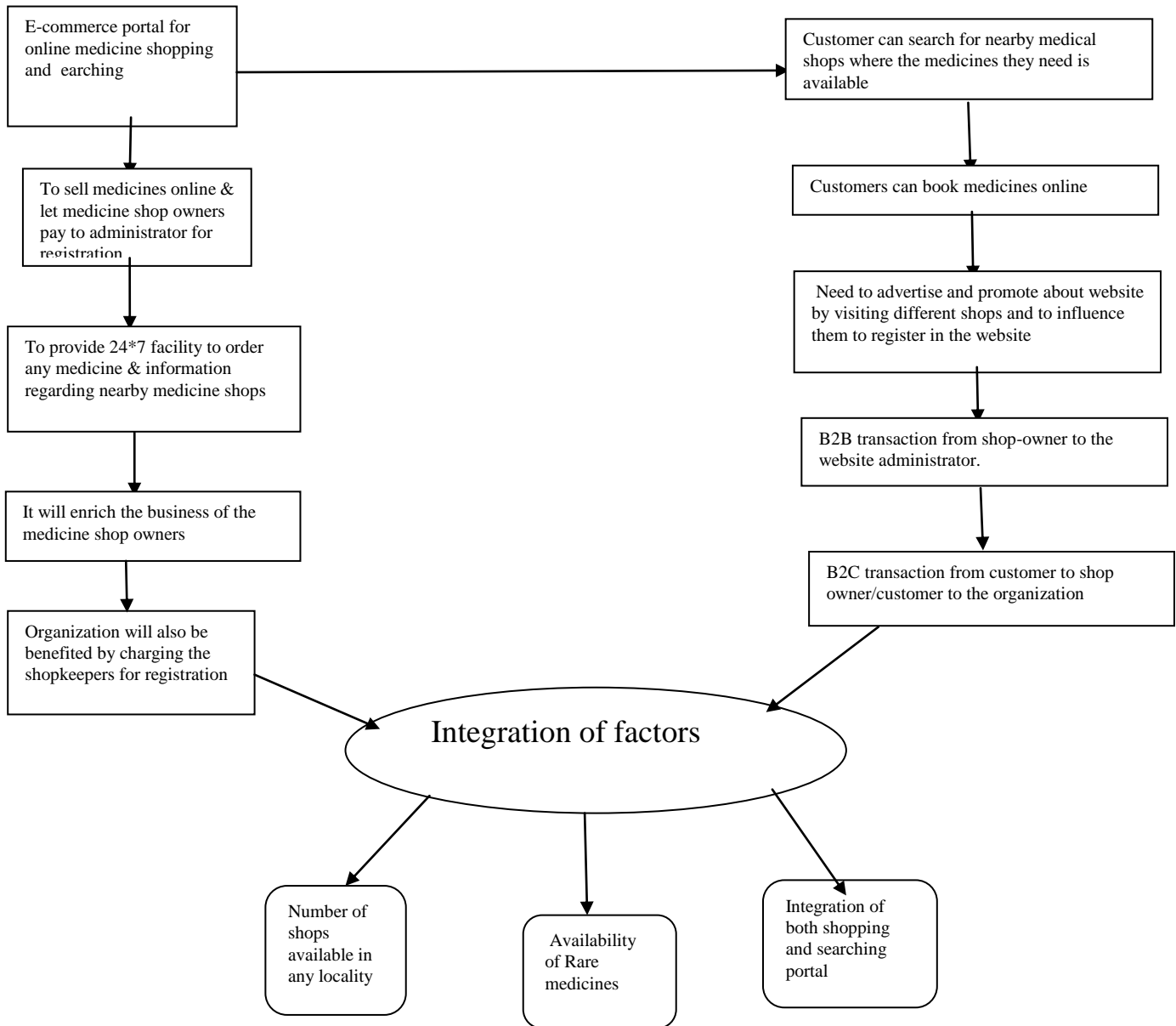


Fig3: EDI Technology

IV. PROPOSED E-MARKETING MODEL BASED ON DEMAND



VI. CONCEPT OF DEMAND ANALYSIS IN E-MARKETING.

The demand indicates the volume of sales i.e., multiple number of units sold by unit price. It is emphasized that demand is influenced by six factors such as, assessment of quality, competition with other competitive product, Analysis of historical records, population density, Analysis of per capita income, customer's intention, and marketing campaign. Each factor denotes the function of demand and these after integrating all the function of demand; we will get total integrated demand. To optimize the demand it is necessary to forecast marketing plan and strategies. After implementing marketing plan through information mining and intelligent computing, the demand will be increase.

V. CONCLUSION

E-marketing is a part of the e-commerce and has very close relationship with e-commerce. This model is useful to promote improving the e-marketing method. The model is based on demand analysis of various customers as well as a new model in E-marketing to supply medicines online with 24*7 facilities. We had also kept in mind the needs of customers and their ease in ordering medicine. This will play a very important role in providing medicines at remote places where there is unavailability of medicines. There will be a detailed list of medicines available in the stock. There will be a list of all medical shops present in the customer's area. If customer database (model) is linked to website, then whenever someone visits the website, customers demand can be analyzed based on

the model, and thereafter forecasting the e-marketing implementation. Registered customer will get e-mail based on their interests and preferences and based on their contact history, buying pattern and online behavior.

ACKNOWLEDGMENT

We are grateful to our institution for providing us support from all aspects.

REFERENCES

- [1] E-Marketing Strategy for Businesses Adam Grzywaczewski; Rahat Iqbal; Nazaraf Shah; Anne James 2010 IEEE 7th International Conference on E-Business Engineering
- [2] file:///C:/Users/Guest/Downloads/TheImpactofUsabilityonE-Marketing.pdf
- [3] A study of contextual rules for web storefronts based on e-marketing in the agent-mediated electronic commerce Wen-Shan Lin; N. Cassaigne IEEE International Engineering Management Conference.
- [4] Development of an Interactive Real-Time Negotiation Module for an E-commerce Platform Nobert Rangarirai Jere; Mamello Thinyane; Alfredo Terzoli 2011 Fourth International Conference on Information and Computing
- [5] Intelligent mining on purchase information and recommendation system for e-commerce Weikang Xue; Bopin Xiao; Lin Mu 2015 IEEE International Conference on Industrial Engineering and Engineering Management (IEEM) IEEE Conference Publications
- [6] Application of Information Technology in Enterprise E-Commerce Based on Grey Relational Clustering and Data Mining Qu Zhiming 2009 Second Pacific-Asia Conference on Web Mining and Web-based Application IEEE Conference Publications
- [7] Secure recommendation system for E-commerce website Bhagya Ramesh; R. Reeba 2017 International Conference on Circuit, Power and Computing Technologies (ICCPCT) Year: 2017 Pages: 1 – 5 IEEE Conference Publications
- [8] Analysis of Users' Behavior in Structured e-Commerce Websites Sergio Hernández; Pedro Álvarez; Javier Fabra; Joaquín Ezpeleta IEEE Access Year: 2017, Volume: 5 Pages: 11941 – 11958 IEEE Journals & Magazines
- [9] Plausible characteristics of association rule mining algorithms for e-commerce Hemant Kumar Soni; Sanjiv Sharma; Manisha Jain 2017 Third International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-Informatics (AEEICB) Year: 2017 Pages: 36 – 39 IEEE Conference Publications
- [10] A predictive approach for improving the sales of products in e-commerce Z. A. Usmani; Shraddha Manchekar; Tahreem Malim; Ayman Mir 2017 Third International Conference on Advances in Electrical, Electronics, Information, Communication and Bio-Informatics (AEEICB) Year: 2017 Pages: 188 – 192 IEEE Conference Publications.
- [11] Niranjanamurthy M and Dharmendar chchar. "The Study of e-commerce security Issues and Solutions "International Journal of Advanced Research in Computer and advanced engineering. Volume -2, Issue -7 . Pages (5-7), July 2013.
- [12] The Application of Web Data Mining in the Electronic Commerce Weigang Zuo; Qingyi Hua 2012 Fifth International Conference on Intelligent Computation Technology and Automation Year: 2012 Pages: 337 – 339 Cited by: Papers (2) IEEE Conference Publications.
- [13] Solaimani, S., Bouwman, H., Itala, T., 2015. Networked enterprise business model alignment: a case study on smart living. Inform. Syst. Front. 17 (4), 871–877.
- [14] Knowledge Management in E-commerce: A Data Mining Perspective Hong Yu; Xiaolei Huang; Xiaorong Hu; Changxuan Wan 2009 International Conference on Management of e-Commerce and e-Government Year: 2009 Pages: 152 – 155 Cited by: Papers (2) IEEE Conference Publications
- [15] On demand recommendation using association rule mining approach Mayur Bhosale; Tushar Ghorpade; Rajashree Shedge 2016 International Conference on Signal Processing, Communication, Power and Embedded System (SCOPEs) Year: 2016 Pages: 1302 – 1306 IEEE Conference Publications
- [16] Knowledge Management in E-commerce: A Data Mining Perspective Hong Yu; Xiaolei Huang; Xiaorong Hu; Changxuan Wan 2009 International Conference on Management of e-Commerce and e-Government Year: 2009 Pages: 152 – 155 Cited by: Papers (2) IEEE Conference Publications
- [17] A study of contextual rules for web storefronts based on e-marketing in the agent-mediated electronic commerce Wen-Shan Lin; N. Cassaigne IEEE International Engineering Management Conference
- [18] Information mining and e-marketing plan on real time data in cottage industries Sumanta Chatterjee, Somsubhra Gupta International Journal of Engineering and Applied Sciences (IJEAS) ISSN: 2394-3661, Volume-4, Issue-10, October 2017

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