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<table>
<thead>
<tr>
<th>Articles</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>MERP: EMERGING DIRECTIONS IN ERP EXPANSION A RESEARCH AGENDA</td>
<td>Rachana Sharma</td>
</tr>
<tr>
<td>STRATEGIC HUMAN RESOURCE MANAGEMENT: PRACTICES IN IT INDUSTRY IN INDIA</td>
<td>Mohammed Galib Hussain, Dr. S. Mohammed Rafique</td>
</tr>
<tr>
<td>AN OVERVIEW STUDY OF IT ENABLED SERVICES AND IT SPENDING –INDIAN BANKING PERSPECTIVES</td>
<td>Manjunath Daler</td>
</tr>
</tbody>
</table>
ABSTRACT

With the MERP, entire businesses can be moved onto the internet. Enterprise databases can be remotely accessed and updated from anywhere in the world, at anytime, with any device equipped with a Web Browser and by anyone with permission to access the service. With the Mobile enterprise platform in place, entire businesses can be moved onto the internet. Enterprise databases can be remotely accessed and updated from anywhere in the world, at anytime, with any device equipped with a Web Browser and by anyone with permission to access the service. Together with other trends that are changing the enterprise applications landscape, ERP systems supports the mobile behaviour of their users. The paper explores the mobile applications landscape by analyzing the services provided by MERP. It also intends to find how ERP solutions can be extended to MERP.

KEY WORDS: MERP, ERP, mobility planning, web browser, remote access.

INTRODUCTION

Governing information is about as easy as herding cats. Let one little item out of the bag, so to speak, and it becomes very hard to control what happens to it. Who will be allowed to read the information? To change it? To move it? If it's changed, how will anyone know if the change is accurate or appropriate, who made the change, and why? And, if no one knows the answers to those questions, is the information still valid? Add to these difficulties an ever changing array of regulations that mandate aspects of information management. Now, multiply those challenges by the staggering amount of information organizations are wrestling with today.

Mobile Enterprise (Mobile ERP) is a web-based mobile cloud computing business solution, leveraging the Internet infrastructure to deliver software as a service to businesses. It consists of a collection of online interactive business applications. It is made viable by the popularity of Mobile Broadband. For data transfer, cellular networks with GPRS and UMTS are connected to the Internet via Media Gateways. Mobile Enterprise depends HSDPA and HSUPA technology. Like mobile messaging technologies, such as SMS and E-mail, mobile enterprise supports enterprise mobility.

Business modules, functions and operations executed using Mobile Enterprise include Collaboration, Document management system (DMS), Customer relationship management (CRM), Point of sale (POS), Human resource management systems (HRMS), Accounting software, Enterprise resource planning (ERP), including sales order, sourcing, tender, request for Quotation, purchase order, shipment, receiving, warehousing, inventory control, delivery order, invoicing, customer service order, production monitoring and control, work order, as well as basic utilities such as corporate calendar, corporate address book, corporate bulletin board, notes and internal messaging.

MERP consists of three main parts: consulting, system integration, and training. All three are vital to creating a successful mobile system that will grow as we add more devices, users, and applications to support those uses.
Definition of ERP (Enterprise Resource Planning)

M-ERP is based on ERP or in other words we can say that it is a form of ERP on Mobiles. Enterprise resource planning (ERP) is the industry term used to describe a broad set of activities supported by multi module application software that helps a manufacturer or other business manage the important parts of business. These parts can include product planning, parts, purchasing, maintaining inventories, interacting with suppliers, providing customer service and tracking orders. ERP can also include application modules for finance and human resources aspects of business. The roots of ERP lie in Material Requirements Planning (MRP) which evolved into Manufacturing Resources Planning (MRPII). Demand for increased functionality led to the current ERP.

Understanding MRP is an essential prerequisite to understanding ERP. MRP is a computerized approach to the planning of materials acquisition for production. The roots of ERP lie in Material Requirements Planning (MRP) which evolved into Manufacturing Resources Planning (MRPII). Demand for increased functionality led to the current ERP.

ERP--The change process

With ERP implementation, the system and the centralized database becomes the basis for decision making and time honored power pockets, evolved organically by self appointed custodians of information and expertise lose relevance. Most of the routine functions, such as statutory compliance, book keeping etc are taken over by the system and retraining and redeployment is a necessary part of the change process. Managing the change calls for effective communication of the advantages of ERP implementation and emphasis on the organizational and individual gains by undertaking the exercise. As in any change process, the consultant's role in ERP implementation is limited to providing the technical inputs and guidance and the responsibility for implementation has to be indigenously vested. The normal procedure is to form a core group, which is dedicated to the implementation process. The core group member profile essentially calls for intimate knowledge of the business processes in the organization, adequate level of seniority to wield the necessary clout and a deep conviction in the change process. A steering committee is additionally constituted to oversee the implementation and provide management support to overcome hurdles encountered. The committee should comprise senior members of the management team who meet on a periodic basis to formally review the progress. The core group besides being operationally responsible for implementation has to serve as effective arbiters, in the event of conflicts arising between the consultant and the user groups or even between user groups.

Going M-ERP Way

When you look at the sleek mobile devices today, with their expansive functionality and tiny sizes that easily fit in your pocket, it’s hard to believe that, not too long ago, we were flocking to the stores to buy “brick” phones that weighed 2 pounds and cost thousands of dollars. Today, mobile carriers offer comprehensive data plans and guarantee a fast and affordable data transfer. Walk down any street in this country and you will notice people surfing the internet, downloading music, and watching the latest episode of Lost on their smartphones. There’s no denying, America has gone mobile.

In recent years, the popularity of mobile devices has risen tremendously. The market has grown by over 6% annually and penetration has exceeded 88% of the population. This means that there are 271 million customers and that almost every American owns a cell phone. Those numbers are growing fast and customers are demanding more and more from their mobile devices. While a decade ago it was a luxury to be reachable anywhere by phone, now it’s crucial for everyday activities. Expectations (and capabilities) are constantly increasing. The ability to use a cell phone to place a call is now considered the most basic of functions. We also need to check email and access the internet in any spot in the world, synchronize our calendars, set up alarms and have maps handy when we get lost in the city. What used to be a phone is more like a personal computer; in fact it IS more personal than a
personal computer, just smaller. For someone who is constantly on the road, these devices are not a luxury, but a necessity.

UPCOMING TRENDS IN ERP EXPANSION

Consolidation is happening at all levels of the market, among those that serve the multinational and top companies around the world (e.g. Oracle and PeopleSoft, Retek, ProfitLogic and Siebel, then Oracle and Siebel; SAP and Business Objects), the mid-sized market (Lawson and Intentia; SSA; GEAC; Sage; Microsoft), and even those targeting the smallest customers. Analysts expect consolidation to be an ongoing trend within the ERP landscape. Whether it’s to gain customers and cross-sell, complete a technology portfolio, or simply to eliminate a competitor, consolidation will continue. However, acquisitions in enterprise or business applications in the future are likely to be more focused, such as adding to a CRM portfolio or rounding out a manufacturing effort with new capabilities (like PLM). Another reason for consolidation is business complexity, due to outsourcing, partnering and increasingly complex channel strategies. As businesses become more complex, software vendors must offer solutions. Applications will reach further into supply chains, out toward customers, and within organizations to provide better Information. Finally, it appears that geographic expansion – diversifying into new markets – has been a driver in the SMB space for ERP. Most application providers address verticalization in their offers. ERP vendors needed to tailor their software to the requirements of specific industry verticals. Verticalization means not just adding new functionality to a given industry solution, but adding vertical functionality to the horizontal functions within the ERP package. This actually means that workflows, supply chains, data warehouses, and analytical tools should all be vertical-specific. SAP is a leader here as they thoroughly understand and build to fairly deep levels in vertical markets. Oracle, however, has a more undeveloped technology approach to most vertical markets, and Microsoft tends to rely on partners for vertical specificity and customization. Outsourcing of ERP operations is the next emerging trend as a company can typically save operational costs close to 50%. With the improvement in connectivity, the option of "ERP as a service" using the SaaS (Software as a Service) model is now proving to be viable. The current generation ERPs, which are based on web architecture, and uses technologies like Service Oriented Architecture can easily facilitate this distributed model. Octavian Dospinescu, Doina Fotache, Bogdanel Adrian Munteanu, and Luminita Hurbean Communications of the IBIMA The Software as a Service global market reached $6.3 billion in 2006 and is reckoned by $19.3 billion by 2011 According to Gartner, by 2011, SaaS will represent 25% of the global business software revenue. As globally distributed communication networks become more and more reliable, the experience and satisfaction levels of end users in hosted applications will increase. Diversification can be best illustrated in the SAP’s move to become a platform provider through its ongoing development of the Net Weaver platform (now a 'Business Process Platform') and associated acquisitions (Top Tier, In-Q-My, A2i). Competitors are working in areas like web services development and management, enterprise information management and integration, analytics and business performance management, and business process management among others. In concert with the above trends, diversification among other platform and IT operations oriented companies will continue as they move up the stack to meet growing demands for distributed and mobile management, security, asset management, and other areas impacted by the advent of component software and web services development. Other technological relevant issues in the ERP landscape are: • open source expansion, • web enabled ERP (based on XML), which makes the enterprise operations go online with Web 2.0 architecture promising a newer, more socially interactive Internet, • wireless ERP, which helps organizations to make use of the communications channels effectively and efficiently by sharing enterprise information through mobile devices.

Mobile ERP In a Company

Smart managers look at mobile technology and quickly see an opportunity for their business. If mobile devices have such capabilities, why not
use them to help business processes? That’s where Mobile ERP systems come in delivering instantaneous access to up to date information. Customers won’t hear the “let me get back to you on that” line anymore. Nor will your salesman have to call the warehouse to check the stock on hand. They can simply check the current stock levels in the mobile version of the ERP system on their phone. With a few clicks orders and invoices can be created and printed on the spot using a mobile printer. The salesman will have access to customers’ order history and will be able to easily calculate discounts. The sales team can even preview credit limits for every customer. They can alert the customer right in the meeting if they are approaching their credit limit and need to pay off their outstanding bill before ordering more. The warehouse staff will be able to keep track of the inventory coming in and leaving the warehouse more precisely. They will no longer need to add items by hand; instead they can scan the barcodes. Everything will be automatically saved in the system, so there won’t be a need to process everything manually. Decreasing the amount of manual work will also decrease the margin for human errors.

How can Mobile ERP be useful for management? Having access to custom reports anytime anywhere will surely come in handy. With a Mobile ERP system, we will be able to see the condition of your business when you are traveling or at a meeting. We can check if our salesmen are meeting their quotas, or access data about your customers or vendors. We will be able to view pending documents that require your verification even while you are out of the office. You will receive alerts on your phone if there is anything that requires your attention whether it is approvals, or declining profits. Because you can constantly follow what is happening in the company, Mobile ERP will not only boost one’s efficiency, but also save the time and money.

**Enterprise Mobility Applications**

**Blackberry Connect:** Airtel, RIM had announced plans to enable a wider choice of devices with push-based BlackBerry e-mail services. Through the introduction of BlackBerry Connect in India, Airtel will extend BlackBerry wireless services to the Nokia 9500 Communicator, Nokia 9300 smartphone and on other industry players (Sony Ericsson P910i).

**Hutch mail service:** An affordable GPRS based solution that allows executives real-time access to their office mails on Nokia 9300 smartphone and Nokia 60 & 80 series. A user can receive, view, save, edit and send Word, Excel, PDF and PowerPoint attachments as one would do on a computer.

**Mobile SFA (Sales Field Automation):** Mobile SFA will help companies to enable to make their web based application and ERP systems wireless so that the field force can have access to information on their Airtel mobile phones.

**AIR (Airtel Intelligent Routing):** Airtel Intelligent routing solution Overlays Company’s PABX, to route landline traffic through the mobile network. Employees of the company can use their existing landline extensions to make calls via AIR. They just need to dial a code (for example 8, configurable by the customer) to reach the AIR terminal. A dial tone will be heard and users can dial the number, which they want to reach. There is no change in the end user experience.

**Global e-mail**

Main way by which teams collaborate with each other in the enterprise. And with those teams often being geographically dispersed beyond the corporate network, it is no longer sensible or acceptable for mobile data capabilities and remote access rights to be the preserve of executives and niche workers. Mobile e-mail will benefit all employees.

Mobile e-mail increases productivity during what otherwise might be idle time: waiting for a meeting, or during travel. Using mobile e-mail, users can keep in touch with their clients, partners and colleagues, receive important information from the office, and respond more rapidly when action is required.

- Today, 60% of all work is carried out via e-mail-making it the predominant mobile business application (Source: Gartner)
- Nearly 80% of large corporations consider e-mail a driver for deploying wireless wide-area data solutions (Source: Yankee Group)
This indicates that mobile e-mail devices should have full attachment support: read, edit and create MS Office attachments; also support for Acrobat reader, ZIP, MP3, JPEG and video clips; support for several third party e-mail solutions and support for several e-mail standards: POP3, IMAP 4 with idle, OMA Data Sync 1.2., MS ActiveSync.

**Impasse Of Multiple Devices**

Typically, in an organization, many employees use their own personal mobile phones for work. Under IT guidance, standardization on specific devices can result in significant cost savings for the organization. IT involvement can have a big impact on successful device management, resulting in a decrease in workload for the support team. For example, an organization that is standardized on specific devices can apply security and application updates remotely over the air quickly and efficiently and effectively extending their existing IT infrastructure to include the mobile workforce.

The management and integration of mobile devices into an organization's overall IT infrastructure is simple and straight. There are a variety of solutions available, which leverage investments already made in the network. Mobile e-mail can be enabled with the addition of a server that sits behind the firewall, keeping data safely in the organization. There is no 'one-device' technology that can be called as single leader. There is no dominant device standard that exists today. The device multiplicity exists in terms of the processing capability, device operating systems, Interface technologies, support for peripherals, ruggedness and so on.

Also there exists a wide range of options for integrating these devices with enterprise systems. The multiplicity will continue to exist and one can't wait for things to mature. Organizations need to find a solution to the existing business problem and make use of the best-fit devices at this stage. Gartner recommends adopting a more tactical approach than strategic approach at this stage.

**Future Scope Of M-ERP**

Enterprise mobile users are increasing exponentially and decision makers are seriously thinking of integrating their LAN with wireless. The tremendous growth in the mobile subscriber base has changed the way enterprise customers go about conducting their business. The idea of anywhere-anytime connectivity, is fast becoming a reality. Business executives, no matter where they are, are realizing the importance of remaining connected. Blackberrys and other similar devices have suddenly become a rage amongst business users and is one of the success stories of a killer application in India. This is enabling the mobile workers to interact directly with the customers on the field instead of rushing back to the office to reach their office computers. The interesting element is that even personal mobile devices of executives are being used for business purposes such is the need to remain connected. While all these mean extending the enterprise, this also has widespread repercussion for the productivity enhancement. According to IDC predictions, three fourths of US workers and more than half of Western European workers will be traveling for business by 2012. According to all indications, situation in India is no different.

**Conclusion**

Most of the large enterprises today have their own ERP systems. The key is to integrate the mobile devices with such applications for true enterprise mobility. Today, the challenge is both on the variety of mobile devices as well as the cost. Also, there are very few integrators available in India who can understand and develop such applications to run on mobile devices. Lots of the enterprise mobility applications are spectrum dependent (such as video streaming and live TV) and abundant availability of spectrum will play a key role. Mobile device improvements, combined with increasing local and wide area wireless bandwidth, have opened a new door to additional productivity enhancements, cost reductions, and users’ satisfaction increases. Microsoft, one of the most important players on the mobile ERP market, powered mobile devices, such as Pocket PCs and Handheld PCs, offering them at a quarter of the cost of custom ruggedized mobile devices from just a few years ago. Utilizing the same development tools and
technologies as the PC, these mobile devices make it easier and quicker to get ERP solutions into the hands of the mobile workforce. MERP can be a pain reliever for companies looking to add mobile computing to the enterprise staff. MERP takes the guess work out of choosing the best mobile solutions of products and services for your enterprise.

References


Annexure

ERP Research

Figure-1
The present paper makes an attempt to investigate the strategic human resource practices and policies of the Indian software industry and examine the SHRM effectiveness in software companies. It was hypothesized that HR policies and practices would be positively related to organizational effectiveness. The data used in this study were collected from 25 software companies which have been operating in Chennai and Bangalore undergoing quite a few changes, especially in term of managerial philosophies and tendencies. The Percentile, Chi-square, Mean, SD and Factor analysis were used to analyze the data. Results revealed that the most of the software companies practice the following Strategic practices were Strategic HRM focus, functional areas covered by SHRM, SHRM facilities, treatment of employees, adopted SHRM activities and SHRM activities. It is also examined that the Software companies those following Strategic HRM practices they achieve its effectiveness by the following practices were workforce plan, participative management, Executive development program, succession and development planning, advance issue identification strategic studies and communication between employee and manager.

Introduction

The field of Human Resources Management as underwent significant changes in scope, functions and activities over many years. There is a radical raise in professional maturity in this field and thus personnel management is now shaped as HRM and further developed as strategic HRM. This involves the managerial personnel of an organization and regards. All over the world a great deal of emphasis is placed on strategic implementation of the HRM which indeed had been witnessed during the 1980s and 1990s. The success of the new policies depends on the introduction and implementation of new strategic HRM policies. The strategy implements on job training, career planning, job rotation and management development. In this strategy the HR policies and practices has to be consistent emphasizing on team work, flexibility, employee involvement and organizational commitment. HR processes emphasizes on factors like hiring, maintaining the workforce, which are very much needed for the highly competitive growing organizations.

Review of literature

Singh and Singh (1995)examined the strategic role of the HR function in mobilizing employees towards change. They proposed models of strategic HRM and HRM cycle depicting the linkages between HRM and the actual implementation of strategic HRM plans in HR activities like manpower planning, selection, retrenchment, and training and development. They also focused on the immense challenges facing senior HR managers in India and suggested the possible ways of facing them.

Sivasubramaniam and Venkata Ratnam (1998) in their study on strategic perspective of HRM in Indian firms and the effects of alternative HRM strategies on firm and employee performance level, surveyed 109 senior managers in public and private Indian corporations. The results of the study indicated three coherent HR strategies in these organizations. The three strategies were based on the HR dimensions of inducement, investment, and involvement. The study found an amazing fact that HR strategy based on motivation through rewards and punishment accounted for 25 percent of the investment strategy sample. Great premium was placed on employee development. A paternalistic approach to management accounted for 33 percent of the sample. Involvement strategy to achieve a very high level of employee commitment accounted for 42 percent of the sample. As far as
Business strategies are concerned, the four different business strategies prevalent among the 83 companies were defender (23 percent), analyzer (42 percent), prospector (27 percent), and reactor (8 percent). Defender is usually based on prices, focuses on stability and efficiency. Analyzer focused on maintaining stability while being flexible, moderately centralized and a reward system that favors efficiency and effectiveness. Prospector usually competes on the basis of innovations, with decentralized control systems focusing on locating and exploring new opportunities, rewards innovation, and creativity. In their survey of the relationship between HRM and firm performance, tracked the performance impact of HR strategy through HR performance, turnover rate, employee productivity, strategic performance, and financial performance. Based on a study of 52 companies, they revealed that 21 firms had aligned their HR strategy with their business strategy.

Sangeeta Tripathi and Nachiketa Tripathi (2001), in their study attempted to investigate the relationship between Downward influence strategies and organizational success, which includes Job satisfaction (JS), Effectiveness (EFF) and Intention to quit (IQ). The study is based on a sample of 200 middle level executives of 10 public and private sector organizations. The finding indicate that less use if Asserting Expertise and Negative sanction and frequent use of rewards and personalized relationship would enhance the Job satisfaction, Effectiveness is also likely to enhanced by the use of Rational Rewards. Asserting expertise may increase Intention to quit the organization. If manager’s use appropriate influence strategies, these would be more likely to result in organization success.

The recent findings of Miles and Snow (1984) suggests that the basic HRM strategy of Defenders will be to ‘build’ human resources, as opposed to ‘acquiring’ or ‘allocating’ them. This means that Defender Company typically engages in intensive training, capability building of people and recruiting people only at the entrée level. In contrast, prospectors typically follow “buy in talent” a strategy that involves sophisticated recruiting at all levels of the organization, limited training, and extensive psychological testing before hiring. By implication Miles and Snow suggest that analyzers should match their HRM strategy to the nature of the product-market, and thus engage in ‘make’ or ‘buy’ HRM approaches as appropriate to the different product-market domains.

A study by Wright, P.M. and McMahan, G.C (1992) Approaches of the SHRM, attempts to link Human Resource activities with competency based performance measures attempts to link Human Resource activities with business surpluses or profit These two approaches indicate two factors in an organizational setting. The first one is the human factor, their performance and competency and the later is the business surplus. An approach of people concern is based on the belief that human resources are uniquely important in sustained business success. An organization gains competitive advantage by using its people effectively, drawing on their expertise and ingenuity to meet clearly defined objectives. Integration of the business surplus to the human competency and performance required adequate strategies. Here the role of strategy comes into picture. The way in which people are managed, motivated and deployed, and the availability of skills and knowledge will all shape the business strategy. The strategic orientation of the business then requires the effective orientation of human resource to competency and performance excellence.

Another perspective linkage between business strategy and HRM is Miles and Snow’s (1994) model of organizational adaptation, which deals with alternative ways in which organizations define their product-market (strategy) and construct mechanisms (structures and processes) to pursue these strategies. Miles and Snow suggest that there are four basic types of organizational strategies which they term ‘Defender’, ‘Prospector’, ‘Analyzer’ and ‘Reactor’. Each strategy has its own unique organizational features and supporting characteristics.

Another survey carried out in 2003 by Accenture (Ashton, Haffender, & Lambert, 2004) confirms these findings; Among 1,000 leaders interviewed, only 34% evaluated the performance of the area as good, although 83% stated it was critical to the success of the business. From this last perspective, HRM should have three key
capacities to be considered strategic. Firstly, it should distribute services related to HRM work processes, so all employees could have access to the internal and external channels related to them (communication). Secondly, the area should bring in HRM management consultancy services, performing as partners of executives, business units and business line managers. In this way, it would attend to the specific needs of each of the other departments of the company helping to develop core competences that are relevant to them and that may constitute business differentiating factors. Thirdly, the HRM department should provide more support and strategic services to the organization’s senior management, an option foreseen as the future of the area, but which has yet to be established.

Gray L. Neilson, Karla L. Martin, and Elizabeth Powers (2008) in this research “The Secrets to Successful Strategy Execution”, found that enterprises fail at execution because they go straight to structural reorganization and neglect the most powerful drivers of effectiveness—decision rights and information flow. They tested organizational effectiveness by having people fill out an online diagnostic, a tool comprising 19 questions (17 that describe organizational traits and two that describe outcomes). To determine which of the 17 traits in our profiler are most strongly associated with excellence in execution, they looked at 31 companies in our data base for which had response from at least 150 individual (anonymously completed) profiles, for a total of 26,73 responses. Applying regression analysis to each of the 31 data sets, they correlated the 17 traits with our measure of organizational effectiveness, which they defined as affirmative responses to the outcome statement “important strategic and operational decisions are quickly translated into action. Then they ranked the traits in order, according to the number of data sets in which the trait exhibited a significant correlation with our measure of success with in 90% confidence interval. Finally, they indexed the result a 100-point scale. The top- “Everyone has a good idea of the decisions and actions for which he or she is responsible"—exhibited a significant positive correlation with our success indicator in 25 of the 31 data sets, for an index score of 81.

Objective of the study

The basic objective of this study is to examine the status of Strategic HRM practices in Indian Software companies and to understand the underlying factors of these practices. To examine the extent of practicing of SHRM in software companies. To bring out the SHRM practices in Software companies. To examine the SHRM effectiveness in Software companies.

METHODOLOGY

A list of information technology companies operating throughout India, but having operation in Chennai and banglore was drawn out for research. Totally 25 organizations which are in Software IT companies. For the purpose of the study, organizations employing more than 50 employees were selected as a responding unit. The sampling population for the study was chosen on the basis of convenient random sampling technique. Respondent were the employees in human resource management and line positions. The sample for the study consist of 250 respondent out of which 208 sample were collected from software IT companies.

RESULT AND DISCUSSION

Strategic Human Resource Management practices are essential to achieve effectiveness in the organization. However the strategic practices enable organization to monitor and control standards, agree on expectation and practices.

DOMINANT SHRM PRACTICES IN SOFTWARE (IT) COMPANIES

According to the percentile analysis the focus of Strategic HRM practices in the rank order is given below. These practices are followed in software firms.

Rank % of Respondent

1. Organization polices and strategies linked to HRM polices(94.2%)
2. Strategic HRM focus(67.3%)
3. SHRM facilitate achievement(65.4%)
4. Treatment of employees (64.4%)
5. SHRM facilitate (57.2%)
6. SHRM activities relates (57.0%)
7. Functional Areas covered by SHRM (56.2%)
8. Organization diagnosis its strategic need (53.8%)
9. Line managers most touch with employee (37.5%)
10. Adopted SHRM activities (33.7%)

This study also examined the relationship between the practices of “organization diagnosis its strategic needs by planning of human development talent and implementing strategies to achievement” and other practices. Such as Strategies are linked to HRM Policies, Areas Covered by Strategic HRM, Achievement of Organizational objectives, Who ones most touch with employee, Strategic HRM Facilitate, Treatment of Employees, Strategic HRM Activities Relates and Strategic HRM Activities Adopted. The following practices have significant relationship to organization diagnosis its strategic need by planning of human development talent and implementing strategies to achievement i.e. Strategic HRM focus (P value = .0001), Functional Areas covered by SHRM (P value = .000), Line managers touch with employees (P value = .000), SHRM facilitate (P value = .000), Treatment of employees (P value = .000), SHRM activities relates (P value = .000), Adopted SHRM activities (P value = .000) and other practices like Organization policies and strategies are linked to HRM policies and SHRM facilitates of no of objectives are not significant with diagnosis its strategic needs.

An attempt was also made to examine the order of importance of practices. Mean and standard deviation tools are used. The analysis yields the following practices in the firms. The following variables are dominant practices in the software firms. They are Achievement of organizational objectives, Strategic HRM activities (Mean 3.1762, SD 1.23324), SHRM activities adopted (Mean 3.0363, SD 1.27628), Treatment of employees (Mean 2.6062, SD 1.17720), Areas covered by Strategic HRM (Mean 2.5440, SD .69924), Organization diagnosis its strategy need (Mean 2.1813, SD 1.05241) and strategic HRM facilitate (Mean 2.0674, SD .79754).

The factor analysis was also done to ascertain dominant factors of SHRM practices. The results are presented below:

The factor analysis emerged explaining the 43.26%. The items loading on the first factor were SHRM facilitates, treatment of employees and Strategic HRM activities. It was named Strategic HRM process which explains 25.484 percentage of variance and the item loading on the second factor were strategic link to HRM polices and functional areas covered by SHRM practices. It was named as organizational goals Accomplishment which explain 17.778 percentage of variance.

From the above Percentile, Chi-square, Mean, SD and factor analysis it is found that most of the software firms concentrate on the following strategic HRM practices:

- Strategic HRM Focus (strategic issues and operational issues)
- Functional Areas covered by SHRM (Finance, Marketing operation)
- SHRM facilitate (Transformation)
- Treatment of employees (Fairness and Equity, Favor balanced decision making and congenial work environment)
- Adopted SHRM activities (Team-based job design, Flexible work force, quality improvement practices)
- Strategic HRM activities (Innovation, Designing consistent policies and practices and strong expectation)

DOMINATE STRATEGIC HRM PRACTICES WHICH ACHIEVE ITS HIGHER EFFECTIVENESS IN SOFTWARE INDUSTRY (IT).

According to the percentile analysis the focus of Strategic HRM effectiveness in the rank order is given below

Rank Practices : % of respondent
1. Workforce plan
2. Participative management
3. Executive development program
4. Family/work program
5. Succession and development planning
6. Advance issue identification strategic studies
7. Communication between employee and manager
8. Quality output
9. SHRM effectiveness attained

The Chi-square test also used to examine the relationship between “conducting work/family programme and other practices. The following variables have significant relationship, i.e. Participative management (P value = .04), Executive development program (P value = .00), Advance issue strategic studies (P value = .00), Communication between employee and managers (P value = .00), and There is no significance relation with SHRM effectiveness attainment of all i.e.,( team work, communication, enhancing quality, employee participation and empowerment), succession planning & development planning, work force plan support and quality output.

An attempt was also made to examine the order of importance of SHRM effectiveness practices. Mean and standard deviation tools are used.

The descriptive statistical analysis of mean and standard deviation which gives higher rating effectiveness by strategic HRM in the organization by its Team work, communication, employee participation and empowerment(Mean 3.56842, S.D 1.5888002), secondly Employee and Manager Communication(Mean 2.5000, S.D .64856),Thirdly Work Force Productivity and Quality Output(Mean 2.2684, S.D .68742),fourthly Work force Planning (Mean 1.9632, S.D .92222),fifthly Executive Development Program and Succession Planning(Mean 1.1632, S.D .37049).

Factor analysis combination of few variables will form a factor. Similarly four factors are used to know the effectiveness of the organization. Factor one consist of two items namely planning and workforce productivity & quality factor were labeled as ‘Employee outcomes’. Factor two consist of two items namely participation management, advance issue identification strategic studies and employee and manager communication was named as ‘Managerial Decision making and communication’. Factor three consisting of two factors namely management (81.2%) and executive development and succession planning (74.8%) labeled as ‘Management Development’. Factor four consisting of only on factor workforce planning was labeled as ‘Work force planning (49.0%)

From the above percentile, chi-square test, Mean, SD and factor analysis it is found that most of the software firms achieve its effectiveness on the following Strategic HRM practices workforce plan, Participative management, Executive development program, Succession and development planning, Advance issue identification strategic studies, Communication between employee and manager.

Reference

Abstract:

The advent of technology and innovation in the IT sector brought revolutionary changes in the operations of banking business. The development and dissemination of technologies helped bankers to adopt IT enabled services to have an efficient business practices and channels to sell their services. The concept and scope of IT enabled services although in its nascent, it is successful in facilitating for an effective payment and accounting system. Delivery channels are the major components of IT enabled services. ITeS refer to the use of technology as a remote delivery channels for banking services. E-banking through various delivery channels has gained wide acceptance internationally and is fast catching up in India with more and more banks embracing. The present study empirically presents the status of delivery channels in India banks. The findings show that the Indian banks have been perceived IT application in banking as a strategic tool for promoting business development. The customers are delighted in making use of the e-banking facility. But the rate of adoption is not according to the expected level (IBA, 2009). The adoptability of ITeS by respective banks has been influenced by many factors such as investments, ROI, volume of business and customers satisfaction etc., Evolving a suitable ITeS model is required to keep bank and customers accomplishing their assigned goals.

Key words: Delivery channels, E-banking, IT driven risk, ITeS

Evolution of IT in Banking Sector:

In the first phase, banks computerized their labor intensive back office operations to reduce costs and improve housekeeping.

In the second phase, banks focused on enhancing customer convenience to gain competitive advantage.

In the third phase, which is presently in progress, banks have implemented Core Banking Solutions (CBS) combining both front office and back office. This phase marked a paradigm shift in more senses than one and branch customers are now bank customers as they can access their accounts from any branch for defined purposes. CBS offered new opportunities for information management, for better customer service and improved risk management. However, one of the shortcomings that has been observed is a disconnect between the Information (I) and Technology (T). Owing to this, banks have not been able to reap the benefits of the technology revolution in terms of cost reduction of small value transactions, improved customer services and effective flow of information within the banks and to the regulator. Although banks have deployed technology for transaction processing, the same has not been explored extensively for analytical processing.

In this background, the role of IT in banking sector needs to be revisited with focus on the following:

- Introducing technologies that balance 3 Cs – Cost, Control and Customer Service
- Implementing data warehouse and business intelligence that meets all internal MIS requirements as well as the information needs of the regulator
- Adoption of technology-based strategies for financial inclusion
- Usage of analytics for improvement of Customer Relationship Management (CRM), risk management and fraud detection / prevention
E-banking is defined as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. E-banking includes the systems that enable financial institution customers, individuals or businesses, to access accounts, transact business, or obtain information on financial products and services through a public or private network, including the Internet. Customers access e-banking services using an intelligent electronic device, such as a personal computer (PC), personal digital assistant (PDA), automated teller machine (ATM), kiosk, or Touch Tone telephone. While the risks and controls are similar for the various e-banking access channels, this booklet focuses specifically on Internet-based services due to the Internet’s widely accessible public network.

Origin of E-banking In India The Indian banking system has undergone significant technological transformation since the 1980s. The Rangarajan Committee report in 1980s was the first step towards computerization of banks. Banks started exploring the idea of 'Total Bank Automation (TBA)'. Although titled 'Total Bank Automation,' TBA was in most cases confined to branch automation. It was only in the early 1990s that banks started thinking about tying-up disparate branches together to facilitate information sharing. At the same time, private banks entered the banking arena with radically different strategies. The private banks provided huge budgets to the adoption of technology to provide a whole new range of financial products and services at minimal costs.

E-Banking in India Most of Indian commercial banks are providing non-conventional and innovative banking services. Product innovation is tied to internet banking; increasing competition amongst the leading banks also promotes product and service differentiation. For example, despite the Internet Banking System developed in 1990 by the reserve bank of India with the help of department of telecommunication of India. Moreover, Indian banks offer innovative technology based banking products and service to their customers. Information technology revolution affect on traditional banking practice in following manner in India.

Computerization of Banks in India Computerization is general trend in all sector, banks also trying to Computerization, as per recommendation of Rangarajan Committee (II), the progress in implementation of the directive of the Central Vigilance Commission (CVC) on the need to computerize 70 per cent of the banking business by public sector banks before January 1, 2006, all banks have achieved the desired level. As on date, all banks have achieved 100 per cent computerization of the banking business.

Introduction to E- Banking Business:

Introduction:

In the world of banking, the adoption and development of information and technology is a Phillip in evolving efficient and user friendly banking operations. Electronic Banking (E-banking) services are the outcome of the development and diffusion of these technologies by banks resulting in efficient banking operations. E-banking refers to the delivery of banking services and products through delivery channels, such as ATM, Internet Banking, Mobile Banking, PoS, core banking solution etc. The concept and scope of E-banking is though still evolving, it is successful in cultivating for an effective payment and accounting system thereby enhancing the speed of delivery of banking services considerably.

What are Delivery Channels?

Delivery channels are various technology based means through which the customers can transact their business with the Bank at their convenience anywhere and at anytime of the day or night. Thus, the customers will have choice of transacting business through ATM, Internet Banking, Tele-banking, Mobile banking or through plastic cards such as Credit Card, Debit Card Smart Card etc., choice of his convenient time, ATMs, Telebanking, Internet Banking and mobile banking are round the clock available and choice of his place, these can be accessed at multiple locations, including overseas locations. In tune with various needs of the customers, different means or channels have been evolved. Following delivery channels have largely been operational in banking industry.
Automated Teller Machines (ATMs):

ATMs offer the convenience of withdrawing/depositing cash and performing other banking transactions without having to visit the branch during pre-fixed business hours. These machines work round the clock, are safe to transact in an isolated and secure environment. With the interconnected ATMs, the convenience becomes much more acceptable as the customer can transact from any ATM most convenient to him/her. Thus ATM network gives the card holder freedom to choose his day, time and place to transact in his account. A customer of “X” bank can very well go to “Y” bank ATM and does the transaction.

Tele-Banking Services:

Undertaking a host of banking related services including financial transactions from the convenience of customer chosen place anywhere across the GLOBE and any time of date and night, Banks have introduced on-line Telebanking services. By dialing the given Telebanking number through a landline or a mobile from anywhere, the customer can access his account and by following the user friendly menu, entire banking can be done through Interactive Voice Response (IVR) system. The system facilities are being offered by Banks.

   a. Automatic balance voice out for the default account
   b. Balance inquiry and transaction inquiry in all
   c. Inquiry of all term deposit account
   d. Statement of account by Fax, e-mail or ordinary mail.
   e. Cheque book request
   f. Stop payment which is on-line and instantaneous
   g. Transfer of funds with CBS which is automatic and instantaneous
   h. Utility Bill Payments
   i. Renewal of term deposit which is automatic and instantaneous

Internet Banking:

Internet Banking, from customer point of view is a very simple and user friendly facility. It can be accessed through bank’s website. The convenience and ease of operations through Internet Banking make it a unique value proposition for the customers. Most of the Tele-banking facilities are being made available in Internet Banking also.

Mobile Banking:

Mobile banking applications involve using a mobile phone to carry out financial transactions—this usually means making a payment for goods or transferring funds electronically. As content delivery over wireless devices becomes faster, more secure, and scalable, there is wide speculation that mobile banking will surpass wire-line e-commerce as the method of choice for digital commerce transactions.

The Indian banks perceived delivery channels as strategic tools for business development. India is also in the verge of major banking revolution with technology based products having already been unveiled. All the nationalized banks and most of the private sector banks in India adopted E-banking system and provided banking facility through delivery channels. The introduction of innovative core banking schemes in Indian banks like Real-Time Gross transfer (RTGS) and National Electronic Funds Transfer (NEFT), which enabled fund transfers among account holders of the same bank as well as inter-bank transfers, attracted many customers towards the use of E-banking system.

RESEARCH PURPOSE:

Though IT enabled technologies have been prevalent in the Indian banking sector for over a decade, very few studies have been carried out regarding the Indian bank consumers’ usage patterns and their experience in using them. The few published studies done in India deal with only aspects pertaining to any one of the technology enabled banking self-services such as ATM (Thamaraiselvan and Raja, 2007) or internet banking (Singh and Malhotra, 2005; Mukherjee and Nath, 2003). Therefore there is a need to understand the usage behavior of the bank consumers using multiple electronic banking channel services as well as the challenges in using different banking channels in a complimentary manner.
Due to the advent of the globalized world, liberalization and free economy, the Banks underwent a re-structuring process in its operations to cope up with the onslaught of competition. E-banking adoption is one of the re-structuring strategies adopted by Indian banks to have a switch over from the traditional patterns of bank operations to introduce technology. However the Indian banks are constantly upgrading their websites, software’s, safety measures, privacy option, etc to enable the customers actively use the E-banking. The banks have also issued the user manuals at regular intervals to make the customer comfort in using the facility. Banks are also not lagging behind in encouraging customers to use the facility. Despite all their efforts aimed at better and easier IT enabled services, these systems remain unnoticed and under utilized by many of the customers. Therefore there is need to understand customers acceptance/ perception of delivery channels and the reasons behind the under utilization of the facility. This study will help the bankers to understand the reasons for under utilization of the facility and evolve suitable marketing and motivational strategies to popularize the IT enabled banking.

OBJECTIVES:

- To understand the role of IT in banking
- To analyze the spending in IT
- To evaluate the IT enabled products reaching customer
- To document the perception of customers/IT staff/ Top Management

IT Spending / Budget:

Currently, the IT spending of banks in India, is about 62 per cent of the total spending on technology by all banks. The increase in IT spend is likely to benefit them in the long term. This IT spend includes capital expenditure, operational expenditure and specialist skilled manpower. The major areas of thrust will be automated data storage, compilation, upgradation and analysis, along with automated decision making that will involve loan sanctions as well.

As Indian banks gear up for the second wave of technological enhancement, their spending is likely to shoot, a little over fifty per cent, to Rs 10,000 crore annually. Banks need to work towards the Client Relationship Model (CRM) strategy and implement it. The advantage of CRM is that it allows comprehensive data analysis and decision making without manual intervention. Once banks fully migrate to the CRM model, they will be able to increase the customer base by 30 per cent through comprehensive customer profiling and servicing. This helps banks to improve customer satisfaction.

Return on Investment:

The major areas of benefit of e-banking offering included:

- Additional revenues from transaction and user fees for on-line bill payment lending, cash management and e-commerce portal offerings.
- Cost savings and improved operational efficiency.
- Opportunities for acquiring new customers and cross-selling new services to existing customers.
- Improved ability to retain customers

The key drivers of profitability for banks are:

- Increase revenues
- Minimize operational and transactional cost
- Cross – selling of products like insurance, bill collection
- Retaining customers

The drivers of profitability for e-banking institutions, in order of significance, are increased revenues, operational and transactional cost savings, ability to generate cross sales by encouraging traffic to the Web site, and the ability to retain customers through target marketing and maximizing the site’s “stickiness value.” Indeed, the expense of offering Internet banking is difficult to justify for smaller institutions on the basis of cost savings alone. Much depends on banks implementing lending, cash management and ecommerce applications on top of simple reporting and transaction capabilities. Banks hoping to achieve significant profitability by simply providing customers with the ability to view their balances online are likely to simply break even on their investment.

Achieving profitability in Internet banking requires banks to not only offer simple Internet banking services, such as reporting and bill
payment, but to also use the time the customer spends on the bank’s web site for cross selling and marketing.

Institutions that have put services on-line have seen cost savings in back-and-front-office operations - from deposits, to statement processing, to loan application processing and customer service. The Internet helps an institution to streamline operations across the board. Cost savings is achieved primarily through less reliance on manual operations and call centers. Profitability is further enhanced by lower customer service costs realized through greater efficiencies in setting up new accounts, servicing consumer loan applications, handling balance and payment activity inquiries, answering requests for copies of checks, stop payments and address changes.

Market Perception regarding percentage of use of different banking channels:

The average usage of ITeS and delivery channels is not much encouraging the banks with respect to return on investment as well as attracting new generation customers. The following table shows the average percentage of usage of banking channels, namely branch banking, ATMs, internet banking, Tele-banking and mobile banking.

Challenges:

Though banks are in race for introducing new products and garnering customer base, there is lack of co-ordination among products. The integration across various delivery channels is always a concern. Integration with back-end to deliver a “one-bank” experience to the customers is need of the hour. There is an urgency to integrate products viz., Banking, Credit cards, auto loan, home loan, bonds, web trade to delivery channels like Internet Banking, Branches, ATMs, Cyber Centers, Call centers, m-banking, banking agents etc., Given their dependence on technology for conducting their day-to-day operations, banks are up against huge challenges such as technology obsolescence, depending on vendors due to outsourcing of IT services, vendor-related concentration risk, external threats leading to cyber frauds / crime. Technology risks not only have a direct impact – operational risks – on a bank but can also exacerbate other risks such as credit risks and market risks. Inadequate technology implementation can also induce strategic risk as decisions could be based on inaccurate data/information. Banks should also trade off between security, convenience and cost.

Conclusion:

In conclusion, the key drivers to achieve profitability for an institution implementing Electronic banking are:

- The ability to increase cross-selling of various services as well as products adoption of target marketing tools and data mining techniques
- Migrating simple, but labor-intensive banking activities to the web viz., funds transfer, account balance and rate inquiry, stop payment, check ordering, address change requests, etc.
- Increasing on-line bill payment penetration
- Streamlining the loan application and fulfillment process
- Cost-effective target marketing
- Lower customer acquisition costs
- Improving customer retention

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Annexure

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<tr>
<th>Usage of Banking Channel (%)</th>
<th>Avg. percentage of transactions (%)</th>
<th>Internet Banking (%)</th>
<th>Tele Banking (%)</th>
<th>Mobile Banking (%)</th>
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<td></td>
<td>Users</td>
<td>Non-users</td>
<td>Users</td>
<td>Non-users</td>
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<td>19.04</td>
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