

## **Standard vs. custom Software: How does a company make right decision?**

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**Abstract:** In earlier years of commercial use of computers, there was no software industry in existence and all software systems were developed within the organization itself. But as the software industry grew over the years, numerous organizations outsourced software development to specialized software suppliers. The software industry started building up their own particular software to multiple customers keeping in mind the end goal to reach economies of scales This was known as the standard programming and it profited software purchasers by bringing down expenses to a large extent. So this study attempts to understand what sort of programming an association ought to go for; a standard programming or a custom programming? The choice relies upon the working of the association itself in light of the fact that if the working of the organization is mind complex and they need to customize the product then they ought to go for customized or if their work should be possible with no customization then they ought to go for standard programming.

**Keywords:** CRM, customized software, Software development cost, Software maintenance cost, Standard software

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### **1. Introduction**

Around the mid- 1950s, in the early years of commercial use of computers, all software systems were developed in-house. There was no software industry in existence at that time [1]. As the software industry formed over the next few decades, many organizations outsourced their software development to specialized software suppliers. Most software products were, however, still developed as unique systems for each organization; that is, there was little standardization. The next step occurred when those software producers developed their own proprietary software in order to capture economies of scales in developing the software once and selling it to multiple customers [2].

This standardization process also benefitted software buyers by lowering transaction costs and risks, it was now possible to choose among a proven set of applications. Moreover, standardization gave both producers and buyers of software a way to capture and black-box best practices by embedding it into the standardized components of the systems [3][4].

Knowing your customers better will enable you to serve them better and keep them loyal forever. This is the main theme of Customer Relationship Management (CRM) [5]. For this, various software are available. Making right choice to suit to the organization is a very thoughtful decision after studying in-details all the possibilities with their pros and cons.

### **2. Literature Review**

CRM is a concept for managing a company's interactions with customers, clients, and sales prospects [6]. As per Ryals and Knox [7], CRM is understood as business philosophy. It is a relationship orientation, customer retention and superior customer value created through process management. In another description, CRM is termed as a business process and defined as a macro level (i.e., highly aggregated) process that subsumes numerous sub-processes, such as prospect identification and customer knowledge creation [8].

In a more balanced definitions, CRM is a term that refers to practices, strategies and technologies that companies use to manage and analyze customer interactions and data throughout the customer lifecycle, with the goal of improving business relationships with customers, assisting in customer retention and driving sales growth [9]. CRM systems are designed to compile information on customers across different channels- or points of contacts between the customer and the company- which could include the company's website, telephone, live chat, direct mail, marketing materials and social media. CRM systems can also give customer facing staff detailed information on customers' personal information, purchase history, buying preferences and concerns [9].

CRM software consolidates customer information and documents into a single CRM database so business users can more easily access and manage it. The other main function of this software include recording various customer interactions (over emails, phone calls, social media or other channels, depending on system

capabilities), automating various workflow processes such as tasks, calendars and alerts and giving managers the ability to track performance and productivity based on information logged within the system[9].

Organizations generally have two options when it comes to selecting CRM software: should they implement an on-premise software solution or should it be housed and supported by a separate company? Both options present pros and cons for the company and there is no one –size-fits- all solution. Instead, the organization must select the option that best fulfills their unique need [10].

We define a standard software package as: a collection of software components which when combined perform a set of generalized tasks that are applicable to arrange of users. As a package is adopted by many, it forms a standard because the core components are identical across all of its installations. Packages are often referred to as “commercial off the-shelf” software [11].

Custom software is a software that is specially developed for some specific organization or other user. Since it is developed for a single customer it can accommodate that customer’s particular preferences and expectations. Large companies commonly use custom software for critical functions or otherwise to fill gaps present in the existing software packages. Joseph [12] further explained that the decision to build custom software or go for a commercial of the shelf (COTS) implementation would usually rest on one or more of the following:

- 2.1 The upfront license cost for COTS product mean that a thorough cost benefit analysis of the business case needs to be done.
- 2.2 In case of COTS, is the supplier likely to remain in business long, and will there be adequate support and customization available – possibly from other parties.
- 2.3 In case of custom software, the software development may be outsourced or done in-house. If it is outsourced, the question is: is the supplier reputable and do they have a good track record?
- 2.4 COTS products usually have a quicker time to market.

Size of implementation: COTS comes with standardization of business processes and reporting. For a global and national player, these can bring in gains in cost savings, efficiency and productivity, if the branch offices are all willing and able to use the same COTS without heavy customizations.

### **3. Research Method**

The study was conducted to understand on what parameters does a company (customer) makes decision whether to go in for customization or use standard software. So, the study focuses on the preference of clients, and the nuances of marketing such software from a company’s perspectives.

The model used for the purpose of our study is the SERVQUAL model (Parasuraman, Zeithaml and Berry, 1988) where the two sides of the study were the IT side or the developer side and the Client side or the business/firm side. From the analysis of the data, it will be possible for the researchers to understand customer’s expectations and perceptions on the product. Also, a thorough study was done to search for the problems faced by both the parties.

The survey was directed by taking reactions of 300 respondents consisting of customers of software packages as well the companies. According to our study, a total of 261 responses are received (251 customers and 10 companies).

### **4. Observations and Discussion**

#### **4.1 Demographics**

It is observed that about 45% respondents (customers) lie in the age bracket of 18 to 24 years. In all 88% of the total respondents are between 18 to 34 years. The customers who took part in the survey belong to a wide range of companies which are using this software. The salary structure of 39% respondents is between Rs. 30,000- 50,000 pm with 28% falling below Rs. 30,000 salary and 33% drawing salaries above 50,000/-.

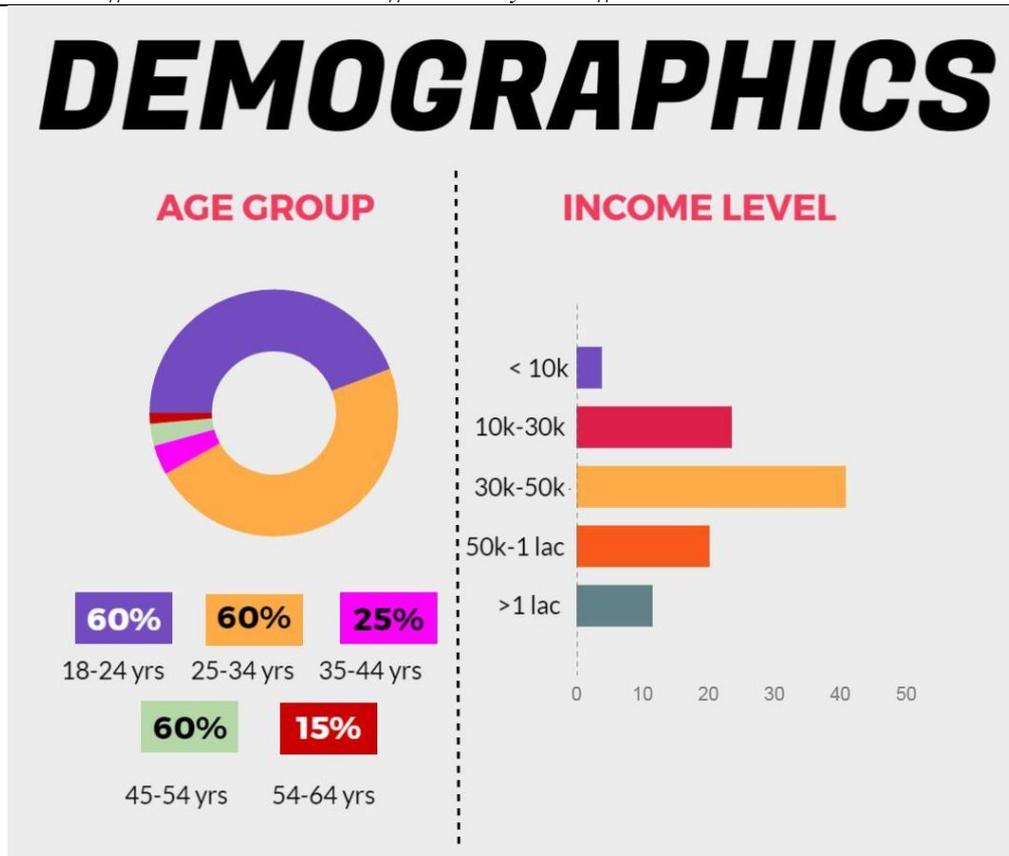


Fig. 1 – Demographics

#### 4.2 Choice of Software

Rujuta Marathe, a friend of mine is a 26 year old IT professional working in Pune. She lives with her college friends and has been living in Pune from the past 8 years. She has long working hours and a huge workload. I often visit her during the weekends which she gets off from work, tends to discuss her work and the latest developments happening in the company she works for.

During one of the conversations we had during my visit to her place, we discussed how the make of a software is important to any company. During the talk she told us about her company XYZ technologies, an IT firm and discussed the software used by the company; gave us good insights into what goes behind selecting the right kind of software and how a company can make right decisions.

Rujuta told us that XYZ technologies uses customized software which they got installed just an year back. She further explained that there are some companies which make their own software and others outsource it. The choice depends on the tradeoff between requirements of the company and the price factor.

56% of the customer preferred buying standard software with 44% customers looking forward to customized software. Although 56% customers are ready to shell out extra money for customized software, yet only a few of them go in for customized software because of the difficulty of procurement.

#### 4.3 Factors affecting choice of a CRM Software

When choosing a new Customer Relationship Management system you make a major decision. You can either adjust your business procedures to fit off-the-shelf programming, or redo the product to fit your business forms. With a custom-manufactured CRM you ought to wind up with a framework customized to your specific prerequisites. That ought to give you an upper hand, especially in the event that you have an exceptional plan of action. When you depend on the same off-the-rack programming as an opponent, outflanking them is more troublesome on the grounds that you aren't boosting either your efficiency or your adequacy. It can be watched that almost every one of the components convey parallel significance. The fundamental purpose behind this could be that if a client/customer is shelling some additional cash from his/her pocket then it might be for something which is efficient and beneficial in all the possible aspects.

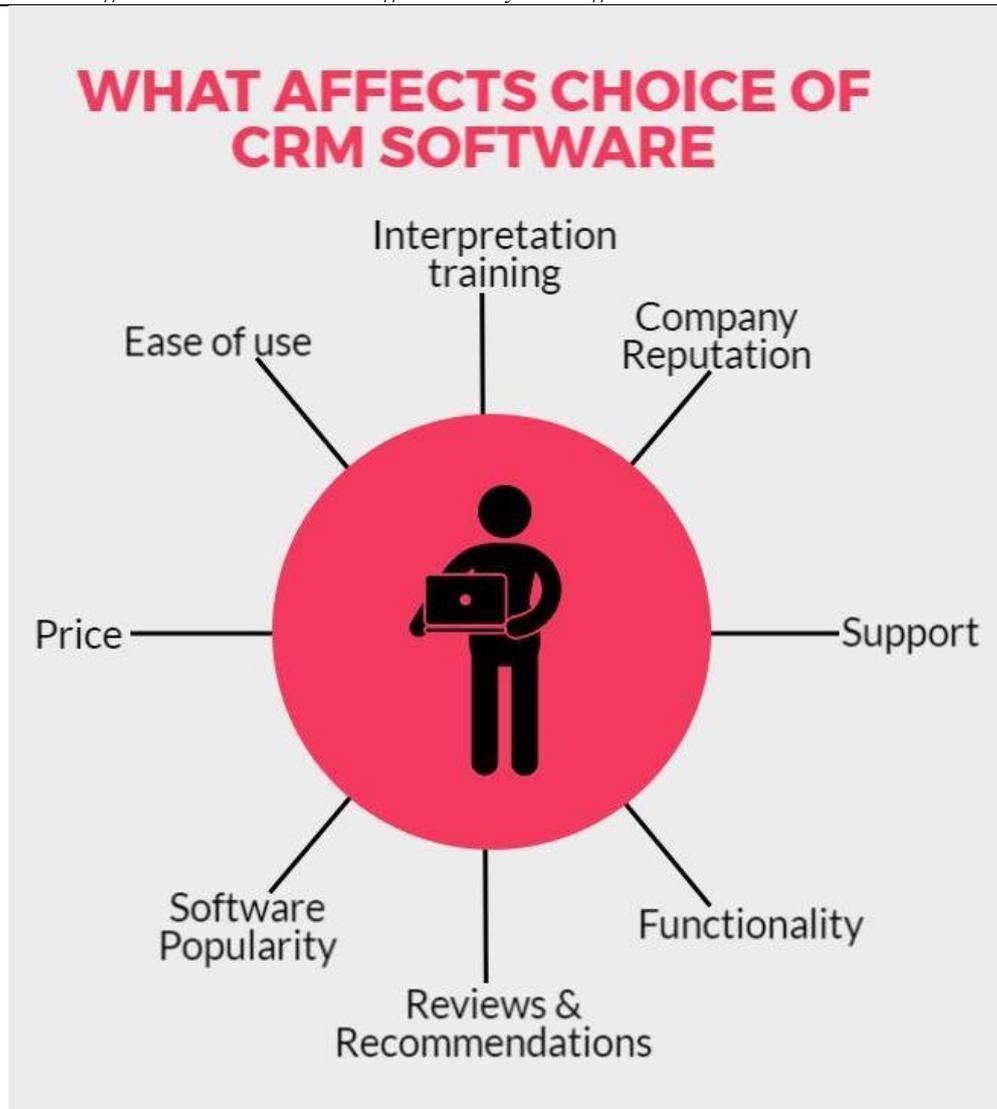


Fig. 2 – Factors affecting choice of CRM software

#### 4.4 Efficiency of CRM software

Rujuta told us that mostly companies go in for customized software but do not consider it to be very efficient due to various factors which she described later on. Mostly company consider the customized software to be moderately efficient.

16.35% respondents consider a customized software to be highly efficient, 44.71% consider it to be moderately efficient where as 35.58% think it's the same as using a standardized software. From the figures we can say that mostly people believe that the customized software is efficient more than a standardized software.

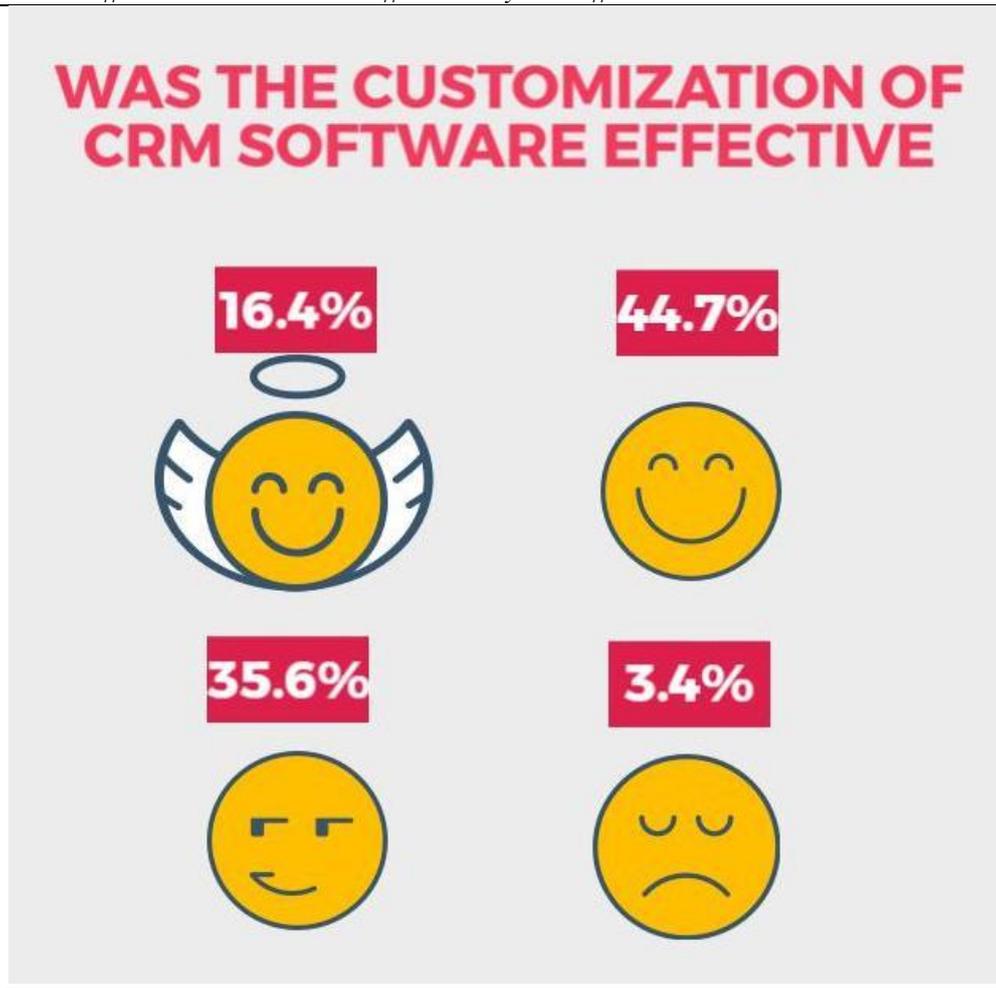


Fig. 3 – Effectiveness of Customization of CRM software

A custom-built CRM is designed to fit a workflow that your team is already familiar with, so training them to use it would be much easier and faster, as it won't involve disrupting your tried and tested way of doing things.

#### 4.5 Areas where customized software substantially benefitted users

The company XYZ in which Rujuta works has been benefitted from the customized software in many aspects such as accuracy, speed, security, precision among others. The maintenance of the software is also lower. But the software is not glitch free. It does face some technical glitches now and then which have to be remedied by a professional employed by the company.

Results clearly state that the respondents have benefitted from the customized software in all aspects except the glitch free section in which mostly the respondents were neutral towards the benefits. The customers should get all levels of support as part of their contract, upgrades etc.

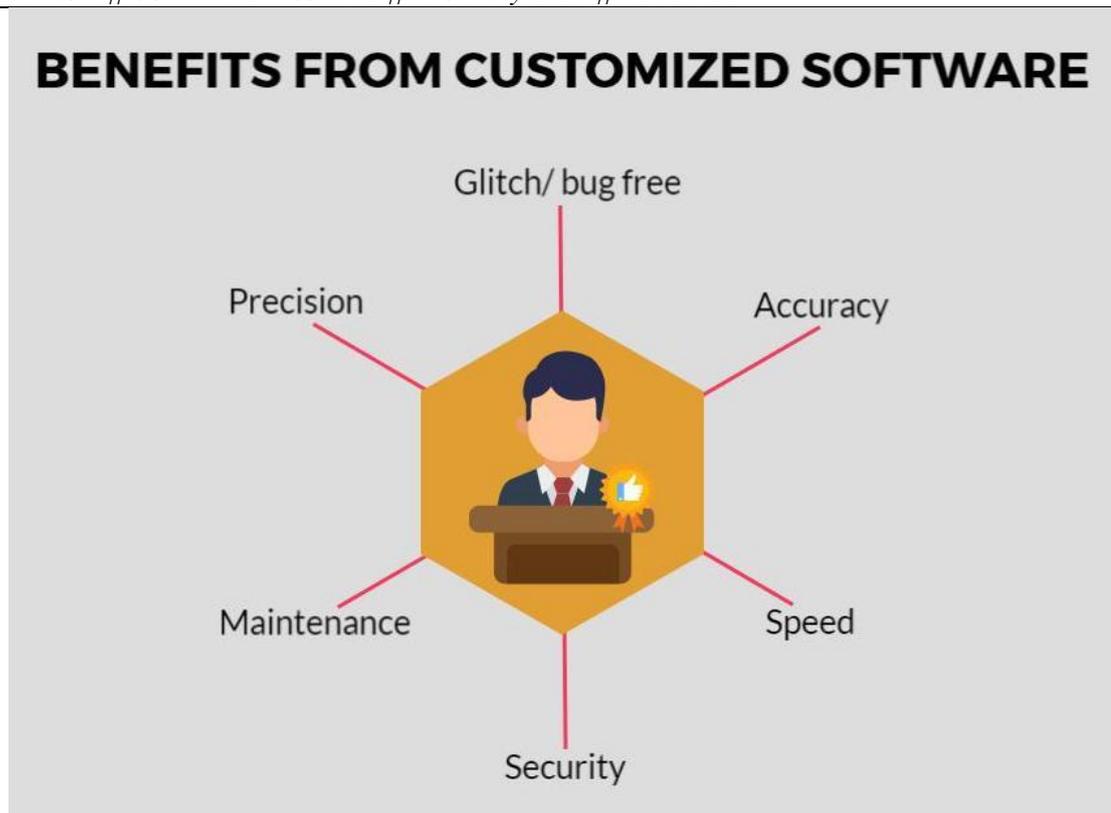


Fig. 4 – Benefits from customized software

#### 4.6 Typical hurdles during planned installation of new customized software

It is observed that 57% customers felt that software crashes are the biggest hurdle during such process. The reasons could be the heavy size of the software, followed by data losses, slow functioning, corrupted installation, incompatible code etc. Sometimes when a company works with a customized software, it might happen that the vendor made such changes to their products that they do not suit the customers. Hence customer is at the mercy of the vendor.

The company Rujuta works in was established 2 years back and Rujuta has seen the company grow. During the installation of the new customized software in the company's systems, Rujuta was present. She told us that the company faced issues during the installation of the customized software. Since the size of the software was huge, the systems became slow which was corrected later on by the technician.

#### 4.7 Preferences of customers

Since there are many potential issues, many companies and organizations decide to invest in a Relationship management system, rather than going for CRM customization. While in many cases cost is obviously a major consideration, opting for an out-of-the-box solution also means that you can have a CRM tool in place much sooner.

As the results clearly state that the customers or the clients consider all the factors equally while purchasing a customized software. Mostly the most important factor at the end of the day is cost, followed by the development time, license, Authentication and lastly the user friendliness.



Fig. 5 – Services, customer wished to include

## 5. Conclusion

Choosing the software which would be beneficial for the organization is a tough decision. Without a strong advice or insight, this can be an extremely difficult decision make. So, for actually knowing about the whole scenario survey was conducted on IT professionals. From the study we were able to understand what drives the organization in selecting the software, is it cost driven, is it value driven or it ease of using an important factor.

The survey indicates that the majority of the respondents would prefer using or switching to customized software for various reasons such as customization, accuracy, ease of usage and speed. Most respondents would like to have a 24\*7 support for their software as any glitch would directly affect the business of the client.

Also, there are certain factors due to which organizations refrain from using customized software such as incompatibility of code, software crashes, slow installation etc. People also believe that the standardized software is easy to obtain compared to the customized ones. This survey has unearthed a lot of details about the topic, from both the customer's and the company's perspectives.

Although packaged or 'off the shelf' software has their own benefits such as initial cost savings, immediate availability and ease of interoperability; the standard software may not be the best solution to the organization's business needs. Hence each company should carefully analyze it's requirements and also weigh the pros and cons of each type of software before making a software purchase.

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## Bibliography

- [1]. George J. F., The Origins Of Software: Acquiring Systems At The End Of The Century. *Framing The Domains Of IT Management: Projecting Future Through The Past*, Pinnaflex Educational resources, Inc., Cincinnati, OH, 2000.  
(<http://soonang.com/wp-content/uploads/2011/04/2000-Ang-Zmud-PINNAFLEX.pdf>)
- [2]. Attewell P., Technology Diffusion And Organizational Learning: The Case Of Business Computing, *Organisation Science*, 3(1), 1999, 1-19.  
([http://sjbae.pbworks.com/f/Attwell\\_1992.pdf](http://sjbae.pbworks.com/f/Attwell_1992.pdf))

- [3]. Howcroft, d. and Light, B, Reflections On Issues Of Power In Packaged Software Selection, *Information Systems Journal*, 16(3), 2006, 215-235.  
([https://www.research.manchester.ac.uk/portal/en/publications/reflections-on-issues-of-power-in-packaged-software-selection\(f2e2d848-f99c-43f7-b8eb-249377ebfc8f\)/export.html](https://www.research.manchester.ac.uk/portal/en/publications/reflections-on-issues-of-power-in-packaged-software-selection(f2e2d848-f99c-43f7-b8eb-249377ebfc8f)/export.html))
- [4]. Damsgaard J., Jan Karisbjerg, Seven Principles For Selecting Software Packages, *Communications of the ACM*, 53 (8), 2010, 63-71.  
(<http://cacm.acm.org/magazines/2010/8/96615-seven-principles-for-selecting-software-packages/fulltext>)
- [5]. *International Journal of e-Management and e-Learning*, 1, 2011, 22-27.  
(<http://www.ijeeee.org/Papers/004-C00077.pdf>)
- [6]. Choi, Customer Satisfaction and Loyalty: A review in the perspective of CRM, 2013.  
(<http://www.jurnalteknologi.utm.my/index.php/jurnalteknologi/article/viewFile/2237/1781>)
- [7]. Ryals L. and S. Knox, Cross Functional Issues In The Implementation Of Relationship Marketing Through Customer Relationship Management, *European Management Journal*, 19, 2001, 534-542.  
(<http://paginas.fe.up.pt/~ee94159/sne/artigo1.pdf>)
- [8]. Srivastava R.K., T. A. Shervani and L. Fahey, Marketing, Business Processes, And Shareholder Value: An Organizationally Embedded View Of Marketing Activities And The Discipline Of Marketing, *Journal of Marketing*, 63, 1999, 168-179.  
(<http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.931.1312&rep=rep1&type=pdf>)
- [9]. [searchcrm.techtarget.com/definition/CRM](http://searchcrm.techtarget.com/definition/CRM), 2016.
- [10]. Susan J. Campwell , Overcoming Challenges In Implementing CRM Software Solutions, 2007.  
(<http://www.tmcnet.com/channels/crm-software/articles/7154-overcoming-challenges-crm-software-solutions.htm>)
- [11]. Sawyer S., Information System Development:A Market Oriented Perspective. *Commun, ACM*, 44(11),97-102, 2001.
- [12]. Joseph M. Morris , Software Industry Accounting, Tanga, 1-10, 2001.  
([http://en.wikipedia.org/wiki/Custom\\_software](http://en.wikipedia.org/wiki/Custom_software))
- [13]. Parasuraman, A., Zeithaml, V. and Berry, L.L., SERVQUAL: a multiple-item scale for measuring consumer perceptions of service quality, *Journal of Retailing*, Vol. 64, Spring, 1988, pp. 12-40.