

Application of Information Systems in Electronic Insurance

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Abstract: Information Systems (IS) and some of the application software are very important for developing electronic insurance. In this research we try to determine and investigate the Information Systems and their application software, which are effective for electronic insurance development. The electronic insurance parameter that we consider in our research are quality of services, human resources, customer benefit, increased customer services, integrated customer information, integrated customer order information, standardized registration processes, speed up registration processes, customer contact, and electronic registration organization management. According to the result of our research, ERP can apply magic effect to the registration organization processes. CRM helps registration organization to use technology and human resources to gain insight into the behaviors of customers and the value of those customers. DSS can help manager to take a good decision about quality of their services and also improve electronic registration organization management. MIS has more effect on integrated customer information, and integrated customer order information, respectively. EDI allows us to send and receive information at any time thereby tremendous improving registration organizations are able to communicate quickly and efficiently. Internet is the most effective on registration organization development parameters. Database application is more useful to integrate customer information. According to the results networking is very effective to speed up registration processes in registration organization.

Key words: CRM, DSS, EDI, ERP, MIS, registration organization

INTRODUCTION

Albeit web services and electronic collaborations are the key buzzwords of today's organizations (Fig. 1), the majority of registration organization is still done via manual paper-based processing. For example, customer orders are still received via old methods of yesterday. The process for handling these documents is time consuming, wrong, and unnecessary. Changing the way in which trading partners interact with you is evolving a slow process, but changing the way in which your organization deals with paper transactions can be done in a few weeks. ERP, e-CRM, and other information technology parameters are removing the manual and cluttered processes of yesterday for many organizations around the globe.

The solution is programmed to identify standard data elements of business transactions such as order numbers, amounts, bank details, article numbers, addresses, etc. As alterations or variations are presented, artificial intelligence learns and stores them in the knowledge base for future application, so manual intervention is no longer needed. This process allows the system to handle structured and unstructured data, and is the key for

deploying the solution quickly and efficiently. We should remember that most registration organizations don't receive standard predefined documents, but receive hundreds of paper variations of the same data (Edelstein, 2002), (Anderson *et al.*, 2003).

Information Technology (IT) parameters are very important to develop registration organization. The aim of this study is to determine and investigate the information technology parameters, which are effective for registration organization development. Information technology parameters that we have considered in our research are electronic Customer Relation Management (eCRM), Enterprise Resource Planning (ERP), Database Application, Decision Support Systems (DSS), Management Information System (MIS), Networking, Internet and Electronic Data Interchange (EDI) those are using or useful for registration organization development. Also we determined the registration organization index and investigated the effect of information technology indices on each of them. The registration organization parameter that we consider in our research are quality of services, human resources, customer benefit, increased customer service, integrate customer information, integrated customer order information, standardized

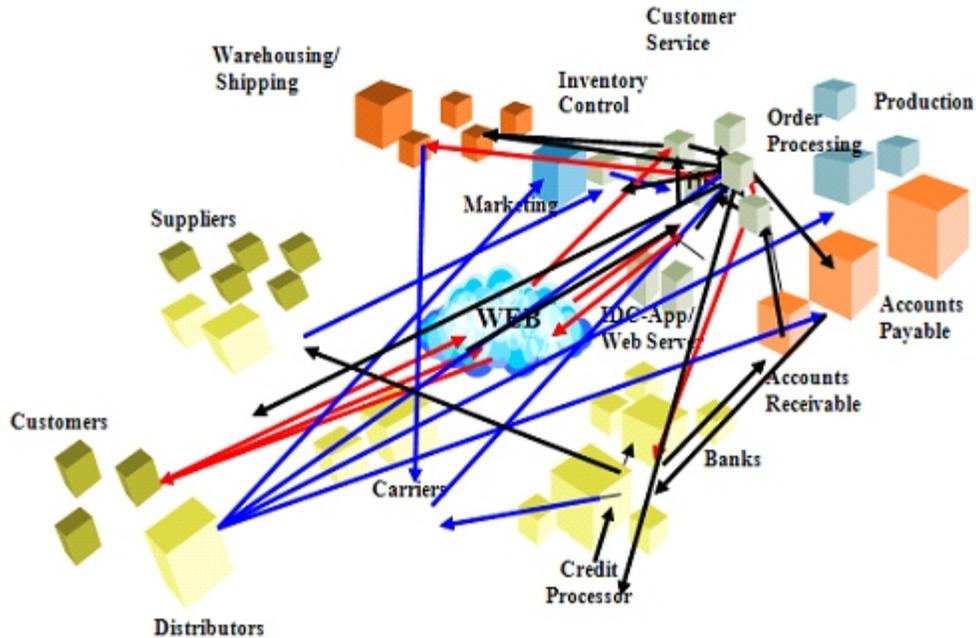


Fig. 1: WEB collaborations in new organizations

registration processes, speed up registration processes, customer contact, and electronic registration organization management (Edelstein, 2002).

In this study we try to find out which of the information technology parameters are more important for registration organization development and more effective to improve electronic registration organization management. For this purpose, we designed question sheet papers and distributed them among our population. Our statistical population for determining the information technology parameters were the customer, employment and management of registration organization (Anderson *et al.*, 2003).

According to the result of our research ERP can apply magic effect to the major registration organization processes. CRM helps registration organization to use technology and human resources to gain insight into the behaviors of customers and the value of those customers.

DSS can help manager to take a good decision about quality of services and also improve electronic registration organization management. MIS affects on integrated customer information, and integrated customer order information, respectively.

EDI allows the ability to send and receive information at any time, thereby improving organizations tremendously able to communicate quickly and efficiently. Internet is the most effective on registration organization development parameters. Database application is more useful to integrate customer

information. According to the results networking is very effective to speed up registration organization processes. Results can help the managers of registration organization to plan for improving their services.

ECRM is not just customer service, self-service web applications, sales force automation tools or the analysis of customer's servicing behaviors on the internet. ECRM contain all of these initiatives working together to enable an organization to respond more effectively for its customer's needs and market for them on a one by one basis (Jones and Haw, 2003).

The Internet is revolutionizing the career of organizations providing customer service. With more and more using the web by people to interact with businesses, it is becoming increasingly critical for these organizations to manage collectively all main channels of communication from their customers, whether by phone, e-mail, through the post or via their websites (Hiles, 2004).

Research review: Recommendations on the impact of digital technologies on customer relationships have swung from anxiety about the threat of frictionless commerce, to enthusiasm over the prospects for cutting customer service costs and tightening connections with customers. As recently as 1999 the prevailing view was that when customers could use the Internet to expand their search for alternatives that margins would shrink and loyalty would be increasingly transient (Day and Hubbard, 2003).

Online exhibition is getting increasingly common. Lots of services are less expensive in the online stores and there are easy ways to compare services over the net. However, customers still prefer to use needed services via traditional ways such as "offline offices" (Höckl, 2002).

Tom Sweeny believes that have your electronic service initiatives lived up to your expectations for cost and efficiency? What do your customers think about your e-services? Do they use it, and are they satisfied with the electronic services you provide? (Sweeny, 2002).

Druzdzal and Flynn (1999) and Alter (1980) believe that for the reason of the lack of one generic model of decision-making, the concept of a Decision Support System (DSS) is extremely broad and its definitions vary depending upon the author's point of view and are strongly dependent on the DSS application context. DSS is a specific class of computerized information system that supports organizational decision-making activities (Druzdzal and Flynn, 1999). A DSS can take many different forms and the term can be used in many different ways to use by organizations (Alter, 1980).

MATERIALS AND METHODS

We have determined and investigated of IT parameters those are effective for registration organization development by question sheet that we spread among our population. Independent variables in our research were IT parameters. IT parameters that we considered in our question sheet were eCRM, ERP, Database Application, MIS, Networking, Internet and EDI. We determine the effect of IT indices on registration organization development.

Registration organization development is exposed to several factors, including quality of services, human resources, customer benefit, and increased customer service, integrated customer information, standardized registration organization processes, and speed up registration organization processes, customer contact, and electronic registration organization management (Edelstein, 2002). These were our dependent parameters.

We have found out which IT parameters were more important to registration organization development and more effective to improve registration organization management, for this purpose we designed question sheet papers and distributed them among our population. Our statistical population for determining the IT parameters was the customer, employer and manager of registration organization.

We analyzed our data by statistical software and we found out which IT parameters were more effective for registration organization development.

RESULTS AND DISCUSSION

Registration organization development is exposed to several factors, including, electronic Customer Relation Management (eCRM), Enterprise Resource Planning (ERP), Database Application, Decision Support Systems (DSS), Management Information System (MIS), Networking, Internet and Electronic Data Interchange (EDI).

IT indices have played a significant role in the development and use of electronic benefit for registration organization process. The results show the benefit percent of each IT parameters on registration organization development indices.

Enterprise Resource Planning (ERP): ERP is a software system designed to support and automate the organization processes of medium and large organizations. ERP can aid controlling many organization activities, like services, billing, and human resources management. All functional departments, which are involved in operations or production, are integrated in one system. In addition, servicing, warehousing, and shipping would include accounting, human resources, and strategic management.

The software attempts to integrate all departments and functions across a registration organization onto a single computer system that can serve all those department's particular needs.

Building a single software program that serves the needs of people in finance as well as it does the people in human resources and in the warehouse is a tall order. Each of those departments typically has its own computer system optimized for the particular ways that the department does its work. But ERP combines them all together into a single, integrated software program that runs off a single database so that the various departments can more easily share information and communicate with each other (Anonymous, 2009a). Figure 2 shows the different department of an organization and ERP software that integrates entire departments.

The results show that ERP can improve the way, which registration organization takes customer orders and processes into invoice and revenue, otherwise known as the order fulfillment process. That is why ERP is often referred to as back-office software. It doesn't handle the up-front selling process (although most ERP vendors have recently developed CRM software to do this); rather, base on results (Fig. 3) ERP takes a customer order and provides a software road map for automating the different steps along the path to fulfilling the order. When a representative customer service enters a customer order into an ERP system, he has all the information necessary to complete the order.

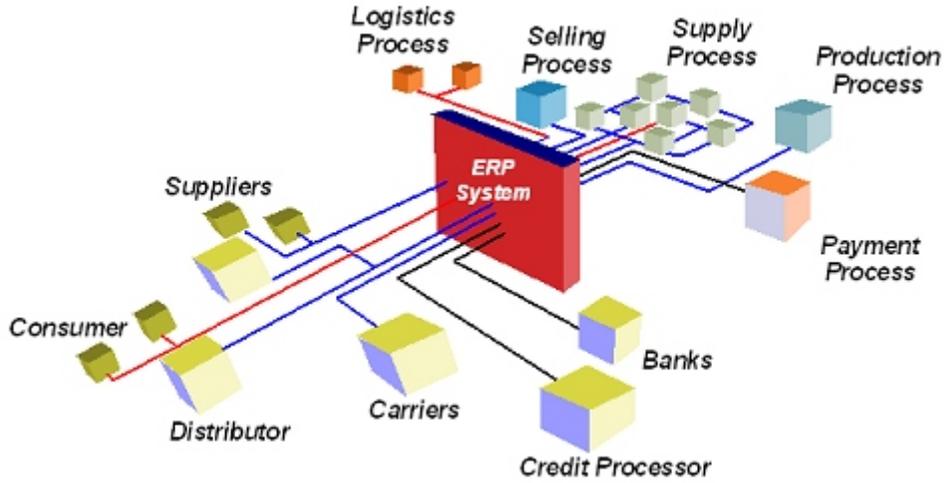


Fig. 2: ERP system integrates all departments of an organization

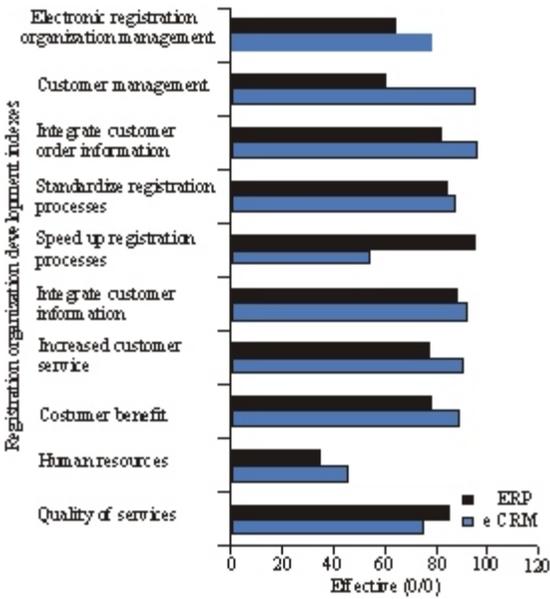


Fig. 3: Effects of ERP and eCRM on registration organization development indices

The results show that ERP can apply the same magic to the other major quality of services, such as customer benefits or customer information.

People don't like to change, and ERP asks them to change how they do their jobs. That is why the value of ERP is so hard to pin down. The software is less important than the changes of organizations made in the ways they do services. If you use ERP to improve the ways of your people taking orders and organizations, you will see the value of the software. If you simply install the

software without trying to improve the ways people do their jobs, you may not see any value at all. Result shows that ERP can improve human resources in registration organization.

Electronic Customer Relationship Management (eCRM): CRM is a process or methodology used to learn more about customer's needs and behaviors in order to develop stronger relationships with them. There are many technological components for CRM, but thinking about CRM in primary technological terms is a mistake. The results show that CRM is as a process that will help bringing together lots of pieces of information about customers (Fig. 3).

According to the results (Fig. 3) CRM helps registration organization using technology and human resources to gain insight into the behaviors of customers and the value of those customers.

Base on the results of research, web based CRM or Self service CRM (eCRM) software enables web based customer interaction, automation of email, call logs, web site analytics, and campaign management.

Relationship between ERP and CRM: ERP is often called back office systems indicating that customers and the general public are not directly involved. This is contrasted with front office systems like Customer Relationship Management (CRM) systems that deal directly with the customers, or the eBusiness systems such as eCommerce, eGovernment, eTelecom, and eFinance, or Supplier Relationship Management (SRM) systems.

ERP is cross-functional and wide enterprise. All functional departments that are involved in operations or production are integrated in one system. In addition for

manufacturing, warehousing, logistics, and information technology, this would include accounting, human resources, marketing, and strategic management. Fig. 3 shows the effect of ERP and CRM on registration organization development indices.

Decision Support System (DSS): Decision Support System is a type of Information System. DSS is a specific class of computerized information system that supports organizational decision-making activities. A properly designed DSS is an interactive software-based system intended to help decision makers to compile useful information from raw data, documents, personal knowledge, and business models to identify and solve problems and make decisions.

According to the results DSS can improve the registration organization index to grow. DSS can help the manager to take a good decision about the quality of services and also improve electronic registration organization management (Fig. 4).

Management Information System (MIS): Management Information System is a type of Information System (Anonymous, 2009b). MIS system, typical computer-based, that collects and processes data (information) and provides it for managers at all levels, who use it for decision making, planning, program implementation, and controlling. MIS is comprised of all the components that collects, manipulates, and disseminates data or information. The involved activities include inputting data, processing of data into information, storage of data and information, and the production of outputs such as management reports. Figure 4 shows that MIS is affecting on integrated customer information, and integrated customer order information, respectively.

Electronic Data Interchange (EDI): Electronic Data Interchange (EDI) is the computer-to-computer exchange of structured information, by agreed message standards, from one computer application to another by electronic means and with a minimum of human intervention. In common usage, EDI is understood to mean specific interchange methods agreed upon by national or international standards bodies for the transfer of services transaction data, with one typical application being the automated serves of services (Anonymous, 2009c).

Despite being relatively unheralded, in this era of technologies such as XML services, the Internet and the World Wide Web, EDI is still the data format used by the vast majority of electronic commerce transactions in the world.

According to the results of the research, there are several advantages of using EDI, which all of them provide distinct benefits to improve Registration organization development. One of the most notable benefits for using EDI is the time saving capability it

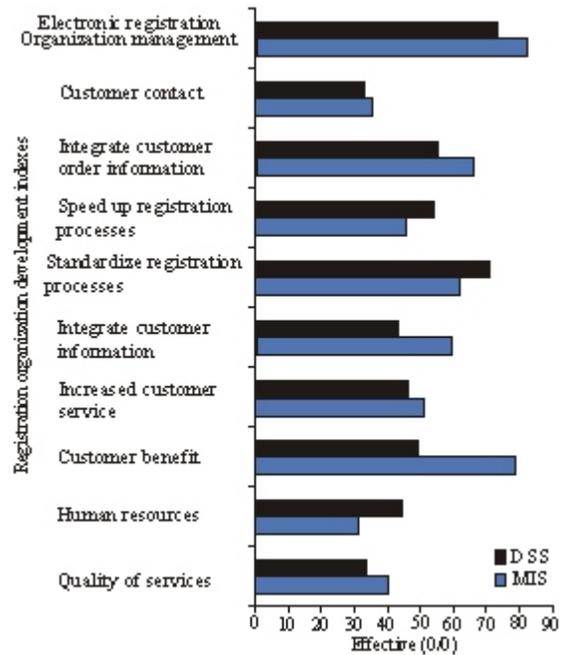


Fig. 4: Effects of information systems parameters such as DSS and MIS on registration organization development indices

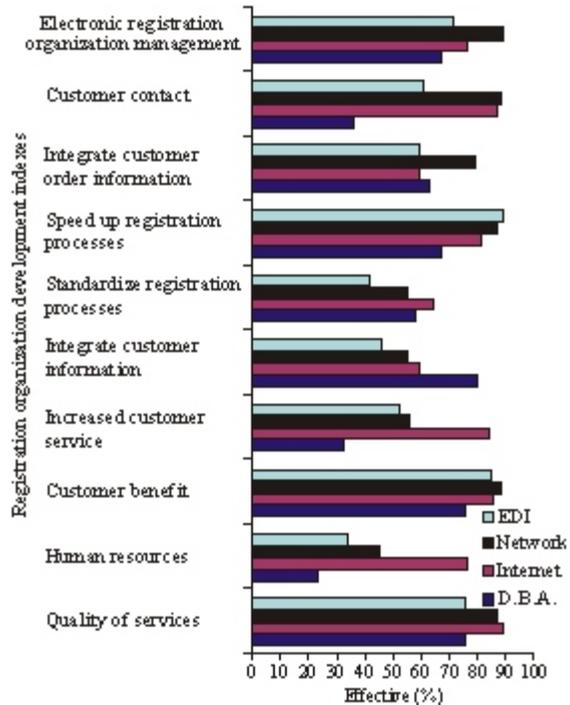


Fig. 5: Effects of EDI, Networking, Internet, and DBA on registration organization development indices

provides. By eliminating the process of distributing hard copies of information throughout the organization, easy access to electronic data simplifies inter-department

communication. Also, another time savings advantage is the ability to track the origin of all information therefore significantly reducing time spent on corresponding with the source of the information (Fig. 5).

Another benefit of this information system for the Registration organization is the ultimate savings in time for the organization. Although the initial set up costs may seem high, the overall savings received in the long run ensures its value. For any business, regardless of its size, hard copy-print outs and document shipping costs add up. EDI allows for a paperless exchange of information reducing handling costs and employer productivity that is involved with the organization of paper documents.

Electronic data interchange has another strong advantage over paper-based information exchange, which has done with accuracy of information. When the information is already stored electronically, it speeds up an organization ability to check for accuracy and make any necessary corrections as the data is already inputted in the system. Also, unlike paper-based methods, EDI is able to send and receive information at any times; thereby tremendous improving organizations are able to communicate quickly and efficiently.

Data base application, networking and internet: Recently data base application, networking and internet are affecting on organization. Results show that Internet is the most effective on Registration organization development parameters. Data Base Application is more useful to integrate customer information. According to the results (Fig. 5) networking is very effective to speed up Registration organization processes.

CONCLUSION

According to the results of this research, information technology parameters such as ERP, eCRM, EDI, DSS, and other parameters can improve the registration organization development indices. Some of information technology advantages on registration organization development are presented below.

Reduces costs automatically by recognizing, verifying, and integrating your paper-based transactions into your applications.

- Removes manual error of critical documents.
- Automates two-way document matching to ensure that customer orders, which are received, are properly matched to the system generated service orders.
- Data is recognized and converted into any other format such as XML, flat file, application file, etc. for integrating with any back-end application, automatically send change notices, acknowledgments, or other partner notifications.
- Increases customer service as automation removes

lost orders and delays global solution, which can easily understand different languages and regional transaction elements.

- Integrates customer information.
- Integrates customer order information.
- Standardizes and speeds up registration processes.
- Standardizes human resources (HR) in registration organization.

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