

# Study of Software Purchase Influencing Factors

Tilak kumar S<sup>1</sup> Dr S A Vasanta Kumara<sup>2</sup>

<sup>1</sup>Student of M.Tech <sup>2</sup>Professor

<sup>1,2</sup>Department of Industrial Engineering & Management

<sup>1,2</sup>Dayananda Sagar college of Engineering, Bangalore-560078, India

**Abstract**— India's software exporting industry is one of the world's successful information technology industries. Begun in 1974, it employed 2.5million persons in 2014 and earned revenue of \$130 billion, equal to 17.6% of global software services spending. This paper's object is to explain the industry's origins, growth and sustainability. The "We have seen a significant increase in global technology spending this year, creating opportunities for the Indian software services sector to post double digit growth again in export as well as in the domestic markets," a top industry representative said. Software purchasing today involves much more in the way of investments. There are many techniques developed to purchasing software like ERP, Web service, HTML. In today's competitive world it has become imperative for companies around the world to keep a track on what a consumer wants from the various products and services offered to him. We also need to keep track on the fact that the product features and services are being perceived the way they were meant to be, and are being used accordingly. It is also necessary for us to keep a tab on the changing needs of the consumers so that we may align our products and services accordingly to meet the customer expectations. This is especially true of financial services sector because of the keen competition involved and because of the intangible nature of the service provided. The attitude and perception of customer play a very important role in determining the success of any financial product or services. Hence keeping a tab on the changing perceptions and attitudes of the customer towards product and institution is also a very important job for any organization.

**Key words:** Purchasing, Computer software, Organizational behavior, Electronic commerce, Internet, Consumer behavior, ERP

## I. INTRODUCTION

In today's competitive world it has become imperative for companies around the world to keep a track on what a consumer wants from the various products and services offered to him. We also need to keep track on the fact that the product features and services are being perceived the way they were meant to be, and are being used accordingly. It is also necessary for us to keep a tab on the changing needs of the consumers so that we may align our products and services accordingly to meet the customer expectations.

This is especially true of financial services sector because of the keen competition involved and because of the intangible nature of the service provided. The attitude and perception of customer play a very important role in determining the success of any financial product or services. Hence keeping a tab on the changing perceptions and attitudes of the customer towards product and institution is also a very important job for any organization.

India's software exporting industry is one of the world's successful information technology industries. Begun in 1974, it employed 2.5million persons in 2014 and earned

revenue of \$130 billion, equal to 17.6% of global software services spending. This project object is to explain the industry's origins, growth and sustainability.

We shall show, the industry originated under untypical conditions. Local markets were absent and government policy toward private enterprise was hostile. These conditions is influenced the industry's origins. The industry was begun by Bombay-based conglomerates which entered the business by supplying global IT firms located overseas with programmers. Their success owed to the innovative exploitation of a new global market opportunity and protection from transnational corporations and startups by policy. The explanation on origins is the same as used to explain industry origin in countries such as Korea and Japan (see, for example, Dickens (2003)) – with the difference that while government policy favored large domestic firms and discouraged TNCs and small firms in those countries, in India, government policy disfavored all types but was least hostile to large, domestic firms. In economic terms, the effect was the same as the more typical protectionist policy. The protected environment restricted the growth of project management and domain skills so that, despite access to a large pool of Programmers, the industry could not grow in value-addition.

During the early years of the industry's third decade, beginning in the mid-1990s, the establishment of the Internet facilitated the separation of services, such as software maintenance and email management, from the site where the software was located. Following telecommunications policy reforms in 1999, this opened new opportunities for domestic firms. In 2000, reforms in foreign ownership rules, intellectual property protection and venture capital policy induced TNC, Diaspora and foreign venture capital entry. The software services industry, dominated by large local firms, has subsequently competed with firms with superior domain skills and access to finance. In consequence, the industry as a whole is seeing new leadership, more product Development and higher value-addition.

### A. Objectives of the Project:

The main focus of the study is that "How the person or organization takes the decision to buy software products and what are the factors influences for taking purchase decision". This study helps to penetrate and positioning the software products in to the market and customer's mind. Customer satisfaction survey based on different product is another focus of the study. It helps to estimate the company strength of delivering the values. Based on this study company can deliver the value effectively and efficiently.

The objective will be:-

- To study the factors that influences the decision to buy or purchase software products.
- Identify of group major factors based on importance.

**B. Scope of the Project:**

As explained in the title, this project of Software industry is one of the major competitive industries. Success of the business depends on how a organization understanding the customer’s requirements and satisfaction. This study helps to estimate the customer satisfaction level. It is leads to the success of the organization. How the Customer taking buying decision. This study helps to understand the consumer behavior. It is help to positioning our product to customers mind.

**C. Research Methodology:**



Fig. 1: Software Development Life Cycle

**D. Problem Definitions:**

The problem selected for the purpose of project is entitled as: “Study of software purchase influencing factors”. The main objective of the study is to know how a person or organization takes software purchase decision and what are the factors influences it. Factors such as Brand, price, user friendly, security, accuracy, way of approach, after sales services and other technical factors such as hardware and operating system compatibility, clarity of documentation, ease of installation , database backup facility etc.

**E. Data Collection:**

Questions ID	Options	Extremely imp.	Imp. fact.	Not imp. at all	Don't know	Not at all imp.
Q1	Brand of the Company	33	32	33	0	0
Q2	Brand of the Software of the company	30	32	33	0	3
Q3	Location of the company	10	33	33	22	0
Q4	Price of the product	11	33	33	0	0
Q5	Implementation of the installation	33	33	3	0	0
Q6	Availability of the vendor services	33	3	0	0	0
Q7	After sales services	33	3	0	0	0
Q8	User friendly	33	11	3	0	0
Q9	Software	33	11	3	0	0
Q10	Reliability	37	3	0	0	0
Q11	Security	37	3	0	0	0
Q12	Productivity	37	3	0	0	0
Q13	Accuracy	33	3	0	0	0
Q14	Quality	33	3	0	0	0
Q15	Flexibility	30	33	0	0	0
Q16	Other sales services or long term relationship	30	33	0	0	0
Q17	Training	37	33	0	0	0
Q18	License	37	33	0	0	0
Q19	After sales services	10	33	3	0	0
Q20	After sales services facilities	10	33	3	0	0
Q21	Other facilities	10	33	3	0	0
Q22	Ease of installation	33	33	33	0	0
Q23	Completeness on long term relationship	30	37	3	0	0
Q24	Clarity of documentation	30	37	3	0	0
Q25	Accessibility of the quality of product support	33	33	0	0	0
Q26	Database Backup facility	33	3	0	0	0
Q27	Hardware Compatibility	33	33	3	3	3
Q28	Operating system compatibility	33	33	3	3	3
Q29	Operating system interface	33	33	33	0	0
Q30	Application software compatibility	33	33	3	3	3

Table 1: Customer responding from the questionnaire

The data collection The Research design is plan and a structure of the study. It provides information on the purpose design for tasks such as sample collection and size, data collection method, instrumentation, procedures and analyzes the data.

The study adopted here is Descriptive and Reporting Study. This study purely based on questionnaire. Where it is being with the specified research questions and data sources specifications involves precise procedure and hypothesis.

**F. Software Purchase Decision Factor:**

From the questionnaire we can decide software purchasing and we can divide in to five groups such as company profile, price & availability, sales & support, software quality and software attributes as shown in figure.



Fig. 2: Software purchase decision factor

From the below table we can observe before purchasing customer responding to software quality, sales and support. From this we plot line chart.

S/no	Major factors	Extremely Important	Important	Moderately+some what unimportant all imp
1	Company profile	105	115	80
2	Price & Availability	292	87	22
3	Software quality	741	45	14
4	Sales & support	627	229	254
5	Software attributes	247	94	62

Table 2: Customer responding total score Here we can find chi-square test months.

**G. Influence Of Importance On Major Factors For Software Purchase:**

Here Ho: major factors have equal importance  
H1: Major factors differ in importance  
Welcome to Minitab, press F1 for help.

1) Chi-Square Test:

C1, C2, C3 F1 Expected counts are printed below observed counts.

Chi-Square contributions are printed below expected counts

Sr.no	C1	C2	C3	Total
1	105	115	80	300
	199.93	56.92	43.14	
	45.077	59.251	31.488	
2	292	87	22	401
	267.24	76.09	57.67	
	2.293	1.565	22.060	
3	741	45	14	800
	533.16	151.80	115.05	
	81.026	75.138	88.750	
4	617	229	254	1100
	733.09	208.72	158.19	
	18.383	1.970	58.030	
5	247	94	62	403
	268.58	76.47	57.95	
	1.733	4.020	0.282	
Total	2002	570	432	3004
Chi-Sq = 491.067, DF = 8, P-Value = 0.000				

From the above chi-square test it is found that there is a difference in importance of major factors for software purchase. This is further illustrated in the following analysis.

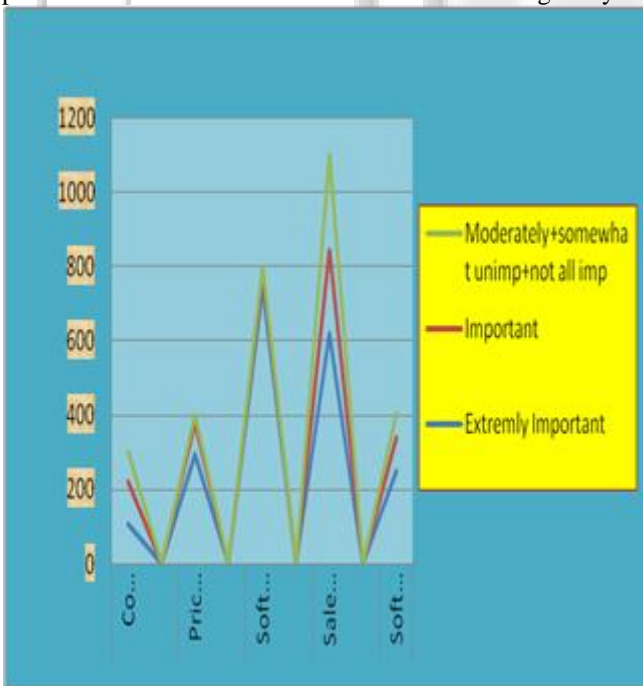


Fig. 3: Line chart for major software purchase

In From Line analysis it is observed that sales & support is the major customer respondent to software purchasing.

Question No	Average	Sorted Average
Q6	4.98	4.99
Q12	4.98	4.99
Q7	4.98	4.98
Q13	4.98	4.98
Q14	4.98	4.98
Q30	4.98	4.98
Q10	4.97	4.97
Q11	4.97	4.97
Q16	4.9	4.91
Q15	4.9	4.90
Q17	4.87	4.88
Q18	4.87	4.88
Q29	4.71	4.71
Q8	4.69	4.70
Q9	4.69	4.69
Q24	4.63	4.63
Q23	4.57	4.57
Q26	4.57	4.57
Q27	4.57	4.57
Q28	4.57	4.57
Q5	4.5	4.50
Q2	4.25	4.24
Q1	4.13	4.13
Q4	3.97	3.97
Q22	3.94	3.95
Q25	3.94	3.95
Q3	3.85	3.84
Q19	2.51	2.49
Q20	2.51	2.49
Q21	2.51	2.49

Table 3: shows calculation of average customer respondent

From this table we arranged sorted ascending order to construct the table and to calculate the percentage of customer respondent. Now we can analysis pie table.

Total AVG scores	NO of questions	Total	Group	Total score
4-5	23	23/30	ALL	0.766
4-6	4	4/30	Company profile & soft attributes	0.133
4-7	3	3/30	Sales & support	0.1

Table 4: PIE Analysis table

- From the pie analysis table we can draw pie chart; from total average score we find the percentage of total score.
- To find the total percentage of group

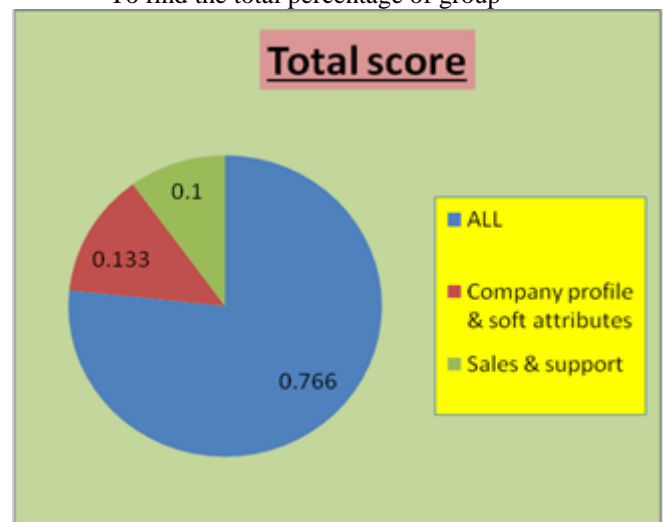


Fig. 4: Pie chart for identifying the percentage of customer respondent

- In above pie chart we observe customer responding to all for purchasing software. Here 76% Customer see company profile, software quality, software attributes, sales & support, pricing and availability.
- 13.3% customer respondent to company profile and software attributes for taking decision purchasing factor.
- Finally 1% customer respondent to sales & support.
- Here we could realized what are the factors are extremely important or important or moderately important or somewhat unimportant or not at all important for considering software buying decision. Here we can see most of factors are extremely important which directly influencing software purchase decision. Some factors are very crucial role in software purchase decision. Some of them are given below.
- Fit to the business needs, user friendly, reliability and security, accuracy and overall quality of product, warranty and after sales services and Database backup these factors are extremely important factors which highly influences in software purchase decision.
- Price of the products, budget of customer, training and licensing and other technical factors such as hardware & operating system compatibility, clarity of documentation and accessibility & quality of product support these are also extremely important factors(50-89% responding) Shortcut key, entertainment option and other utility these are very less role in software purchase decision(less than 10% responding extremely important).
- Several factors especially general and technical factors directly or indirectly influencing the software purchase decision.

## II. LIMITATIONS

The study faces limitations like any other research. However these limitations cannot have a drastic impact on the conclusions and recommendations of the study as these are within manageable limits. Some limitations are as follows.

- Data collected may not be accurate as bias of respondent comes in.
- Time and budget constraints normally require very careful planning of purchasing software.
- Compromise between thoroughness and budget.

## III. CONCLUSION

How to do an effective and efficient software sales, telemarketing techniques, how market research helps to sales forecast, what is marketability and how to enhance the marketability, how the software marketing is differ from other marketing, how theory is differ from the real time experience, how to contribute my theoretical knowledge to practical professional life, how the management helping an organization, how to help the Knowledge management system for decision making, what is customer satisfaction, how people or organization take software purchase decision, What is efficient work distributions, how to do an efficient software demonstration and more and more.

This study helps to estimate and evaluate customer decision approach and preferences.

- As per the research we can grasp the factor which influences the software purchase decision. Several factors especially general and technical factors directly or indirectly influencing the software purchase decision.
- From this study we can interpret "customers are very sensitive and they can take right software purchase decision at right time.
- Managers much alerts before implementing software products
- Product life cycle extends

## REFERENCES

- [1] www.planetsoft.com
- [2] Dawson, Christian. "Why Uptime Guarantees are Ridiculous". Servint. Retrieved 7 October 2014. "a good SLA will clearly state how uptime is defined and what you'll receive if the "uptime promise" is not met."
- [3] Vanvleet, Derek. "Google Apps vs. Office 365: What Does 99.9% Uptime Really Mean?". Cloud Sherpas. Retrieved 7 October 2014.
- [4] Cheng, H. and R. Sims, et al.: 1997, To Purchase or to Pirate Software: An Empirical Study, *Journal of Management Information Systems* 4, 49–60.
- [5] Timothy Paul Cronan & Sulaiman Al-Rafee in "Factors that influence the intention to pirate software and media"
- [6] Donald S, Tull Del I, Hawkins, *Marketing Research*, 6th edition 2007.
- [7] Kotler Philip, Keller Kevin lane, *Marketing Management*, 12th edition, 2006
- [8] Kothari CR, *Research Methodology*, New age international Publisher, 2nd edition, 2006.
- [9] Vij.Taranjit singh & Dr.G.S Batra in "Information Technology and it enabled services industry in India"
- [10] Benjamin Tan in "Understanding consumer ethical decision making with respect to purchase of pirated software"
- [11] Richard S.Glass, Wallace A.Wood in "situational Determinants of software piracy"
- [12] Eric Waarts, Y Vonne & M.Van Everdingen in "Abundance of IT innovations are constantly struggling for market acceptance"
- [13] Jeny S.Y Lee, Leo Y.M Sin & Alan C Soft-lifting (software piracy by individuals
- [14] Rubina Adam, Paula Kotze, Alta van der Merwe. 2011. Acceptance of enterprise resource planning systems by small manufacturing Enterprises. In: In: Proceedings of the 11th International Conference on Enterprise Information Systems, Vol.1, edited by Runtong Zhang, José Cordeiro, Xuewei Li, Zhenji Zhang and Juliang Zhang, SciTePress. .
- [15] Henderson, Ian ERP from the Frontline MBE ISBN 978-1-898822-05-9 Making ERP Work.
- [16] Benslimane, D.; Dustdar, S.; Sheth, A. (2008). "Services Mashups: The New Generation of Web



- Applications". IEEE Internet Computing 10 (5): 13–15. doi:10.1109/MIC.2008.110.
- [17] Oppenheim, A. N. (1992) Questionnaire design, interviewing and attitude measurement (2nd edition). London: St Martin's Press.
- [18] Gray, N. A. B. (2005). "Performance of Java Middleware - Java RMI, JAXRPC, and CORBA". University of Wollongong. pp. 31–39. Retrieved 2011-01-11. "The results presented in this paper show that the nature of response data has a greater impact on relative performance than has been allowed for in most previous studies."
- [19] Leenders MR, Blenkhorn DL. Reverse marketing: the new buyer supplier relationship. New York: The Free Press, 1988.
- [20] Anderson JC, Thomson JBL, Wynstra F. Combining value and price to make purchase decisions in business markets. Int J Res Market 2000;17(4):307–29.

