

The Impact of AI and IoT-Driven Systems on the Social and Psychological Aspects of Employee Management in the Banking Sector

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Abstract: Artificial intelligence (AI) and the Internet of Things (IoT) are highly disruptive, having a profound impact on the work and life of every individual. This impact is escalating rapidly with the advent of newer chatbots, analytical tools and user interfaces. Employee management is a major area of impact. AI and IoT automate routine tasks, optimize decision-making and reduce decision risks for employees and their managers. This study reports on the significant impact of AI and IoT based systems on the social and psychological aspects of employee management. This study is based on a survey of 200 respondents from the banking sector using direct random sampling.

Keywords: Artificial Intelligence, Sensors, Employee performance, IoT, Banking

1. Introduction

The social and psychological impact of AI and IoT-driven systems and the corresponding changes in customer service, employee performance and work efficiency demand careful study. The advances in AI have the potential to either enhance or challenge the supervision of employees.

Big data strategies are being used in the monetary region to additionally foster client care, increase adequacy, and reduction risk. For example, data mining is used to extract models from colossal datasets. In the banking sector, this data can be used to additionally foster client division, target promoting campaigns, and recognize distortion. AI can also be used in RPA (Robotic Process Automation) to handle banking tasks like coercion, distinguishing proof, risk appraisal, and client care. This automation can set free HR to focus in on fundamental tasks. Ordinary language dealing with (NLP) can be used to inspect client

information and electronic entertainment data. This data can be used to additionally foster thing headway, client support, and advancing campaigns.

Conveyed figuring parts with a flexible and reasonable stage for putting and taking care of big data. This grants banks to take advantage of big data without placing assets into expensive hardware and programming.

Big data is an astonishing resource that can be used to additionally foster the monetary region. By using big data methods, banks can gain a more significant cognizance of their clients, work on their things and organizations, and diminishing gamble.

Banks can use big data to area their clients into different get-togethers considering their economics, approaches to overseeing cash, and chance profile. This data can be used to target displaying campaigns and thing commitments even more.

Banks can use big data to recognize underhanded trades. For example, AI estimations can be used to separate instances of misleading approach to acting.

Banks can use big data to overview the bet of crediting money to a particular client. For example, they can use data on the client's compensation, expenses, and record of credit reimbursement to make a crediting decision.

Banks can use big data to additionally foster client care. For example, they can use NLP to analyze client analysis and online entertainment data to perceive districts where they can deal with their things and organizations.

Big data is a rapidly propelling field and new applications for big data in the monetary region are being encouraged continually. As big data ends up being more available and

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sensible, very likely, big data will expect an essentially bigger part in the monetary region in the years to come. AI and IoT can emphatically influence the social and mental pieces of specialist the board. AI-energized chatbots can be used to answer laborer questions, offer assistance, and resolve issues. IoT-engaged contraptions can be used to connect laborers with each other and with their managers, regardless, when they are not in a comparable region. This can help with additional creating correspondence and facilitated exertion, which can provoke extended effectiveness and occupation satisfaction.

Positive impacts

- Greater collaboration and teamwork: AI and IoT can be used to create more collaborative and efficient work environments. For example, employees can use AI-powered tools to share information and communicate with each other more easily.
- Increased employee diversity: AI and IoT can help banks to attract and retain a more diverse workforce. For example, AI-powered recruiting tools can help to reduce bias in the hiring process.
- Improved work-life balance: AI and IoT can help banks to create more flexible and employee-centric work arrangements. For example, employees may be able to work from home or remotely access work systems.

Negative impacts

- Increased stress and anxiety: AI and IoT can lead to increased stress and anxiety for employees, especially if they are concerned about job security or feel that they are not keeping up with the pace of change.
- Reduced social interaction: AI and IoT can lead to reduced social interaction among employees, especially if they are working remotely or using technology to communicate with each other instead of interacting face-to-face.
- Loss of control: AI and IoT can lead to employees feeling like they have less control over their work and their work environment. This can be due to the fact that AI-powered systems are often opaque and difficult to understand.
- Ethical concerns: AI and IoT raise a number of ethical concerns, such as the potential for bias and discrimination. Employees may be concerned about how their data is being used and how AI-powered systems are making decisions.

Recommendations for mitigating negative impacts

- Promote collaboration and teamwork: Banks should promote collaboration and teamwork among employees, both in person and remotely.
- Be transparent about AI and IoT: Banks should be transparent with employees about how they are using AI and IoT, and how these technologies are impacting their jobs.
- Address ethical concerns: Banks should develop ethical guidelines for the use of AI and IoT, and they should communicate these guidelines to employees.

Overall, the impact of AI and IoT on employee management in the banking sector is complex and multifaceted. Both technologies have the potential to improve the social and psychological well-being of employees, but they can also lead to challenges. Banks need to be proactive in addressing these challenges and mitigating any negative impacts.

The impact of AI and IoT-driven systems on the social and psychological aspects of employee management in the banking sector is complex and multifaceted. On the one hand, AI and IoT can help to streamline and automate many tasks, freeing up employees to focus on more strategic and value-added activities. This can lead to increased job satisfaction and productivity. On the other hand, there are concerns that AI and IoT could lead to job displacement and increased workloads for employees who remain. Additionally, there is a risk that AI and IoT could be used to monitor and control employees in ways that are harmful to their privacy and well-being.

Here are some of the specific social and psychological impacts of AI and IoT on employee management in the banking sector:

Increased job satisfaction and productivity: AI and IoT can help to automate many repetitive and time-consuming tasks, such as data entry, customer service, and fraud detection. This can free up employees to focus on more challenging and rewarding work, such as developing new products and services, building relationships with clients, and providing personalized advice. By automating routine tasks, AI and IoT can also help to reduce the workload on employees and improve their work-life balance.

Increased workloads: Even if AI and IoT do not lead to widespread job displacement, they could still have a negative impact on employees' workloads. As AI and IoT systems are implemented, employees may be expected to learn new skills and take on new responsibilities. This could lead to increased workloads and stress levels.

Loss of control and autonomy: AI and IoT systems can be used to monitor and control employees' work in ways that were never before possible. For example, AI-powered

systems can be used to track employees' keystrokes, mouse movements, and even facial expressions. This could lead to employees feeling like they are being constantly watched and judged, which could have a negative impact on their morale and productivity.

Privacy concerns: AI and IoT systems collect a vast amount of data about employees, including their work habits, performance, and even personal information. This data could be used to make decisions about employees' careers, such as promotions and layoffs. There is a risk that this data could also be misused or sold to third parties without employees' consent.

Overall, the impact of AI and IoT on the social and psychological aspects of employee management in the banking sector is mixed. Banks should also take steps to mitigate the risks and ensure that employees are treated fairly and ethically.

Here are some steps that banks can take to mitigate the social and psychological risks of AI and IoT:

- **Transparency and communication:** Banks should be transparent with employees about how AI and IoT are being used in the workplace. Banks should also communicate with employees about their plans for the future of AI and IoT.
- **Employee well-being:** Banks should take steps to protect the well-being of employees, such as by setting clear boundaries for work and personal time. Banks should also provide employees with access to support services, such as counseling and employee assistance programs.

By taking these steps, banks can help to ensure that AI and IoT are used in a way that benefits both employees and the organization as a whole.

The overall impact of AI and IoT on the social and psychological aspects of employee management in the banking sector is likely to be mixed. On the one hand, AI and IoT can help to improve efficiency, productivity, decision-making, and collaboration. On the other hand, AI and IoT can also lead to job displacement, increased workload, depersonalization, and bias.

It is important for banks to carefully consider the potential social and psychological impacts of AI and IoT before implementing these technologies. Banks should also take steps to mitigate any negative impacts, such as by providing training and support to employees, and by developing ethical guidelines for the use of AI and IoT.

Additional considerations

- **Transparency:** Banks should be transparent with employees about how AI and IoT systems are being

used in the workplace. Employees should be informed about how these systems are collecting and using their data, and they should have the right to opt out of data collection if they wish.

- **Trust:** Banks need to build trust with employees about the use of AI and IoT systems. Employees need to believe that these systems are being used in a fair and ethical manner.
- **Control:** Employees should have a sense of control over their work environment. This means that they should be able to provide feedback on AI and IoT systems, and they should have the right to request changes to these systems.

By taking these steps, banks can minimize the negative impacts of AI and IoT on the social and psychological aspects of employee management, and maximize the positive impacts.

Employee management in the banking sector is a critical function, as banks rely on their employees to provide high-quality customer service and manage sensitive financial data. Banks also face a number of unique challenges in employee management, such as the need to comply with strict regulations and the increasing importance of data security.

Key components of employee management in the banking sector include:

- **Recruitment and selection:** Banks need to recruit and select qualified and motivated employees who can meet the demands of the job and represent the bank in a professional manner. This process often includes conducting background checks, drug testing, and reference checks.
- **Training and development:** Banks need to provide their employees with the training and development they need to be successful in their roles. This may include training on new products and services, compliance regulations, and customer service skills.
- **Performance management:** Banks need to set clear performance expectations for their employees and regularly monitor and evaluate their performance. This helps to ensure that employees are meeting their goals and contributing to the overall success of the bank.

Additional challenges of employee management in the banking sector:

- **Compliance:** Banks need to comply with a number of strict regulations governing employee management, such as those related to data security, privacy, and anti-discrimination.

- Data security: Banks must protect their customers' sensitive financial data from unauthorized access and disclosure. This requires implementing robust data security measures and training employees on data security best practices.
- Technology: Banks increasingly rely on technology to deliver products and services to their customers. This means that employees need to be trained on the latest banking technologies and be able to adapt to new systems and processes.

Trends in employee management in the banking sector:

Banks are implementing a variety of initiatives to improve employee engagement, such as employee surveys, recognition programs, and wellness programs.

Overall, employee management in the banking sector is a complex and challenging task. Banks need to balance the need to comply with regulations with the need to attract and retain top talent. Banks can create a workforce that is well-positioned to meet the demands of the ever-changing banking industry.

2. Literature Review

AI-energized assessment can be used to follow specialist execution and perceive areas where they need improvement. This data can then be used to outfit delegates with modified info and improvement open entryways. This can help agents with feeling more attracted and convinced, which can incite better execution. (Kaiser, 2019)

AI and IoT can be used to automate tasks and make work processes more viable. This can set free delegates to focus in on more creative and key work. It can moreover simplify it for delegates to work from home or on versatile schedules. This can help with making a more versatile and flexible workforce, which can be a critical advantage in the present serious business place. While AI and IoT might conceivably vehemently influence the social and mental pieces of delegate organization, there are similarly a couple of anticipated that unfriendly results should consider. (Gupta, 2019)

As AI and IoT become more mind boggling, they are good for automating an always expanding number of tasks. This

3. Result and Discussion

could provoke work removing for certain workers, particularly individuals who are used in troubling or routine positions. The consistent checking and perception that is possible with AI and IoT could incite extended delegate pressure. Laborers could feel like they are constantly being watched, which could make them feel anxious and centered. (Keskin, 2020)

AI and IoT structures can make decisions without human data. This could provoke a diminishing in delegate freedom, as laborers would feel like they are by and by not responsible for their own work. AI and IoT are solid headways that might perhaps change agent organization. Anyway, it is imperative to be aware of the reasonable antagonistic outcomes of these headways moreover. By means of circumspectly considering the potential benefits and risks, affiliations can use AI and IoT to make an all the more certain and valuable working environment for their delegates. (Elish, 2018)

Despite the positive and unfavorable outcomes referred to above, it is basic to observe that the impact of AI and IoT on laborer the board will vary dependent upon the specific setting. For example, the impact of these advances will be startling in a tremendous, overall organization in contrast with in a bit, neighborhood business. The impact will moreover be different in different endeavors. (Watson, 2016)

Taking everything into account, impact of AI and IoT on laborer the leaders is at this point being talked about. In any case, clearly these developments might perhaps basically change how we work. Affiliations that can embrace these movements will be decisively arranged to prevail from this point forward. (Gupta, 2020)

Research Methodology:

A survey was conducted with the help of the institutional tutor.

Sample type

For the present research work, a total of 200 respondents were selected using direct random sampling.

Table 1: Gender of respondents

Gender	Freq	,
Male	100	50%
Female	100	50%

Here, 100 were male female ratio.

Table 2 : Age of respondents

age	Freq	,
20-23	56	28
24-30	58	29
31-40	62	31
41-50	6	3
above 50	18	9

Here, 58 respondents had the age in between 24 to 30 years.

Table 3: Marital status

status	Freq	,
Single	82	41
married	78	39
divorced	40	20

Here, 41% respondents were unmarried.

Table: 4: Family type

family type	Freq	,
nuclear	144	72
Joint	56	28

72% respondents were living in nuclear family

Big Data, AI and employee performance

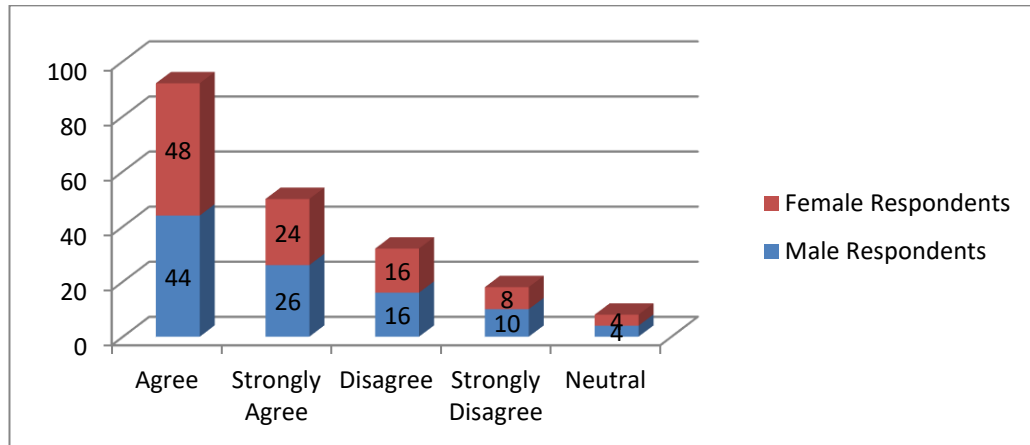
Table No. 5: employee performance

S. No.	AI and big data are helpful in employee performance?	Male		Female	
		N	%	N	%
.	Agree	4 ⁵	54	46	46
.	Strongly Agree	6 ¹	16	34	34
.	Disagree	2 ¹	12	9	9
.	Strongly Disagree	1 ¹	11	6	6

.	Neutral	7	7	5	5
	Total	100	100	100	100

Analysis

54 stated that AI and big data are helpful in employee performance while 16 and 12 respondents were ‘strongly agree’ and ‘disagree’ with it respectively.



AI, big data and customer service

Table No. 6: customer service

S. No.	AI and big data are helpful in improving customer service?	Male		Female	
		N	%	N	%
1.	Agree	47	47	52	52
2.	Strongly Agree	18	18	28	28
3.	Disagree	10	10	6	6
4.	Strongly Disagree	14	14	4	4
5.	Neutral	11	11	10	10
	Total	100	100	100	100

Analysis

47 mentioned that AI and big data are helpful in improving customer service while 18 and 10 respondents were ‘strongly agree’ and ‘disagree’ with it respectively.

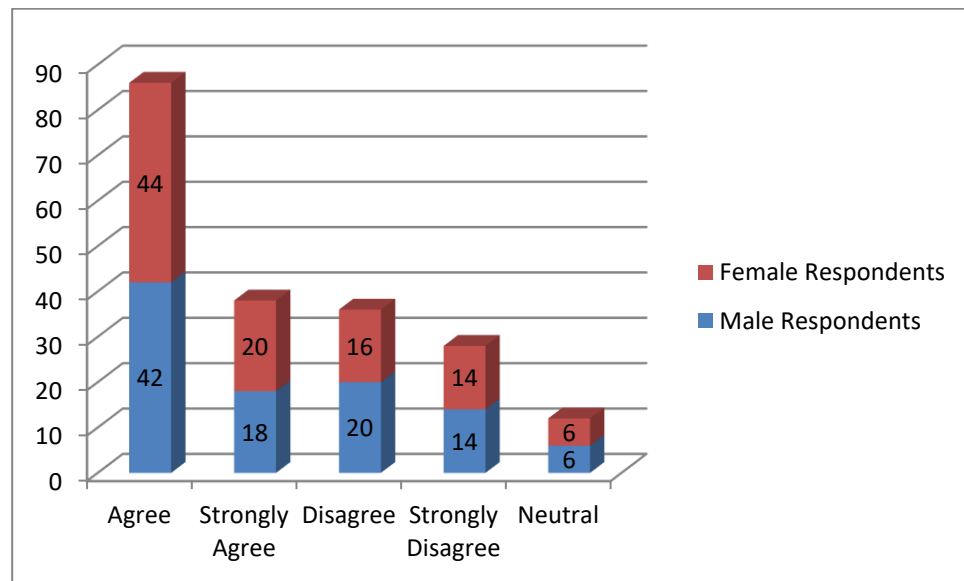


Table No. 7: Work Efficiency

S. No.	AI and big data are helpful in improving work efficiency?	Male		Female	
		N	%	N	%
1.	Agree	42	42	41	41
2.	Strongly Agree	18	18	29	29
3.	Disagree	20	20	15	15
4.	Strongly Disagree	12	12	9	9
5.	Neutral	8	8	6	6
	Total	100	100	100	100

42 reported that AI and big data are helpful in improving work efficiency while 18 and 20 were ‘strongly agree’ and ‘disagree’ with it respectively.

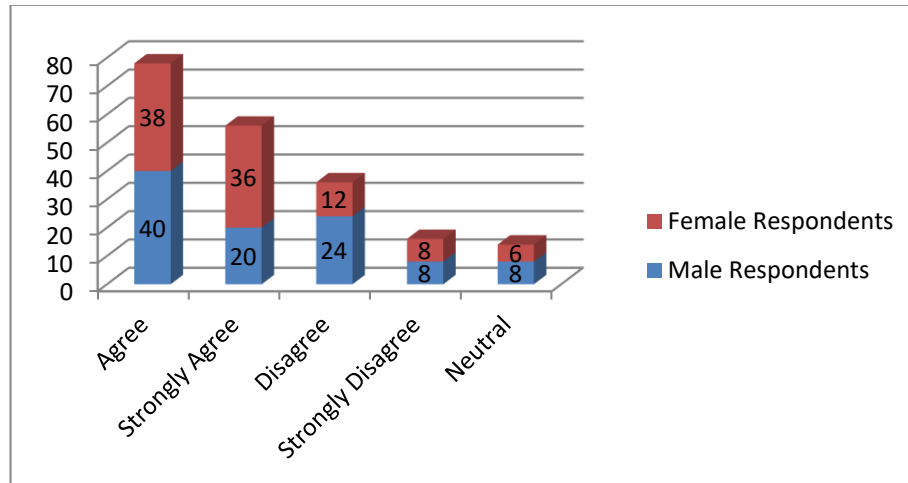


Table: 8: Regression analysis

	male	female
r^2	0.409	0.413
F	36.608*	38.912*
Constant	0.304	0.367
Customer Service	0.196*	0.006
Emp Performance	0.006	0.290*
PpePPerformance		
Work Efficiency	0.296*	0.198***

Table 5 shows that the customer service, employee performance and work efficiency variables explain 40.9% (male respondents) and 41.3% (female respondents) of the variation in employees' mental health.

4. Conclusion

The current study summarizes that the big data and AI play a major role in employee management. We used three variables i.e. customer service, employee performance, work efficiency and found that most of the respondents were agreed that these three parameters lead to improvement in overall performance of the management.

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