

INTERNATIONAL JOURNAL OF RESEARCH IN COMPUTER APPLICATION & MANAGEMENT

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ROBOTS REPLACING HUMAN IN THE BANKING SECTOR - NEW ERA OF ROBOTS: A SYSTEMATIC STUDY

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ABSTRACT

In the paradigm of technology banking sector has been affected by technology too. When we glimpse at the global platform for the financial services activities most of the operations are automated to ease the services for customer and better insight for customers. This study accentuates on the creation of workplace where both robot and human interact and work together to address the customer services. Robots play vital role in the multi-tasking and can work in the hazardous working conditions. This study also focuses on the partial and fully pledged implementation of robots in the work place and converse the pros and cons of partial and fully implementation of robots. Introduction of robots in the banking sector in the India and how would be the customer and internal customer respond to it. How effectively it can be implemented and accomplished to ease the work and pace with technology driven economy on global overview. To conclude, the study endeavour about the future prospective of robots in the Indian economy.

KEYWORDS

banking, future prospective, partial, robots.

INTRODUCTION

Revolution in the area of automation to be global competitive in the banking industry, it is essential to adopt technology and various automation software's in order to reduce interface of human in the operations. When you visit bank, imagine of robots in the place human how you react to it. Robots acts as human and helps in assisting customers to solve their query. In many business and sectors, robots are replacing humans especially in the area of manufacturing, retail sector, aeronautics etc. with the wave of technology, many banks will need fewer space with better use of technology and require less human source.

Robots play role in the manual and repetitive tasks. When we come to the area of banking robot can be introduced in the field of customer care service (Telephonic Queries) and it can tremendous role in the place of cashier where you don't need much interaction. Globally we can see the banks who have introduced robots in the operations of banking industry.

In the technology driven economy, it's indispensable to upgrade our processes and area of banking to enlighten and depict the customers about technology. When we look at the recent developments in the world of banking and finance across the world its surprising to face the banking processes automated and no human interface. Banking sector should be forefront for the innovation in the banking activities with the consideration of technology.

REVIEW OF LITERATURE

This study states the relation and interaction of robot and human at the workplace made more innovative way of bringing technology in the field of banking. With the pace of swift, customers depiction towards the technology driven global economy.

OBJECTIVES OF THE STUDY

Following are the objectives of the study:

1. To know the pros and cons of the robots in banking sector in India
2. To study the positive and negative impact of the robots with partial and full replacement of human at workplace.
3. To study the future perspective of robots in the Indian banking industry.

RESEARCH METHODOLOGY

The study has originated from insights of the various articles, referred various articles to analyse the implementation process of robots if it happens in India. Its derived from the contemporaneous shifts happened in the other countries like US etc. In the context of Indian banking sector, how robots play a role and how it contributes to the sector and deliver usrp services to the clients or customers. Genuine attempt made to analyse the status quo of the study in Indian banking sector.

WHY ROBOTS IN THE PLACE OF HUMAN

This study assist in differentiating the productivity of human and robot in the workplace and also to modernize the operations with the pace of introduction of robots to produce better quality without sojourns. Significantly the industries are benefited with robotic automation as mentioned below:

- Accuracy – Error free
- Increase in productivity
- Increase in the ease of operations
- Reduction of workload for the existing workers
- Competitive edge over the technology
- Accomplish peak season
- Consistency
- Pioneer In the technology

Significantly, the motive of deploying robots in the banking industry is to improve quality, reduced cost, increased speed and appreciation in the accuracy and consistency. The kind of the benefits are derived from the deploy of robots in manufacturing and service industry differ in many aspects. The characteristics of deploying of robots in the manufacturing industry assist in the reduction in the cost of production, increased speed etc.

Replacement of human in clerical work doesn't require much of training of staff to supervise the operations. Whereas replacement of labour in the place of human definitely has significant implication when the repetitive job is replaced at lower cost. Robots also plays tremendous role in the area of confidentiality.

Each industry strives to upgrade their technology to make strong base in the market and also retain and attract more number of customers with their exclusive services. Across the world many banks are embracing the automation of operation through robots which enhance the abrasion less operations.

CURRENT PARADIGM OF AUTOMATION IN INDIA

Automation empowers the growth of business and establishing great market presence. One of the articles says that IT Companies in India prefer to spend more on the capital than on the human resource. In other words, companies are ready to spend on the technology than on the human resource.

As per the survey by IBM on emerging trends in the banking industry, customers are looking for much customized services, transparency in terms of costs; technology oriented and supported services which can ease the customers. Customers are focusing on the convenience of services

Contemporarily, robots are playing major role in the industries like manufacturing, retailing etc. Fundamental modification in foremost sectors of the global economy, the paradigm shift in the banking sector is part of global change in the technology. Shift in the technology is inevitable for all the sectors who exposed to the technology.

Recent developments and innovation will redefine the banking industry, delivery of services and products. Robotic automation can be defined as automation of built-up and clerical operations using Robots.

STUDY THEME

This study emphasize on two broader way of introducing robots in the banking sector

- Partial robotic operations
- Full pledged robots in the place of human and operations.

I] PARTIAL ROBOTIC OPERATIONS

In the banking sector, robots are introduced in the job of cashier and telephonic queries resolution (Customer care representative). Deploying of robot in the tasks such as double data entry, copy and paste between the computers, reconcile the data and cross verification between the different computers and systems. IT transformation demands the high investment in the time and money works for the clerical and manual work of repetitive tasks.

POSITIVE IMPACT

The partial impact of the study goes as follows:

- 1) Reduction of time consumption
- 2) Existing employees can be utilized in better area
- 3) Burden of the employees reduced by taking over monotonous job.
- 4) Scope for innovative ideas and job areas by employees.
- 5) Customers are ensured error free service as it's free of human intervention.
- 6) Pioneer in the introduction of robot in the banking industry in India.
- 7) To gain edge of over competitors.

NEGATIVE IMPACT

The following are the negative impact of the study:

- 1) Reduction of jobs for human in future.
- 2) Task of the cashier and CSR will be laid off; existing employees will lose their current job.
- 3) No human Interaction – Customers and employees should be working with machines.
- 4) Employee response to the change in technology.

II] FULL PLEDGED INTRODUCTION OF ROBOTS

From the statistics of world robot association, upsurge in the production robots over a period of time. Technology plays phenomenal role in the industry of banking, this study endeavour to state the pros and cons of the full implementation of robots in the place of human.

Robotics may well see many more innovations that address larger issues and bring about lasting social transformations. Automation assists to become globally competitive for the companies in industry of the nation. Robots can act as human; at the same time it is known fact that it can replace the intelligence, interpersonal, knowledge skills of an employee. By playing the role of human they can add value to the existing system and process which is of complex and requires more time in doing repetitive jobs.

POSITIVE IMPACT

The following are the positive implications of the full robots at work place from the study:

- 1) Better quality
- 2) 100 % Error free
- 3) Getting Rid off absentees at workplace
- 4) Getting competitive edge on global platform.
- 5) Convey usurp operations in India with technology
- 6) Existing few employees trained with new technology and new skills.

NEGATIVE IMPACT

Following are the negative implications of full robots in the workplace as follows:

- 1) Fewer human left out at workplace to operate and supervise the automation.
- 2) Proliferation in the rate of head count.
- 3) Upsurge in the rate of unemployment in the country.
- 4) Require more funds for the automation operations.

TABLE 1: ESTIMATED YEARLY SHIPMENTS OF MULTIPURPOSE INDUSTRIAL ROBOTS IN SELECTED COUNTRIES. (Number of units)

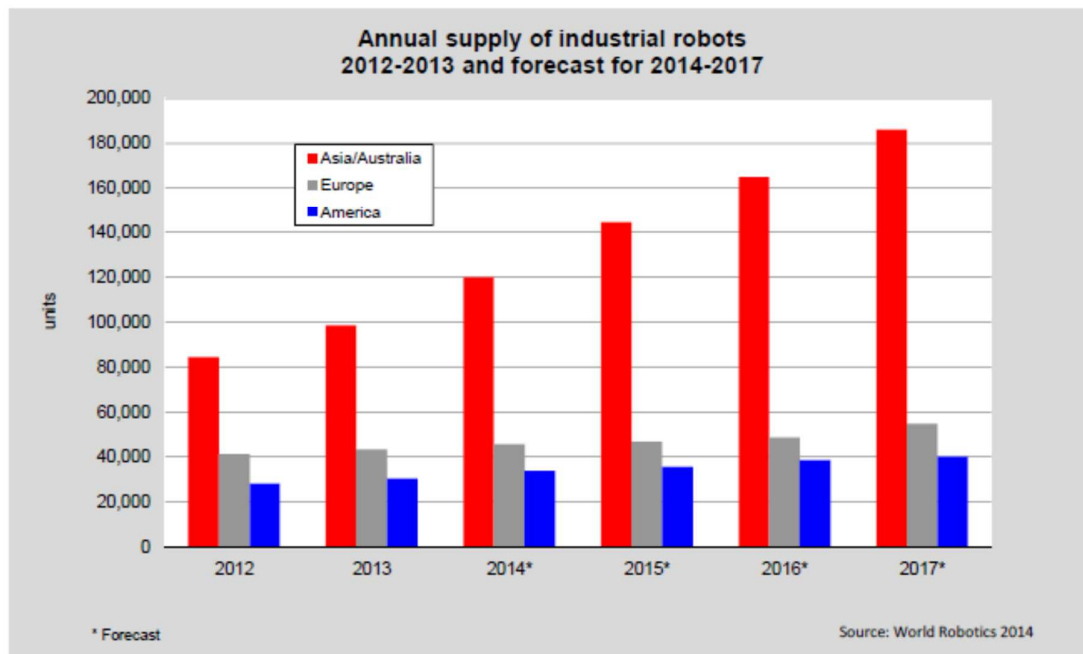
Country	2012	2013	2014*	2017*
America	28,137	30,317	33,700	40,000
Brazil	1,645	1,398	2,000	3,500
North America (Canada, Mexico, USA)	26,269	28,668	31,500	36,000
Other America	223	251	200	500
Asia/Australia	84,645	98,807	120,000	186,000
China	22,987	36,560	50,000	100,000
India	1,508	1,917	2,500	5,000
Japan	28,680	25,110	28,000	32,000
Republic of Korea	19,424	21,307	23,500	26,000
Taiwan	3,368	5,457	6,000	9,000
Thailand	4,028	3,221	4,200	7,000
other Asia/Australia	4,650	5,235	5,800	7,000
Europe	41,218	43,284	46,000	55,000
Czech Rep.	1,040	1,337	1,800	2,600
France	2,956	2,161	2,300	2,800
Germany	17,528	18,297	19,500	21,000
Italy	4,402	4,701	4,800	5,500
Spain	2,005	2,764	3,000	3,800
United Kingdom	2,943	2,486	2,500	3,500
other Europe	10,344	11,538	12,100	15,800
Africa	393	733	800	1,000
not specified by countries**	4,953	4,991	4,500	6,000
Total	159,346	178,132	205,000	288,000

Sources: IFR, National Robot Association

*forecast

**reported and estimated sales which could not be specified by countries.

FIG. 1



Sources: IFR, National Robot Association

The robotics industry in North America is having its best year ever in 2014,” said Jeff Burnstein, President of RIA. “Along with record performance, we are seeing more interest in robotics and related technologies than ever before. Companies of all sizes continue to recognize that automation makes them stronger global competitors. It’s also interesting to note that as robot sales boom, U.S. unemployment continues to fall, and is currently at its lowest level since July of 2008, further evidence that robotics helps save and create jobs.”

REPORT HIGHLIGHTS

- The global robotics industry was worth \$17.3 billion in 2008 and an estimated \$17.6 billion in 2009. This should reach \$21.4 billion in 2014, for a compound annual growth rate (CAGR) of 4.0%.
- The industrial robots segment is the largest segment, worth \$11.5 billion in 2008. This is expected to decrease slightly to \$10.5 billion in 2009, and then grow at a CAGR of 2.8% to reach \$12.1 billion in 2014.
- Professional service robots are the second largest segment, generating \$3.3 billion in 2008. This should increase to \$4.0 billion in 2009 and \$5.4 billion in 2014, for a CAGR of 6.0%.

FUTURE PERSPECTIVE OF AUTOMATION

Prophecies regarding how the automation process and operations provide services to the customers are salient feature of science fiction. In the today's world the robots are making the lives of human easier and human is getting the required service at the ease. Robotic automation is debauched emerging as a highly demonstrable and efficient. It ensures the cost reduction of 25 to 50% and ensures high savings. It also entreaties the compliance and risk management operations because it reduces the human errors tremendously.

CONCLUSION

This study assists in determining the prerequisite of technology in the banking sector on broader aspect. In depth study of the introducing robots in the banking sector with partial and fully pledged classification or segregation of implementation in the workplace in Indian Banking and financial service sector. A robot has noticeable productivity and ensures error free tasks and operation with quality and customer delight with ease ensuring the safety and security of the task and also ensures the confidentiality in terms of banking activities wherever it's required. There is no wonder if in future when you visit bank you see robots in the place of humans and your required service will be delivered by robots. India has great future in banking sector with automation.

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