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Inclusion of Financial Technology and Artificial Intelligence in Management and Development of Human Resource in India

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Abstract: *Technological innovations are never ending and having its impact on almost all, in every aspect of life over the past few years. Financial inclusion is also a pressing issue with many policy implications.One of the most technological innovations which is capable of revolutionising the world, the most spoken, discussed and implemented in many fields is artificial intelligence. Artificial intelligence isa software which can think intelligently, similar to how an intelligent human think. Governments and central banks worldwide have come up with different programs to achieve maximum financial inclusion.Based on few studies AI is organized into four categories such as, it's a system that thinks like a human (Haugeland, 1985; Bellman, 1978), think rationally (Charnaik and McDermott, 1985; Winston, 1992), act like a human (Kurzweil, 1990; Rich and Knight, 1991) and act rationally (Schalkoff, 1990; Luger and Stubblefield, 1993). Integrating AI and Fintech in HR does not mean that they would completely take over the role of HR managers rather this will help the HR's to focus on more strategic work and less focus on repetitive and low-value add tasks. Financial inclusion, it issues, and challenges can be supported with FinTech. However, FinTech has its own policy implication, potential benefits and pitfalls. Fintech should be complemented by supporting infrastructure and a robust legal environment to be effective with proper regulatory policies by government and regulatory financial institutions. Alternatively, we find that widespread and uneven access to digital infrastructure can also have its own direct and indirect risks which can be detrimental and will start another chain of financial exclusion.*

Keywords*: Financial Inclusion, Fintech,Artificial Intelligence, Human Resource Management*

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I. Introduction:

Artificial Intelligence (AI) the most debated and predicted technological advancement has takencontrolover various functions in the field of science, engineering, business and HR. Today's generations are fortunate because of the advancement that's taking place in AI. A mundane task once done manually is now performed by machines, software and various other automated systems (North, 2016). AI has been referred toas computational intelligence, simulation of human intelligence, a machine with minds and many more. According to McCarthy (1956), AI is defined as, "the science and engineering of making intelligent machines" (as cited in McCarthy, 1959). It is also referred to as efforts taken to make a computer think, with minds and also make them think sense (Haugeland, 1985). AI is incorporated in many products and serviceslike automation in robotics that enables to perform a repetitive task which humans frequently perform. Similarly, machine learning helping a computer perform without any programming, computers that can capture and analyse visual information, process human language, design and manufacturing of robots and the most known on-going experiment which is self-driving cars with the help of image recognition, deep learning and computer vision (Rouse, 2017).

Financial Inclusion is an issue of much importance for countries across the globe. Globally, governments have been coming up with large projects to achieve maximum financial inclusion, which is very much influential in human and economic development. Financial inclusion intends to broaden financial product/services access to the poorer and disadvantaged sections of society. Bringing everyone under the formal financial and banking system and increasing its access has many more significant implications. Yet, inequality among different classes of people makes it an arduous task among governments to reach the bottom line, thereby hindering inclusive growth. Financial Inclusion is "the process of ensuring access to financial services and timely and adequate credit to vulnerable groups such as weaker sections and low- income groups at an affordable cost." (Committee on Financial Inclusion led by Rangarajan, 2008). Financial inclusion's purpose includes boosting inclusive growth by providing equal opportunities to each citizen to access formal financial

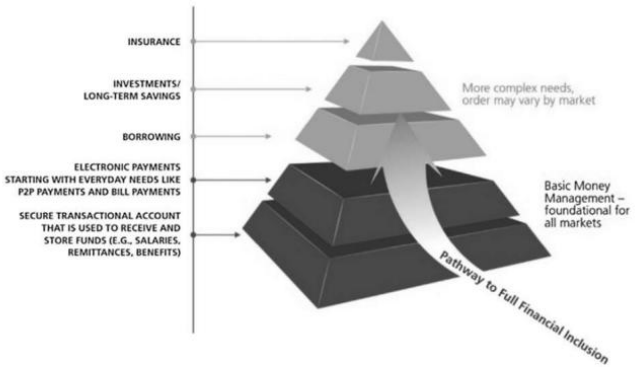
products on credit, savings, and investments. Policies and programs to foster financial inclusion have been introduced in India, leading to its significant increase. The recent successful program and initiative were Pradhan Mantri Jan Dhan Yojana (PMJDY) in 2015, which included a mass no-frills zero-balance accounts opening campaign by mainly nationalized banks in India. The idea behind PMJDY was to provide at least one formal bank account in a household, and the final numbers achieved were quite impressive. But this is not enough. Even though PMJDY aimed at one account at least per household, there is a need for at least one bank account per individual, making a significant difference in improving financial inclusion. Further, improved financial inclusion, especially in a country like India, is crucial as the benefits from the success achieved by India's secondary and tertiary sectors have not trickled down to the lower-class segments (Varghese and Viswanathan, 2018). In an emerging economy such as India, where a significant portion of the citizens are still from the socially and economically lower class and divided across caste, income inequality, and inadequate infrastructural facilities, FinTech can help to improve the present scenario. This is the crux of interest of this paper. FinTech or Financial technology in recent years emerged as a practical solution to challenges raised by financial exclusion. Fintech is providing financial services through technology assistance such as mobile phones and other technology channels. E-banking, M-banking, and payment apps are examples of FinTech.

II. Literature Review:

Sr. No.	By	Year	Description
1	McCarthy	1956	It is referred to as a thinking machine which includes cybernetics, automation theory and information processing (as cited in McCarthy, 1959)
2	Marr	2018	The development and innovation in AI have come a long way, and many organisations have incorporated it in their day to day business activities.
3	Rayome	2018	Around 61% of the businesses have already adoptedAI in their operations which is higher compared to 38%
4	Alriza	2018	Healthcare isone of the most important sectors is taking mucheffort to implement AI in few of the areas such as patient care: automated prescription, pregnancy management, personalised medications and care, medical imaging and diagnostic, drug discovery and other healthcare management
5	Bharadwaj	2018	Transportation comprises of both cargo and public transportation which is used bythegeneralpublic as well as by industries. Applying AI in transportation is a critical task about reliability and safety. Integration of Artificial Intelligence in Human Resource 5070 Published By: Blue Eyes Intelligence Engineering & Sciences Publication Retrieval Number: L33641081219/2019©BEIESP DOI: 10.35940/ijitee.L3364.129219 However many regions have tested automation in transportation with the help of AI such as autonomous buses, trucks and self-drivingcars

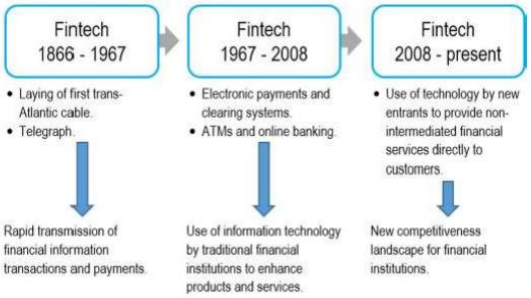
Sarma and Pais (2011) delved into the relationship between human development, as measured by Human Development Index (HDI) and Financial Inclusion. With the help of the "Index of Financial Inclusion" (IFI) proposed by Sarma (2008), the authors attempted to empirically estimate the linkage of financial inclusion to human development (as measured by human development index, HDI). HDI is a comprehensive measure of development used extensively by academicians, practitioners, and policymakers alike. On the other hand, IFI uses three parameters: first, accessibility, second, opportunity or availability, and third, usage or adoption of banking facilities and services. It is then derived as the number of facilities per 1000 and multiples populations. The paper derived the IFI values of 49 countries (both developed and emerging) and related them to the HDI values. The study found that HDI and IFI move along the same direction, implying that HDI and IFI are correlated and almost tandem. The study also found that countries in their samples with higher financial inclusion, such as Denmark, France, Austria, Spain, and Belgium, also have the highest HDI. There are also countries like Saudi Arabia where HDI is very high but financial inclusion is very low. Some countries in Turkey, Iran, and Namibia have a relatively sound financial inclusion than HDI. In general, the study concludes that countries doing exceptionally well in HDI do exceptionally well in IFI. The impoverished countries in HDI will have very low IFI. In addition, the study also finds that factors like GDP, adult illiteracy, infrastructural development, modernization, and income inequality are crucial for financial inclusion improvement. Kumar (2013) studied financial inclusion and its determinants with particular reference to India. The author starts with the intriguing question of whether financial inclusion can genuinely help the poor overcome their low life standard and financial condition. Citing the benchmark papers from the field, he argues that the efficiency of the financial system can have a long-run influence on the developmental and economic growth of a country. Also, a fully functional and efficient banking and financial system can accelerate capital formation and expansion. The author provides literature evidence for developing communication infrastructure and facilities like telephones and the internet on financial inclusion. Remittances are an essential component of capital formation and financial inclusion, which strong networks can only increase among the banks. Thus the interconnectedness among banks also leads to financial inclusion. The author finds that the main problem with financial inclusion is

the slant banking facilities coverage and monstrous income inequality. In this paper, the author empirically found that growth in account holdings between 1995-2008 is less than that of the population growth witnessed during the same period. The paper also reports a statistically compelling and positive association or impact of branch density/penetration on financial inclusion. Various measures and programs implemented by the RBI (Reserve Bank of India) are a proven success in general terms. Another interesting finding is that industrialization and employment opportunities also have a statistically significant, positive, and meaningful impact on financial inclusion. Arun and Kamath (2015), in their paper "Financial Inclusion: policies and practices," lead a discussion with practitioners and policymakers across the globe. They report the high cost of accessing banking and financial services as a policy issue. They also say that behavioral lethargy is observed towards new financial products disturbing emerging economies like India. One of the most successful interventions by governments across the globe is the disbursal of welfare money and other social benefit schemes through cards and bank accounts. It can be followed in India too. We were pretty successful in doing this during the welfare distribution in pandemic 2020. Like Maslow's need hierarchy theory, they also presented a pyramid model of the financial needs of the consumers.



Financial needs hierarchy (adapted from "MasterCard" Advisors 2014)

FinTech: The global financial crisis or subprime crisis of 2008 triggered the widespread diffusion of technology into finance and banking. It was an innovation from the more prominent players, including international banks, central banks, multinational corporations, and startups that focused on finance technology. The core idea was to satisfy and secure consumer needs by exploring the possibilities with the help of advancements in technology. Gomber et al. (2017) conducted an extensive review of FinTech and came up with some interesting findings. FinTech had its original roots in digital finance or electronic finance (e-finance), which refers to digitalizing the finance sector. It happened globally around the 2000s and before, characterized by magnetic taped credit-debit cards, chip-based cards, e-banking and trading websites, and the advent of ATMs. The DFI defines digital finance as "innovation for integrating distributed digital banking, mobile solutions, and delivery platforms, micro-finance, payment solutions, peer-to-peer lending, and crowd-funding." However, FinTech is an advanced version of digital finance. The term FinTech (written often as "FinTech", "Fin-Tech" or "Fintech") roots back to its origin from the words "finance or financial" combined with "technology" and is generally referred to as "connection of modern and, mainly, Internet-related technologies (e.g., cloud computing, mobile Internet) with established business activities of the financial services industry (e.g., money lending, transaction banking)" (Gomber et al., 2017). As compared to traditional financial service providers, FinTech provides competitive edge and advantages to customers and providers alike such as "security", "flexibility" and "efficiency" (Lee, 2015). FinTech can be seen as an innovation and based on the innovation classified by Christensen (1997) FinTech can be viewed as "sustaining" Fintech as well as "disruptive" Fintech. In the "sustaining Fintech", the existing traditional players try to safeguard their business by bringing in technological innovations to the products offered (SBI Yono, Axis Mobile etc.). When it comes to "disruptive Fintech", new players invest in technology diffusion into their products which potentially can replace traditional finance and banking. A prominent example is Google Pay, Paytm, and so on



Phases of Fintech (Consumers International 2017)

III. Results and Discussions:

Despite many articles on AI and its integration in HR, there are very few research-based articles. Hence there is a dearth of academic research conducted to unravel the AI integration in HR and its benefits. This study based on qualitative research contributes to the theory building of AI and HR. The findings of the study demonstrated the different HR functions were AI has been integrated and how it has made the function more effective and systematic. The study also highlights the various benefits employees', HRs and organisation have due to AI integration. The findings illustrate the reasons why AI must be integrated into HR functions by all companies.

IV. Conclusion:

The paper has outlined what financial inclusion is and the problems and issues associated with financial exclusion. It was then followed by FinTech and unveiling its potential to boost financial inclusion. The challenges faced by a country like India and how to overcome those challenges by FinTech were explored. FinTech alone will not be sufficient for increasing financial inclusion. Fintech should be complemented by supporting infrastructure and a robust legal environment to be effective. RBI's must direct with proper regulatory policies, the commercial banks (both public and private) to increase financial inclusion with the help of FinTech. Covid-19 has created a suitable environment for increasing financial inclusion in a digitalized manner. More attention is needed here, and the government should act immediately to achieve this golden goal towards maximum financial inclusion. At the same time, we should also manage the risks efficiently associated with FinTech. FinTech can also negatively affect financial inclusion, especially in tough times like that of a pandemic. Widespread and uneven access to digital infrastructure can be detrimental and will start another chain of financial exclusion. This new cycle of financial exclusion will again be hitting underprivileged sections like marginal farmers, the poor, women, and other disadvantaged people.

Idiosyncrasies related to machine learning and artificial intelligence coding errors can perpetuate the cycle of denying digital finance products and services to specific groups of people, leading to another form of financial exclusion. Another challenge is to keep in mind is the procyclical behaviour of Fintech players. The FinTech players can also behave in a procyclical manner which should be kept in mind. Now in this pandemic scenario, we may observe a boom, but after some time, after the end of the pandemic, we may not expect this trend to continue. It may lead to unhealthy lending practices or denial practices which will intensify the impact of slowdowns. Another risk is of the indirect nature that comes with FinTech. It is the impact on the business of traditional banks and MFI's. People's attitude towards FinTech and lack of trust in digital finance can negatively impact financial inclusion. Problems associated with customer satisfaction, proper complaint redressal mechanisms, adherence to rules and regulations, and user protection policies adopted by FinTech players will also impact the financial inclusion through FinTech. One should keep in mind all these direct and indirect risks associated with FinTech.

Without a doubt, AI is taking over many HR functions,but it does not mean that AI is taking over the HR jobs and replacing HRs, which isnot true. There isa lot of administration related work for HRs which is significant and repetitive such as job posting, sourcing, screening, scheduling meetings and interview, preparing timesheets, recording and verifying accounts and other expenses. Of course, if this can be fully automated through AI, it will hugely benefit the HRs by relieving them from these routine tasks and ensuring they dedicate more time in strategic thinking, creativity, relationship building, emotional intelligence and better problem handling. AI has a promising future in HR, however integrating it in HR has many challenges (Bersin, 2017) which a company has to overcome to get the full advantage of it. AI works like human only if quality data is collected and provided otherwise the results can be wrong, hence to get all people related data while integrating is a long process but it is only an initial challenge. Secondly, confidentially of the documents and policies shared by companies need to be ensured that they are not misused and proper measures to be taken to keep it confidential and secure. Lastly, we cannot claim that AI will able to perform the work with 100% efficiency but

to a great extent can eliminate human errors and bias. Despite these challenges, many companies are making efforts to integrate AI in HR because the advantages overshadow the challenges with AI integration in HR.

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