ANALYZING THE IMPACT OF AI ON EMPLOYEE PRODUCTIVITY IN TELECOMMUNICATION SECTOR OF PAKISTAN: MEDIATING ROLE OF RECRUITMENT AND TALENT MANAGEMENT PRACTICE

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ABSTRACT

Among the first to embrace artificial intelligence was Pakistan's telecoms industry. AI-powered technologies are already helping many businesses increase operational efficiency and customer service quality. This research looks at how employing artificial intelligence alters employee productivity by means of recruiting and management as a prism. Participating in the quantitative research were three hundred individuals from various Pakistani mobile providers. The data was examined and the proposed connections tested using descriptive statistics, correlation analysis, and regression analysis. The findings reveal a high positive correlation between implementing artificial intelligence and employee production, therefore indicating how revolutionary AI technology may be for increasing worker productivity. Furthermore, revealed was how acquiring and managing talent functioned as a go-between for the relationship between artificial intelligence application and staff production. This emphasizes how crucial it is to have well-considered human resource strategies if one wants to maximise artificial intelligence ambitions. Some issues were raised, however, including the fact that the research was cross-sectional, the self-reported data may be biassed, and the small sample size. Notwithstanding these challenges, the report effectively illustrates how artificial intelligence is being used and what this implies for HRM in Pakistan's telecom company. In the digital era, telecommunications firms must invest money on artificial intelligence technologies and better how they recruit and treat staff if they are to remain ahead of the competitors. This will enable the employees to do their tasks more effectively. Future research in this field should be focused on continuous studies, cross-industry comparisons, qualitative investigations, and ethical problem finding out underlines. Scholars filling up these knowledge gaps will enable telecoms firms to negotiate the challenges of using artificial intelligence and maximize its benefits in terms of output and general corporate performance.

Keywords: *AI Implementation, Employee productivity, Recruitment Process, Talent Management Practices, Telecommunication Sector, Pakistan*

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I am very happy to be presenting this article to you.

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CHAPTER 1: INTRODUCTION

1.1 RESEARCH BACKGROUND

There is no question that the global COVID-19 has sped up the use of artificial intelligence. Because of this, getting better at using AI is much more important for a company's ability to compete (Nayal et al., 2021). The main things that will shape the future are new clever technology and the huge increase in computer power (Dhamija and Bag, 2020). It was a turning point in the history of technology during the Industrial Revolution, when long-standing habits were completely changed, especially as people's physical skills got closer to their limits (Dabbous et al., 2022). In the same way, AI has the potential to change the social, economic, and intellectual spheres by creating more jobs or even moving them. AI could have a big impact on many areas, including finance, human resources, Telecommunication, shopping, supply chain, transportation, and the public sector (Paschen et al., 2019). The need to use AI has grown as globalisation has become more likely. Businesses have improved their operations, switched to digital platforms, and depended on digital media for business messaging (Goel et al., 2022). With the rise of online shopping, new measures have come up, which means that analytics need to be both very detailed and very hard on computers. One of the best things about using AI for marketing research is that it can learn, process, and divide up very large datasets. Dabbous et al. (2022) and Danyluk and Buck (2019) both found that AI learns and acts like humans.

When businesses use AI, the data that the AI generates can be used to their advantage. This could protect the company from any possible information leaks (Goel et al., 2022). Businesses that use AI in marketing would learn about the changing business environment, their own plans and goals, as well as consumers' likes and dislikes and how they act (Lauterbach, 2019). Both Kumar et al. (2020) and Saxena and Kumar (2020) say that the use of AI changes the work setting and the field of human resource management as a whole, especially when it comes to hiring, training, and managing employees. As new AI technologies that handle HR tasks become more popular, they may help the HR function solve some of its problems. This could lead to more efficiency with fewer resources (Nayal et al., 2021). Sometimes it's hard for managers to find suitable people. AI can help with some of that (Kiron, 2017; Wamba-Taguimdje et al., 2020; Kambur and Akar, 2021).

The general use of digital technologies made possible by AI will have a big impact on changes in the job market, such as the rise of customised work tasks and the fall of standard employment models (Lee and Chen, 2022). These days, the digitization of business methods is a big problem for all fields. Digital technology has a huge impact on how businesses make money and give value to their customers. Also, businesses can change their business methods to better use technology in their management, operations, strategy, and internal organisation (Di Francescomarino and Maggi, 2020). Many people believe in AI's potential, but there are some problems that make it hard for businesses that are just starting to use AI solutions to boost their output (Bag et al., 2020). There are several things that make it hard for managers and employees to use AI systems in the workplace (Chiarini et al., 2020; Amoako et al., 2021). There are some problems with the system, like bias, not trusting data collection and algorithms, and bigger issues with how decisions are made and having control over those decisions at work (Okunlaya et al., 2022). When companies want to use AI, they hav trouble. Yigitcanlar et al. (2020) say that new technologies like AI will change how work is organised and how things are done in the business. So, in order to avoid confrontation and protect themselves, companies need to teach their employees how to think critically and artistically (Soni, 2020).

It has also never been harder to hire the best people. As more tasks that used to be done by hand are automated, more difficult tasks are being done and many jobs are changing in structure. This is why HR offices today are having problems that have never been seen before (Kambur and Akar, 2021). AI technology could make it easier to find and hire the right people and keep them happy, loyal, and experienced on the job. Wamba-Taguimdje et al. (2020) say that AI technologies give companies a competitive edge by letting them use their employees and technology in new ways. The current study is aimed to explore the impact of AI implementation in telecommunication sector in Pakistan. Further it will also explore the mediating effect of Recruitment process and talent management practices on the employee’s productivity. For this purpose, the data will be collected from the employees of telecommunication sector of Pakistan then this study will explore the findings.

1.2 STATEMENT OF THE PROBLEM

Little research has been done on how artificial intelligence (AI) influences the output of Pakistan's swiftly expanding telecom company. Issues with personnel management and

recruiting prevent artificial intelligence from being completely integrated, therefore restricting its capacity to raise efficiency. This paper investigates how personnel recruiting and management influence the relationship between employing artificial intelligence at work and the output of Pakistani telecom company. To maximise AI, close skill gaps, and create a flexible workforce, one must find these middle grounders. Business executives and governments might want to know more about these procedures in order to maximise artificial intelligence and acquire long-term financial benefits.

1.3. AIMS AND OBJECTIVES OF THE STUDY

The aim of the study is to analyse the impact of AI on Employee Productivity in Telecommunication Sector of Pakistan where Recruitment and Talent Management Practices have mediating effects. The subobjectives of the study are as follows:

- To explore the Relation between AI implementation and employee's productivity.
- To identify the relation of AI implementation, Recruitment process and employee's productivity.
- To explore the relationship of AI implementation. Talent management practices and employee's productivity.

1.4. RESEARCH QUESTIONS

- Is AI implementation effects the employee's productivity?
- Is there any relation of AI implementation, Recruitment process and employee's productivity?
- How AI implementation and mediating effect of Talent management practices effects the employee's productivity.

1.5. SCOPE OF THE STUDY

The study gives us useful information about how AI affects worker output and how it can be combined with talent management and hiring methods to improve HR strategies and help Pakistan's economy grow. Using AI in recruitment makes things run more smoothly by making the connection between candidates and recruiters better and by giving recruiters better hard and soft skills (Vedapradha et al., 2019). In turn, this makes it easier to find the best-fit talent in an

unbiased way. The rest of the piece talks about the real-world benefits of using AI to make decisions about finding the best candidates for open jobs in a company.

1.6. LIMITATION OF THE STUDY

The research has some flaws. The research only examines Pakistan's telecom sector, hence the information may not be applicable for other sectors or locations. Second, given that the data originates from self-reported assessments of workers, it may be biassed or erroneous. Finally, some maybe crucial elements are omitted. These include staff training, executive assistance, and business culture. This is so because the research only considers the interaction between recruiting procedures and talent management. Fast development in artificial intelligence suggests that over time results can potentially become worthless. Finally, the instruments at hand might restrict the extent and depth of the inquiry.

1.7. OPERATIONAL DEFINITION OF TERMS

1. **Artificial Intelligence (AI)**

For "artificial intelligence," or AI, this is the point at which software and machines may act humanistic ally. Data analytics, machine learning, and natural language processing are among these tools that let the telecom company make better judgements and function more efficiently (Chandu et al., 2020).

2. **Employee Productivity**

Worker productivity is defined as output to input proportion. Performance criteria like speed, quality of work, and rate of project complete within a certain period of time are often used in the telecommunications sector to gauge this (Quraishi & Sadath, 2024).

3. **Telecommunication Sector**

Businesses and organizations providing many means of communication—including the phone, the internet, and data sharing—make up Pakistan's telecommunications sector. Companies running mobile networks, Internet service providers, and accompanying equipment fall under this category (Abdullah & Mohd, 2019).

4. Recruitment Practices

Recruitment strategies are the processes and tools businesses use to identify, interview, and land qualified candidates for available roles. This covers every aspect of recruiting someone, from adverts to interviews to last decisions (MNOUER Oumaima & Ayoub, 2023).

5. Talent Management Practices

"Talent management practices" are a set of organized methods for locating, developing, involving, and using highly qualified but low-key employees. Within this category are training, performance assessments, job development initiatives, and succession planning (Vaiman et al., 2019).

6. Mediating Role

What serves as a go-between in the link between applying artificial intelligence and workers' production is the part talent management and recruiting strategies play. It demonstrates how different approaches could either increase or diminish artificial intelligence's capacity for increased productivity (Dobrin & Morey, 2019).

CHAPTER 2: LITERATURE REVIEW

2.1 THEORETICAL BACKGROUND

There are many different ideas about what technological progress is, how it works, and how it affects society. Each idea is shaped by the time it happens in. In the fields of labour economics and labor sociology, technological progress is often seen as a real reason why people lose their jobs. However, real historical evidence from since the industrial revolution shows that technological progress does not cause widespread structural unemployment (Zhang, 2023). Neoclassical liberals like Adam Smith say that technological progress will not cause unemployment. Other experts, like Sismondi, disagree. In his book On Machinery, David Ricardo backed the "Luddite fear" that technological progress could make work more productive but also keep people from participating, which would make them poor. These days' power tools are turning workers "into a crippled creature." Spencer (2023) says that technology is more often used to boost job quality and make workers more productive than to cut hours and make jobs easier. Schröder's theory of innovation says that technical innovation comes from the balance of positive and negative feedback in a complicated system, as well as the coming together of opposites like "revolutionary" and "destructive." Even a small change in technology can have big effects. A lot like people with cognitive skills, "machines" now do more of a "worker" role. This is what makes the effect of AI on jobs different from other industrial changes (Boyd and Holton 2018). AI-related technologies are always getting better, and the manufacturing and marketing of AI are speeding up. The business is also busy looking into all the different areas where AI could be used. Since the first ideas about artificial intelligence were put forward at the 1956 Dartmouth Conference, people have talked nonstop about "AI replacing human labour" and "AI defeating humans." This dynamic has become even stronger since ChatGPT came out, and many people are afraid that technology will one day replace them in their job. Among the study that has been done on AI and how it affects the job market, three main things truly stand out:

For starters, AI can both create jobs and take them away from people. The clever manufacturing industry model set by AI technology could help create a high-quality way for people and machines to work together. In an educated society, better division of labour leads to more advanced economic forces and higher wage efficiency, both of which help the poorest people

in society. As technologies improve, businesses that use those technologies need to make more products, which means they need more workers. This circle keeps going because it makes production more efficient, lowers the prices of finished goods, and encourages people to buy things. This has been proven by several studies (Li et al. 2022). Many people think that robots could take away jobs from people because they have a narrow, selfish view of technology. Living with machines and people at the same time is not a zero-sum game. It makes more jobs and new tasks that people can work together on when the goal changes from "cooperation for all" to "cooperation between man and machine." Balsmeier and Woerter 2019 and Duan et al. 2023 say that this change reduces production limits and raises total factor output. Materialized AI can also improve production efficiency across businesses in the value and industrial chains, as well as between upstream and downstream firms, in a way that makes sense for its factor resource structure. As a whole, the market will become more efficient, which will push companies to make more and promote breeding. This will then lead to more creativity because there will be a greater need for people with a variety of skills (Liu et al. 2022). As a key part of the fourth industrial revolution, artificial intelligence (AI) will change the makeup of the workforce and have far-reaching effects on people's social standing. AI and robots make work more productive by taking over boring tasks. This makes workers' time and efforts more valuable. In 2021, Polak predicted that a machine-for-machine employment model will get rid of low-skilled jobs and create new, as-yet-unrealized types of work. One could even say that relationships between people and robots through digital technology and AI are making robots smarter and raising their wages (Yoon, 2023).

2.2 ARTIFICIAL INTELLIGENCE

We narrow down on a few meanings of AI taken from finance and other fields. "The theory and development of computer systems able to perform tasks normally requiring human intelligence" is how the Oxford English Dictionary defines artificial intelligence, according to the editors of The Economics of Artificial Intelligence: There are several ways to understand this word. There is an old joke among computer scientists about how AI sets limits on these machines.

If this way of thinking is correct, then the word "artificial intelligence" (AI) is a real thing whose meaning changes over time (Chandu et al., 2020). For example, early chess machines were considered AI, but now computers can easily beat human players, so AI no longer

includes them. On the other hand, the term "artificial intelligence" wasn't commonly used when earlier waves of computer technology hit the market. Since about 2012, the term has mostly been used to talk about machine learning, which is a mix of techniques from computer science and statistics, as a way to make predictions with the goal of finding useful uses that can make money. "AI system" refers to a machine-based system that can guess, suggest, or judge things that happen in real or virtual settings in order to meet a set of human-defined goals. AI systems are designed to work on their own in different ways.

The Assembly of the EU's Permanent Representatives passed the AI Act of the EU on February 2, 2018. It is an important set of laws for using AI in the business world. In the same way, it talks about AI systems. Proposal for a Regulation 2021/0106 software systems that are "based on the rules defined solely by natural persons to automatically carry out operations" and are less complicated. There are two of these programmed that are not AI. There are different levels of autonomy for artificial intelligence systems. This means that they can do some tasks or parts of tasks without any help from a person. Paragraph 6 of the Proposal for a Regulation 2021/0106 (COD), 2024 says that an AI system is adaptable after it has been put into use if it can learn on the job and change while it is working to reach the clear or hidden goals that were set for it. This claim is important when trying to figure out how to connect legal and economic understandings of AI systems, like the ones used by the worldwide System of National Accounts (SNA): Artificial intelligence systems can be used in more ways than just being built into a product (embedded) or just providing functionality to a product without being built in (non-embedded) (Laza & Karo Karo, 2023).

2.3 AI AND PRODUCTIVITY

There has been a lot of heated debate about how the current boom in AI and robots technology affects things like pay, growth, output, jobs, and inequality, all of which are connected to each other. Classical economic theories say that technological growth and new ideas decide how an economy grow (Aghion & Howitt, 2023). Many new ideas, like skill-biased technological change, say that advances in technology can lead to wage inequality by making more skilled workers needed compared to unskilled ones and job losses because of automation (Barbieri et al., 2020). But if technology makes more jobs available because it makes production more

efficient, the rise in productivity might make up for the job losses (Acemoglu and Restrepo, 2020).

Theories about the economy say that growth in technology will make people more productive. As Brynjolfsson (1993) calls it, the "Productivity Paradox" says that output has been low in rich countries since the 1970s, especially in areas that use technology a lot. Gordon (2018) says that efficiency at work is responsible for almost half of this slowdown. New advances in AI and its many uses have given people hope that the economy may be able to return from its long-term output decline. For example, AI can automatically combine different technologies, make predictions more accurate, and come up with new ideas (Bartelsman et al. 2019). All of these things could make people more productive. Even though AI technology has come a long way in the past few years, economic growth is still low. This might be because the AI revolution takes some time to spread through the economy, leading businesses to change how they work, workers to learn new skills, and new products that work with AI to come out (Brynjolfsson et al. 2019).

That being said, not all writers feel this way. Gordon (2018) says that the drop-in productivity can't be fixed and that people have unfair expectations about new technologies like the digital and AI revolutions because they aren't as revolutionary as the inventions that led to the United States' amazing productivity growth from the 1920s to the 1970s, such as the internal combustion engine and electric power. Jones (2009) used a very large dataset of inventors to show that the average age of the first creation tends to rise over time, as do skill and teamwork. He tells them that they need to keep learning if they want to move the territory forward. Bloom et al. (2020) say that it is getting harder to come up with new ideas because research output has dropped sharply across a wide range of industries, things, and businesses. Gries and Naudé (2018) look at it from a different angle and point out the possible effect of total demand. In particular, AI and technology lower wages and the share of work that women do. This leads to a wider income gap and fewer people gaining from progress, all of which could slow down growth and productivity.

There are different academic points of view at play, so strict actual study is needed to make things clear. This study makes a big difference because it's one of the first to look at how new AI and robots' technologies affect the effectiveness of businesses that make them. There hasn't

been a lot of clear factual data up until now, and most of it has been about how robots are used in general. As Raj and Seamans (2019) point out, it is very helpful to add to the actual data that is already out there on the development of artificial intelligence (AI), its use, and its effects at the business level. Robots may have helped 17 countries' average annual output grow by more than 15% between 1993 and 2007. This is according to Graetz and Michaels (2018), who used statistics on industrial robot transports at the national level. A study from 2016 by the European Commission of 3,000 factories in seven European countries found that industrial robots make workers more productive. The study looks at companies on an individual level, which is one of the few that has done so.

Alderucci et al. (2020) did a study similar to this one that looked at how AI affected different results by mixing patents linked to AI with firm-level microdata from the US Census Bureau from 1997 to 2016. Researchers found that when AI-inventing companies were compared to a control group that never patented AI, sales, jobs, and wage inequality within the companies all went up. By comparing the two groups of firms, this was seen. The study doesn't say that it has found direct effects since the first AI technology was made, and the results could be due to a similar cause that hasn't been seen. Thus, above discussion formulates below hypothesis.

H1: AI has positive relationship with Employees productivity.

2.4 AI AND RECRUITMENT PROCESS

Using AI in human resources is a popular trend among people who work in recruitment (Upadhyay and Khandelwal, 2018). One way that Russell (2020) describe information retrieval is as the process of gathering data by searching. Using data extraction techniques along with artificial intelligence can, for example, make it easier to hire new employees by automating the process of looking over current papers and gathering relevant data at the right time. That is, keep in mind that different people will approach AI with different goals when you work with it. Russell (2020) say that when choosing an AI method, one should think about whether they are interested in thought or action, and whether they want to act like people or follow an ideal standard. People's behaviors can be called logical to a certain point. There are, however, limits to what people can understand, so they can't always make the best decisions (Omohundro, 2015). This is because we don't have enough information to find the best possible solutions to all problems. When hiring people and making decisions, perception is always at work, even

when it's not paid attention to. The goal of artificial intelligence is to get rid of irrationality. So, it tries to get rid of any nonsense that is still there (Omohundro, 2015). Like most things, AI has pros and cons (Klima, 2021). People think that artificial intelligence will make people smarter in many ways in the future. AI today can remember, understand, spot trends, make choices, adapt to new situations, and learn from what it sees. With the help of AI, technology has learned new things and can now do great things. Artificial intelligence seems to have a bright future in technology. It will probably stay important at the same level or even become more important. When AI makes computers better than people, that could be a threat (Mozumder, 2018).

Artificial intelligence (AI) can be used in the hiring process to speed up the process of finding topics and useful knowledge. Perlis and Norvig (2005) say that information extraction is the process of getting facts and knowledge from a text. AI may also be able to figure out who people are by looking at written and spoken words using linguistic cues. Smarts, drive, and job success are all parts of a person's personality. AI can now figure out a candidate's personality and job interests just by reading their cover letter. You could ask people directly about their personality traits, but study by Mairesse et al. (2007) shows that watching people's personalities through text and voice would give you better results than the personality models they tried. Personality copying can also figure out feelings and moods by looking at the language used. Communication is one of the most important parts of the hiring process. Communication is an important part of hiring the right people. Natural language analysis is something that AI is very good at because of two main reasons. The first is to talk about ideas and facts with other people, and the second is to collect knowledge through writing texts (Perlis and Norvig, 2005). One meaning of communication is the exchange of information on purpose. Researchers Stuart and Norvig (2016) say that AI systems should learn how to talk and join chats, since humans are the most talkative species. While some people are naturally good at communicating, algorithms don't always need to be. It is possible to make programmes that talk and act like people. Barrett et al. (2017) says that AI can include ideas and beliefs that are important to people. Because it's hard to go through all the papers and applications, automated applicant sorting systems have also been thought of as a way to speed up the hiring process. With the help of AI, programmes for rating applicants may be made. AI systems learn how to score candidates by using training data from human interviewers. This data is then used to rate candidates. To make things easier for businesses, new tools for hiring have been created, such as job matching tools that help sort

through resumes based on the requirements of the jobs being offered. Computers can help match people with jobs in a number of ways that are based on learning and genetic algorithms (Montuschi et al., 2014).

Due to the huge number of job applications, which may even be too many for human resources offices to handle, electronic systems that score applicants have been used to speed up the hiring process. Most of the time, the human resources staff reads job applications by hand. As a result, AI-powered systems that sort applicants may make it easier for interviewers to make decisions. Using training data given by recruiters, AI hiring algorithms learn how to rate candidates, which makes it possible for the candidate ranking system to work. Chatbots, which were first suggested by Upadhyay and Khandelwal (2018), are AI-powered hiring helpers that talk to applicants in real time and in a personalized way through chat, email, or text message. There are ways to match people with jobs that use computers to make the process easier for businesses. Some examples of these kinds of methods are learning-based and algorithmic ways to sort resumes (Montuschi, et al., 2014). One interesting thing about AI-powered ranking systems is that job applicants should be able to learn about mental traits that are important for doing well on the job. But the interview process is a good time to notice these traits. If you search the web, you might find some general knowledge. Falićka et al. (2012) say that reading through a candidate's LinkedIn page or blog posts can help you figure out how they're feeling and what kind of personality they have. As a way to screen job candidates, online video interviews have become very popular very quickly. HireVue made software for video talking that is driven by AI. In this case, AI can figure out the candidate's body language by reading their facial movements and the way they speak. The software compares each interviewee to the company's best workers and then provides hiring managers with a list of the most suitable candidates (HireVue, 2018). The hotel chain Hilton has found that video interviews work really well. The most obvious result is the time saved during the hiring process. The hiring process at the Hilton Hotel went from taking 42 days to an average of just 5 days with the help of AI-powered video conversations.

Based on what has been said, it is clear that most study on AI in hiring has looked at how AI changes the hiring process. AI may help employers find the best candidates faster, save money, and improve the ranking of applicants, according to scientific study.

H2: Recruitment Process has mediating effect on relationship of AI implementation and Employees productivity.

2.5 DEFINITION OF TALENT MANAGEMENT AND TALENT EMPLOYEES

There are two sides to talent management: talent and management. Talent is the ability to stand out (mental or physical), and management is the ability to lead, direct, and deal with people (Narain et al., 2019; Jooss et al., 2022; Kafetzopoulos et al., 2022). Talent management may help a company better handle employee who are good at their jobs (Aljbour et al., 2021). One way to describe skill is the ability to see problems, use appropriate information, and come up with new ways to solve them (Luna-Arocas et al., 2020). One of the most common things that people look for in new employees is that they should be very talented. This will help them do a better job than the average worker. Intellectual curiosity, making goals, being able to do more than one thing at once, and a strong desire to pursue areas of real interest are all traits of talented workers (Mensah, 2015). Kafetzopoulos et al. (2022) say that talent management is a current way for businesses and other groups to get more work done. It brings together strategy planning and managing people. A study by Aljbour et al. (2021) says that this method might help improve the efficiency and usefulness of human resources, especially abilities. This could have a big effect on the business. According to King (2017), talent management is the key to finding and keeping highly skilled workers and giving them the tools, they need to do great work, advance professionally, and move up in the company. Seethalakshmi et al. (2020) used the word "talent management" to talk about how companies find suitable workers. The three main parts of talent management are finding talent, growing it, and keeping it (Seethalakshmi et al., 2020). Parts of a talent management plan that are important are keeping talent and helping them grow as individuals (Pandita and Ray, 2018). To improve the company's ability to keep key employees, a number of HRM projects must be implemented that are specifically designed to target those skills (Yildiz and Esmer, 2022). One way to do this is to give each employee a job development plan and run programmes that encourage them to move up in the company (Kafetzopoulos et al., 2022). As a direct result, getting employees more involved has a direct effect on the company's ability to keep good employees and do well in the long run.

2.6 IMPLEMENTATION OF ARTIFICIAL INTELLIGENCE IN AN ENTERPRISE

It's hard to add AI because the company's leaders and culture need to change, people need to learn new things, and business methods need to be changed (Eriksson et al., 2020). The use of technology to solve problems in different areas of human resource management (HRM), especially when it comes to hiring, training, developing employees, and managing the workforce (Kambur and Akar, 2021). this is called artificial intelligence (AI). This is why companies need to put money into their employees' professional growth and development (Eriksson et al., 2020). AI could help with almost every part of human resource management, from the initial screening of job candidates and talent selection to ongoing tasks like training and performance reviews (Mikalef and Gupta, 2021). AI-powered tools not only reorganise boring office work, but they also speed up the hiring process and give employers and applicants valuable information about each person (Di Francescomarino and Maggi, 2020). Management of human resources AI systems are the way of the future because they can do their jobs quickly and correctly, without bias or mistakes (Coulibaly et al., 2019). Artificial intelligence is mostly used by companies in the banking, telecoms, transportation, and high-tech fields. Based on SURS (2021), the most important delays are happening in agriculture, telecommunications, tourism, manufacturing, and processing and manufacturing in Slovenia. Human resources and management problems are the ones that businesses have the most trouble with. AI is not yet ready to be used by most companies. Businesses are short-staffed when it comes to employees with the right skills. It is generally thought that most businesses need expert people who know how to build and maintain technology. Most Slovenian companies say this is their biggest mistake (SURS, 2021). With the rise of artificial intelligence, two linked fields of knowledge and new ideas are needed. Things about people, methods, and groups are just as important as technology itself. Businesses want to hire people who can connect business and technology. Companies need to make it a priority to hire people who can understand AI and use it to its full potential. Companies should put a lot of money into teaching, educating, and reskilling their employees (Shaffer et al., 2020). This is the list of the most important backlogs for Slovenian businesses (SURS, 2020). Decisions made by leaders may be affected in both good and bad ways by the results of data analysis using artificial intelligence. AI programmes are made by people, so they may have the biases and preferences of the people who made them, whether they were aware of it or not. Tambe et al. (2019) and Paesano (2021) say that if AI systems are biassed when they are built, then the results they produce will also be biassed. AI might have

a problem if it is built to reinforce a systemic bias or if it leaves out important information. It's also possible that both human and AI decision-makers are biassed, since bias can show up during machine learning (Barn, 2020).

2.7 RECRUITMENT AND RETAINING A TALENTED EMPLOYEE

Artificial intelligence helps with the evaluation of application profiles by checking to see if the person has the right skills. Another useful contact tool is the ability to automatically email leads. Artistic intelligence helps companies get all the skills and knowledge they need, which speeds up the process of hiring people and makes it easier to choose the right ones (Vaishnavi and Achwani, 2018). Human resources professionals can use technology to speed up the hiring process. This gives them more time to work on key projects and other important parts of the business (Eubanks, 2018; Hogg, 2019). People who are skilled can see the big picture, make links, plan processes, deal with problems well, take the lead, believe in themselves, ask good questions, show understanding, and want the business to grow. Smart workers are very loyal to their companies because they feel like they know them (Anlesinya and Amponsah-Tawiah, 2020).

The first thing that needs to be done to get businesses to use AI more is to make sure they know how it can help them in the future (SURS, 2021). Along the same lines, AI is no longer just for big businesses. Small businesses can also use easy-to-find technology to make their work better (Wamba-Taguimdje et al., 2020). Yigitcanlar et al. (2020) say that companies need AI plans that cover everything. Building important structures helped the company do better, got employees more involved, and use AI more effectively.

H3: Talent Management Practices has mediating effect on Relationship of AI implementation and Employees Productivity.

2.8 APPROPRIATE TRAINING OF EMPLOYEES

Investments in AI should only be thought about after all important factors have been carefully considered, even if AI could help with jobs that take a lot of brain effort. When companies try to turn their employees' unspoken information into AI, they often run into problems (De Bruyn et al., 2020). Putting some business decisions in the hands of AI is hard because humans can't fully understand many situations on their own. However, AI would otherwise do everything in

a rational way. It's a different matter when knowledge is passed the other way. Teaching workers how to use the information made by AI is another big problem. This is especially true when you need to show the facts in a way that everyone can understand. People need to be trained often, just like AI does (De Bruyn et al., 2020). AI can also be used to simplify the processes of learning and growth. One-way AI is used in the workplace is to make personalized training plans for employees (Soltani et al., 2020). Personalising the course to meet the needs and hobbies of each student makes it easier and faster to learn new skills (Maity, 2019). Kashive et al. (2021) say that AI makes employees more interested in their work and helps them learn faster. AI also lets companies keep an eye on how their employees are doing and give them helpful feedback (Paesano, 2021). Wijayati et al. (2022) say that this will make workers feel more involved, driven, and supported as they learn new skills.

2.9 NEW ORGANIZATIONAL CULTURE

A company's ability to adapt to the future relies on how well its leaders encourage new ideas. Munir et al. (2022) say that business mindset is very important for building an AI-driven company. Companies that build a strong AI culture and make the workplace friendly and interesting will be able to adapt to change and keep all of their employees (Behl et al., 2021). The boss must be able to create an atmosphere that encourages these traits so that the company can grow and adapt to changing market conditions. Because of this, the future will be more fair, as shown by better ideas and things (Jarrahi et al., 2022).

Aside from that, robots that are driven by AI help companies communicate with their employees and create a welcoming workplace that values differences. This promotes unity by making the office easier to get to for everyone, not just those who work close to top management (Dabbous et al., 2022). It is very important to create a new company atmosphere that encourages taking risks, being creative, and coming up with new ideas. Because of this, business success gets better (Behl et al., 2021). Creating a creative mindset that uses AI is one way to make a business more competitive. Based on a poll of 2,197 managers around the world, 75% said that team unity, participation, and sharing of knowledge all went up (Ransbotham et al., 2021).

2.10 NEW WAYS OF LEADERSHIP

A big reason why AI projects don't catch on more often is that top management doesn't support them. Companies can't get the most out of their AI efforts unless the top leaders really understand the subject and are ready to make big changes (Mikalef and Gupta, 2021). For a company to get the most out of its AI adoption, a boss must be involved (Dhamija et al., 2021). Because of the rise of AI and other new technologies, the job of leaders has changed. Wijayati et al. (2022) say that good data analytics based on AI and machine learning can help people find new ways to use data in business. Executives will be able to focus less on numbers and figures and more on people's traits and actions thanks to AI (Chang, 2020). Because of this, the company's bottom line will get better thanks to more engaged and productive employees and more efficient processes (Kambur and Akar, 2021).

2.11 FORMING APPROPRIATE TEAMS

New ideas, ways of working, and views on production or things give companies chances to fight more effectively when they are put into action. Webber et al. (2019) say that teams can get their employees more involved by coming up with their own unique ways to solve problems and work more efficiently. AI has made it easier and faster for people to work together. The system might put things into groups based on how similar they are, which would make it easier for team members to focus on their own project duties. This leads to better relations at work and fewer misunderstandings (Arslan et al., 2021). Artificial intelligence can instantly sort and screen emails, messages, and papers that come in, which makes it easier for staff to work together. That way, the staff always knows what's going on. It may also recap conversations or certain topics. Saxena and Kumar (2020) say that this will give workers more time to focus on their work and less time to deal with interactions. AI is often used as a way for businesses with employees in different places or who work from home to talk to each other. This makes two-way contact easier and makes sure that everyone has the most up-to-date information on their projects and chores (Lesgold, 2019). If business leaders want their companies to do well, they need to make sure their employees can work well with each other (Webber et al., 2019).

2.12 INCREASING EMPLOYEE PRODUCTIVITY OF THE ENTERPRISE WITH ARTIFICIAL INTELLIGENCE

Right now, AI is very useful because it is being used to make systems that can-do hard jobs (Goel et al., 2022). New AI apps mark a huge step forward in technological progress (Lee and Chen, 2022). Cichosz et al. (2020) say that standard software is powerful, but it needs to be set up and configured in a lot of different ways before it can be used. AI systems are flexible and can finish jobs faster because they can learn new things quickly (Nayal et al., 2021). Today's market gives early users of AI systems a bigger edge over their competitors (Bag et al., 2020). If companies don't adopt and use AI in their work, they will have a hard time competing and succeeding in the market (Okunlaya et al., 2022). With this in mind, artificial intelligence has a positive effect on the success of organisations. Using AI in business is mostly done to raise the level of products while lowering the cost of making them. AI not only makes work easier by handling many boring tasks, but it also helps companies come up with creative solutions to new problems (Ribeiro et al., 2021). Another thing that Yigitcanlar et al. (2020) said was that AI techniques and methods make automatic process execution more accurate. One of the main ideas behind Industry 4.0 is automation, which makes business processes more efficient and opens up new market opportunities. Industry 4.0 is made up of a group of technologies that make operations even better (Malik et al., 2021; Mikalef and Gupta, 2021). When ideas and technologies like smart products, processes, and automation are brought together, they change the way the business's digital processes move (Ribeiro et al., 2021). Eriksson et al. (2020) and Yigitcanlar et al. (2020) found that companies can meet their goals and objectives faster, better, and more cheaply when they use new technology to improve and make processes easier. This makes the work of employees easier. Bag et al. (2020), Kambur and Akar (2021), and Goel et al. (2022) all say that businesses have problems when their employees get too used to the same routine and stop being able to think of new ideas. By taking over regular processes, artificial intelligence can make sure they are done exactly when they are supposed to be. So, the company gives its employees time to think of new ideas and be creative. Bag et al. (2020), Kambur and Akar (2021), and Goel et al. (2022) all say that AI has the ability to make departments and the whole company more efficient over time. Another problem is that working with huge amounts of data takes a lot of time and resources. A computer programme could easily do that, but people would have a hard time with it. Wang (2021), Bushweller (2020),

and Sari et al. (2020) all agree that progress in technology has greatly sped up working times and eliminated the need for mistakes.

The use of new technology to teach computers to think like humans is called artificial intelligence (AI) (Bohr and Memarzadeh 2020). Tursunbayeva and Renkema (2022) found that AI helps businesses be more effective while also making their processes more efficient. AI is being used more and more in every business in the world, from telecommunications (Bhatia, 2021) to manufacturing (Kia et al., 2021). Communication, like many other areas, is very important because it can affect people's lives and well-being (Wu et al. 2021). As the world's population continues to grow, it gets harder to provide enough information services and help people through artificial intelligence. There are many ways that AI has changed the work that telecom workers do (Tursunbayeva and Renkema 2022). Tong et al. (2021) go into more detail about how AI makes it possible to track how productive each employee is, which increases efficiency and effectiveness. AI makes employees more productive by collecting, processing, and using data about the activities and operations of telecommunications more efficiently. Also, AI could help managers figure out which skilled workers are the most useful (Zhou et al. 2021). AI not only makes it easier for doctors, staff, and workers to communicate and work more efficiently, but it also makes it easier to store a wide range of medical data. This technology not only makes performance reviews more accurate, but it also helps workers learn on their own and offers changes that can help them do a better job (Tong et al. 2021). AI helps companies link their employees' work to their long-term goals, which encourages them to do a better job.

2.13 REDUCING THE WORKLOAD OF EMPLOYEES WITH ARTIFICIAL INTELLIGENCE

AI changes how businesses work and what people do for a living, so HR, IT, and workers need to work together in a new way (Dhamija and Bag, 2020). Goel et al. (2022) and Lee and Chen (2022) say that AI will take over more and more boring routine tasks. This will free up human resources pros to work on strategy and ideas for the future. AI affects employee involvement by making it easier to keep an eye on staff from afar. With solutions powered by AI, employees can now work together more efficiently with coworkers who are far away. This makes it easier for workers (or team members) to talk to each other and work together, no matter where they

are (Agarwal et al., 2022). AI could help workers in many ways, such as making goals, getting quick feedback on their progress, and finding the right training classes to improve certain skills (Sari et al., 2020). With artificial intelligence, workers can get back about a third of the time they would have spent on boring, easy tasks. Because of this, both employee involvement and effectiveness go up (Wijayati et al., 2022). As Bushweller (2020) and Wang (2022) say, artificial intelligence (AI) could take over boring, repeated tasks, making workers' lives easier and increasing productivity. Researchers have found that AI may make work a lot less stressful.

2.14 THEORATICAL FRAMEWORK

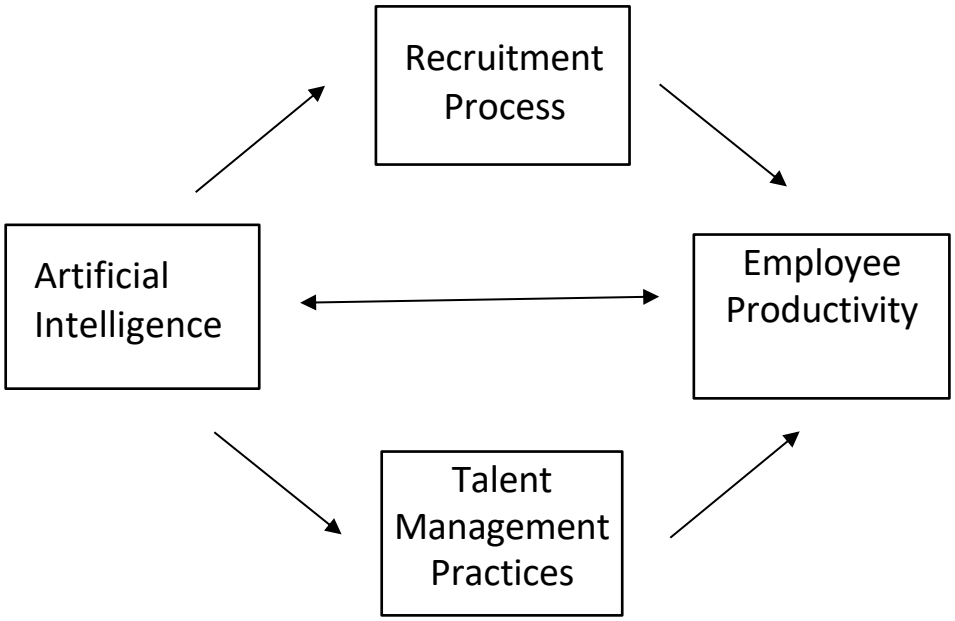

Figure 1: Research Model

Independent variable (IV): Implementation of AI

Mediating variables: Recruitment and talent management practices

Dependent variable (DV): Employee productivity

2.15 RESEARCH GAP

AI is being used more and more in Pakistan, but not much is known about how it affects the productivity of businesses when it comes to hiring (Zhang et al., 2021). This study looks at how artificial intelligence affects worker output, with a focus on how jobs are filled in Pakistan. Another goal is to let politicians, HR pros, and businesses know what will happen in the real world when AI is used in the hiring and selection processes.

CHAPTER 3: METHODOLOGY

3.1 INTRODUCTION

The portion on the approaches outlines the study strategy aimed at determining how artificial intelligence (AI) affects Pakistani telecom workers' production of their job. This chapter clarifies the objectives of the research, its methodology, and its results as well as their explanations. The nice thing about this section is that it searches the research for dependability, validity, and correctness. The method is presented in this chapter so that further research may investigate the intricate relationship among artificial intelligence acceptability, talent management, recruiting strategies, and employee performance. The coming out findings will be accurate and helpful. The portion on the approaches starts here. It compiles the data collecting techniques, sample design, research plan, and analytical processes (Batallán, 2019). This article offers the framework for a complete study of all methodological elements and emphasizes how crucial methodological rigor is for obtaining effective research findings. This section largely addresses how to handle the probable shortcomings, societal concerns, and actual restrictions accompanying research. By precisely outlining the scientific method, this section guarantees the validity of the research findings. This supports consistency and accountability. The approaches component should let artificial intelligence (AI) and employee productivity researchers in the area make their way through the intricate network of empirical research and come up with ideas that will influence practice, policy, and future studies.

3.2 RESEARCH DESIGN

This research used a quantitative poll approach to investigate how personnel efficiency in Pakistan's telecommunications company is affected by talent acquisition and management. People who work in Pakistani telecoms will be asked to complete a consistent questionnaire to provide data. The research will examine staff efficiency measures, talent management strategies, and AI use levels among other topics. The responses will be scored on a Likert scale, therefore ensuring consistent and simple comparison of the results. To acquire a good impression of the sector overall, we will employ persons from a variety of organisational levels within our target group. Data will be examined and the hypothesised correlations and influencing influences tested using statistical techniques like structural equation modelling and regression analysis. This approach provides a lot of information on how artificial intelligence

increases productivity in the telecoms sector by recruiting and managing workers by looking at the elements in a factual and planned perspective.

3.3 RESEARCH PHILOSOPHY

One may say that this research is grounded on positivism. Positivists believe that truth is something one may see and quantify. Consistent with this perspective, the research examines how artificial intelligence has altered production in Pakistan's telecom company using a logical and orderly methodology. The research aims to gather real-world data using quantitative techniques—particularly a poll—that may be statistically investigated to identify patterns, relationships, and direct interconnections. This philosophical perspective shares the belief of looking for dependable, objective, and typically beneficial results (Luck, 2019). This research focuses on being able to precisely assess the items under observation (AI adoption, recruiting and talent management strategies, and employee output) and grasp how the interactions among these factors may be interpreted. By providing facts-based information that might influence industry operations and regulation, positivist research seeks to enhance the usage of artificial intelligence (AI) in the telecommunications sector.

3.4 POPULATION OF THE STUDY

However, 128 million people in Pakistan have internet, and right present 248,200 individuals work for every telecom company there. The subjects of the research are Pakistani telecom company employees. This area covers those in running mobile networks, internet service providers, and businesses emphasizing data transport and telecommunications equipment. To acquire a whole picture of how artificial intelligence influences production, we will include employees from all levels and occupations in the organization, including those in charge of technical support, customer service, management, and administration. With consideration for many various job roles, the major objective of the research is to get many points of view on how talent management and recruiting procedures influence the relationship between artificial intelligence integration and employee production in the telecom sector as a whole.

3.5 SAMPLING TECHNIQUE AND SAMPLE SIZE

Participants for this research were chosen at random from a pool of Pakistani telecom employees. Convenience selecting is selecting a set of easily accessible and eager participants

for the research. This approach was selected as it is efficient and allows one to quickly and with few resources compile data. Our sample group for this project consisted of three hundred employees. Given the large number of participants, we can reasonably examine how talent management and recruiting influence worker production as well as how artificial intelligence does. The research decided to interview three hundred individuals from a broad spectrum of employment and roles within the sector to ensure that the results would be more relevant to the telecoms sector as whole. Structured questionnaires will be sent to staff members of many telecommunications firms in order to gather data. To ensure the group is fair and to gather as many answers as feasible, the surveys will be distributed both online and by mail (Rowley & Welsh, 2023).

3.6 RESEARCH INSTRUMENTS AND VALIDITY AND RELIABILITY TESTING

The relationship between artificial intelligence and employee production in Pakistan's telecom company was investigated using a structured questionnaire. The emphasis was on how recruiting policies and talent management influence this connection. The form is split into many sections so that thorough data collecting on all relevant variables is feasible. These groupings include information on demographics (such as gender, age, education, income, duration of employment at firm, and title), people management, recruiting, and performance at workplace. They also provide information about artificial intelligence (AI) applications. In every section, we ask participants to score the following Likert scale statements: Strongly agree is 1; agree is 2; so on.

Several actions are conducted to ensure the tool is authentic. To be accurate, we consulted professionals and extensively studied to make sure we addressed everything there was to know about artificial intelligence (AI), recruiting, personnel management, and efficiency. Factor analysis allows us to be sure the questionnaire questions really reflect the theoretical structures intended for measurement. We create construct validity here. We may test the poll with a small sample of individuals to discover any issues and ensure its accuracy.

Cronbach's Alpha, a metric of internal consistency, helps us ascertain the poll's dependability. With a Cronbach's Alpha value of 0.789, the 33 questions comprising the poll obtained in this research As long as the objects are correctly connected and regularly show the same fundamental structures, this degree of dependability is sufficient. The case handling review

ensures that every one of the three hundred responses is authentic and unblocked. This guarantees that the data is complete and fit for further investigation. This research shows that the questionnaire is a solid and dependable means of obtaining knowledge on how employment strategies and talent management use artificial intelligence (AI) to influence employee productivity in Pakistan's telecom company.

Table 1: Reliability Analysis of Questionnaire Item

Case Processing Summary

		N	%
Cases	Valid	300	100.0
	Excluded[a]	0	.0
	Total	300	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.789	33

3.7 DATA COLLECTION TECHNIQUES

This research largely employed a well-organized questionnaire survey to get a decent spectrum of data from Pakistani telecom companies. For topics including demographics, AI acceptability, recruiting procedures, managing staff, and job efficiency, there are Likert scale options ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The form is tested by a small group of individuals to ensure it is clear and practical; their comments help to enhance the questions. Our aim is to assemble three hundred qualified and ready participants for the research so that the industry's functions are sufficiently covered. Sending the form to them both online and physically attracts the most individuals to complete it. Gathering all the data takes many weeks, and those assigned to do it receive notes to ensure they never overlook. The filled-out reports are reviewed to ensure they are accurate and complete; any issues are addressed using accepted protocols. This will help us to ensure that our data is strong and enable us to examine how artificial intelligence influences production at business via the prism of talent

management and recruiting practices.

3.8 DATA ANALYSIS TECHNIQUE

Especially with regard to the function of talent management and recruiting procedures, we will investigate the structured questionnaire data using many statistical approaches to ascertain how artificial intelligence (AI) influences worker productivity in Pakistan's telecom sector. A summary of the data will be provided using descriptive analysis—which will highlight the demographic and response trends—to Reliability analysis—which tests the consistency of the form's questions with one another—will make use of Cronbach's Alpha. Pearson's association analysis will help us to find any relationships among staff production, hiring policies, and talent management techniques. Using multiple regression analysis, one will be able to see how well these many elements predict employee productivity. We will also investigate the functions that talent management and recruiting strategies play in the relationship between artificial intelligence and employee efficiency using mediation analysis with the PROCESS macro. These all-encompassing data analysis techniques will guarantee thorough review of all the acquired data. This will demonstrate via personnel recruiting and management how artificial intelligence influences production in Pakistan's telecom company.

3.9 LEGAL, ETHICAL AND SOCIAL CONSIDERATIONS

Investigating how artificial intelligence influences worker performance in Pakistan's telecom company requires researchers to consider several legal, ethical, and social considerations to maintain the validity and reliability of the study:

3.9.1 Authorization Knowing

Before they participate in the research, everyone who wishes to will be briefed about its goals, procedures, hazards, and rewards. Every individual will be asked to provide their complete permission on the understanding that their responses will be kept secret and they are not obliged to participate.

3.9.2 Security and privacy of data

It will be ensured that the participants' information remains private and not shared with anyone else. We will ensure that only the correct persons may access all of your personal data and that

it is stored securely. We will only use your information for research; we will not forward it to anybody else without your specific consent.

3.9.3 Follow the guidelines

The research will abide by ethical guidelines and data security rules established by institutional review boards or ethics committees. This is to ensure it complies with Pakistani laws and guidelines controlling research.

3.9.4 Halting harm

Nobody will be placed at risk or suffering without a valid cause. This implies ensuring that the poll questions are intelligent and free from intrusion as well as providing them with the resources to handle any mental suffering they may go through.

3.9.5 Treatment with equity

Nobody who attends the event will be subject to discrimination or bias based on who they are or what they believe. We shall do everything in our power to assemble a group of Pakistani telecom employees from all walks of life that fairly reflects the complete nation.

3.9.6 Being frank and open

All of the research will be conducted honestly and open-minded. No matter what the findings are, I will appropriately and honestly document the results and be honest about any conflicts of interest or prejudices I may have.

3.9.7 Advantageous for society

Examined in terms of how they could influence society, the outcomes of the research will The findings of the research might guide initiatives for improving the health and happiness of telecom employees, corporate practices, and government policies meant to provide everyone fair access to AI technology and influence the workforce development.

The research attempts to observe ethical norms, defend the rights of the subjects, and correctly progress knowledge in the fields of artificial intelligence and worker efficiency in Pakistan's telecommunications sector by considering these legal, moral, and social concerns.

CHAPTER 4: DATA ANALYSIS

4.1 DEMOGRAPHICS ANALYSIS

Table 2: Gender Analysis

Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	male	241	80.3	80.3	80.3
	female	59	19.7	19.7	100.0
	Total	300	100.0	100.0	

Gender analysis shows that men and women answered the question in somewhat different ways. The research clearly shows a prejudice against women as 59 women (19.7% of the sample) and 241 males (or 80.3% of the sample) answered the questionnaires. This disparity prompts me to question Pakistan's telecommunications company's woman count and diversity. Though it also illustrates that there might be obstacles to a more equal and open workplace, a group largely composed of males may reflect the gender mix of the people working in this industry. Eliminating gender disparities can help to ensure that research findings apply to all workers and support equality as well. Future studies should include more women to help to better grasp how things operate in the spheres of artificial intelligence acceptability and employee output. In order to provide every employee, regardless of gender, the opportunity to perform effectively and make a difference, telecommunications firms should likewise endeavour to assist gender diversity and equality in the workplace.

Table 3: Age Analysis

Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-29	128	42.7	42.7	42.7
	30-39	125	41.7	41.7	84.3
	40-49	41	13.7	13.7	98.0
	50-59	6	2.0	2.0	100.0
	Total	300	100.0	100.0	

The age distribution of the survey responders reveals how dispersed throughout many age groups they were. Of the three hundred participants in the research, forty-seven percent were young adults—that is, twenty–29 year olds. Close by, 41.7% of the respondents fall between the ages of 30 and 39. Just 13.7% of the total are those between the ages of forty and 49. Finally, only 2.0% of the individuals who responded fall between the ages of 50 and 59. When we sum up the figures, we can see that the group comprises people of various ages. This split makes it very evident that most users are younger—between the ages of 20 and 30. This might point to the kinds of employees Pakistan's telecommunications company employs. Knowing the age category the respondents fell into can help you to put study results in perspective. People of several ages may have diverse ideas, experiences, and viewpoints about how artificial intelligence should be used and how it influences employment. Using this knowledge, businesses and governments may create more transparent AI merger strategies that satisfy the demands of workers of all ages and degrees of expertise.

Table 4: Education Analysis

Education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Certificate	61	20.3	20.3	20.3
	Diploma	106	35.3	35.3	55.7
	Degree	133	44.3	44.3	100.0
	Total	300	100.0	100.0	

The education research of the study might help one to identify the respondents. The greatest proportion among the three hundred participants is 44.3%, who hold degrees. Twenty-3% of

individuals who responded have a certificate; thirty-3% have a diploma. Looking at the number overall, one finds that individuals from all school levels make up the sample. This distribution indicates that many of the respondents had degrees, therefore indicating a great degree of higher education qualification among them. Still, a lesser fraction of the sample consists of licencing holders. Understanding the kind of education the respondents to the survey had helps you to put study results in perspective. Regarding the use of artificial intelligence and how it influences employment, persons from all backgrounds might have various opinions, degrees of knowledge, and skill set. These findings might be used by telecommunications companies' policy makers and organisations to create particular training courses, teaching initiatives, and other actions meant to let employees improve at what they do.

Table 5: Income Analysis

Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20000-30000	80	26.7	26.7	26.7
	31000-40000	87	29.0	29.0	55.7
	41000-50000	89	29.7	29.7	85.3
	51000-60000	28	9.3	9.3	94.7
	61000 or Above	16	5.3	5.3	100.0
	Total	300	100.0	100.0	

The income analysis helps us to understand the financial situation of the Pakistani telecom company's employees. Of the three hundred participants, or around thirty-nine percent fall within the salary range of 31,000 to 40,000. Comprising 29.7% of the total, those whose income falls between 41,000 and 50,000 rubles only behind them. Moreover, 26.7% of the respondents claim their income falls between 20,000 and 30,000. Some individuals earn far more than these percentages: 5.3% make 61,000 rupees or more and 9.3% fall between 51,000 and 60,000 rupees. When one adds the percentages, one finds that individuals from every economic level comprise society. The broad spectrum of pay levels below indicates that individuals employed in the telecoms sector come from diverse origins and have varying financial levels. Finding probable difficulties and ensuring that solutions are catered to the requirements and concerns of employees from all income levels depend on an awareness of income distribution. These findings might let businesses create bonus packages, pay stubs, and incentive systems considering the various financial positions of their employees. This data might potentially be

used by legislators to advocate telecom industry policies supporting fair compensation and increased economic power for employees.

Table 6: Business Duration

Business_Duration

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 1 year	116	38.7	38.7	38.7
	1-4 year	104	34.7	34.7	73.3
	5-10 year	50	16.7	16.7	90.0
	Above 10 year	30	10.0	10.0	100.0
	Total	300	100.0	100.0	

Of the those that responded, three-eighths—38.7% of the total—have been in business for less than a year. 34.7% of the respondents, just behind them, had spent one to four years working in the sector. Apart from that, 10.0% of participants have been in company for more than ten years and 16.7% for five to ten years. Compiling all the percentages reveals that every group of business duration makes exactly 100% of the total data. Term duration distribution reveals varying degrees of rank and experience among telecommunications field workers. Knowing the size of companies is the only way to ensure that research findings are placed in the appropriate context and that solutions are developed to match the demands and issues of workers at many phases of their careers. This data may be used by companies to create mentorship programmes, efforts at succession planning, and job development initiatives supporting employees in many paths of mobility within the organisation. These findings might also be used by legislators to advocate legislation enabling experts in the telecom industry to pick up fresh skills and advance in their professions.

Table 7: Designation

Designation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Front line employee	214	71.3	71.3	71.3
	Middle-management	51	17.0	17.0	88.3
	Top management	35	11.7	11.7	100.0
	Total	300	100.0	100.0	

Working as a service worker in the telecom company, 71.3% of the group represents the most often chosen career among the respondents. Besides, 11.7% are at the very top and 17.0% are in middle management. You acquire 100% of the group if you sum all the percents for every designation category. The way employment and duties are distributed in telecommunications firms is shown in the following graphic. Most employees serve on the front lines. Knowing the distribution of titles helps one to put research findings in perspective and ensure that therapies are catered to the demands and issues of workers at various levels of an organisational structure. This data allows businesses to create performance management strategies, succession plans, and leadership development initiatives catered to employees with varying degrees of experience and career objectives. These findings may also be used by legislators to advocate legislation supporting the advancement of skills and employment growth for those employed in telecommunications.

4.2 DESCRIPTIVE ANALYSIS

Table 8: Descriptive Statistics of Demographic Variables

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Gender	300	1.00	2.00	1.1967	.39814
Age	300	1.00	4.00	1.7500	.76340
Education	300	1.00	3.00	2.2400	.76879
Income	300	1.00	5.00	2.3767	1.13095
Business_Duration	300	1.00	4.00	1.9800	.97781
Designation	300	1.00	3.00	1.4033	.68962
Valid N (listwise)	300				

Table 8's summary statistics provide the research group's demographic picture in its whole. With a mean gender value of 1.20 and little fluctuation in the distribution of the genders, the research reveals that majority of the responses are male. Having a mean age of 1.75, most of the responders fall between the ages of 20 and 29. The ages range greatly from one another. Though everyone has varying degrees of education, the mean score of 2.24 for education indicates that many of the respondents have a degree. With a mean of 2.38 ranging from 41,000 to 50,000 rupees, the incomes of the respondents vary greatly. Likewise, the mean figure of 1.98 indicates that most of the companies who answered this poll have been open for one to

four years, with considerable variances in the length of time they have been open. Let now consider the job title distribution. With a mean value of 1.40, most of the respondents are front-line employees; the distribution is very constant. These descriptive numbers help to clarify the group demography of the research. These thus provide a more whole picture of the features and qualities of the respondents as they pertain to Pakistan's telecom industry.

Table 9: Descriptive Statistics of AI implementation

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
AI1	300	1.00	5.00	3.9333	.84732
AI2	300	1.00	5.00	4.0300	.72861
AI3	300	1.00	5.00	3.9767	.79891
AI4	300	1.0	5.0	3.927	.8929
AI5	300	1.00	6.00	4.0567	.79302
Valid N (listwise)	300				

These figures help us to understand public opinions on the use of artificial intelligence by the corporation in certain spheres of industry. Most individuals are happy with how artificial intelligence is being used as the average score for every statement falls between 3.93 and 4.06. Standard deviations ranging from 0.73 to 0.89 make it abundantly evident that individuals have somewhat varied views about how to use artificial intelligence. These comprehensive data points taken together highlight how artificial intelligence is presently used in corporate operations, its performance, and areas of possible improvement needed.

Table 10: Descriptive Statistics of Recruitment

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
R1	300	1.00	6.00	4.0067	.81783
R2	300	1.00	6.00	3.9633	.91183
R3	300	1.00	5.00	3.9500	.95422
R4	300	1.00	5.00	3.8233	1.01763
R5	300	1.00	5.00	3.9267	.88915
R6	300	1.00	5.00	3.8900	.90219
R7	300	1.00	5.00	3.9967	.83605
Valid N (listwise)	300				

Lines R1–R7 clearly indicate how much the summary statistics reveal about people's opinions about corporate hiring practices. Based on the responses of three hundred individuals, all claims have a minimum score of one—the lowest number that may be assigned. With ratings ranging from 5 to 6.00, statements reveal the highest marks that respondents assigned for every employment strategy. The average results—which range from 3.82 to 4.01—show that most consumers view the company's personnel hiring practices favourably. Between 0.82 and 1.02, the standard deviation values reveal that people's rankings of each hiring strategy lacked complete consistency. This variation reveals the different points of view among the respondents on the effectiveness and degree of use of recruiting strategies. Though there are occasional variations, generally the mean outcomes are good. Most of the respondents so replied in line with their hiring process. These comprehensive statistics provide a whole picture of how successful and thoughtfully the recruiting strategies are regarded to be for business staff. Making strategic choices and guiding group development depend on this knowledge.

Table 11: Descriptive statistics of Employee productivity

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
EP1	300	1.00	5.00	4.0200	.82980
EP2	300	1.00	5.00	4.0467	.84471
EP3	300	1.00	33.00	4.1967	1.85908
EP4	300	1.00	44.00	4.1933	2.44593
EP5	300	1.00	5.00	4.0633	.85738
EP6	300	1.00	45.00	4.2233	2.50353
EP7	300	2.00	5.00	4.1700	.76357
EP8	300	2.00	5.00	4.0300	.79026
Valid N (listwise)	300				

The summary statistics reveal what individuals felt about how artificial intelligence might influence worker productivity; the responses to lines EP1–EP8 reflect these ideas. With a sample size of three hundred respondents, the lowest possible score—that is, the minimum score for every claim—is one. The fact that the highest scores provided for various assertions extend from 5 to 45 shows the great variety of ratings given for every element of employee output. Mean ratings between 4.03 and 4.22 reflect the positive view on how artificial intelligence affects employee performance. Still, there are some variations in the figures

individuals provided for every division of employee production. The values of the standard deviations are between 0.76 and 2.50. This diversity reveals that respondents disagreed on how artificial intelligence may raise production. Though there is significant fluctuation, the generally high mean ratings indicate that artificial intelligence is seen as improving many spheres of staff production inside the organisation. These comprehensive statistics illustrate how valuable individuals believe AI-driven programmes are for increasing staff efficiency, therefore they may support strategic choices meant to increase the performance of a company.

Table 12: Descriptive statistics of Talent Management

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
TM1	300	2.00	5.00	4.0500	.82650
TM2	300	2.00	43.00	4.1167	2.41852
TM3	300	1.00	55.00	4.1533	3.06504
TM4	300	2.00	5.00	4.0567	.79723
TM5	300	1.00	5.00	4.0433	.81875
TM6	300	1.00	5.00	4.0600	.83189
TM7	300	1.00	5.00	3.9900	.90145
TM8	300	2.00	5.00	4.0800	.77174
Valid N (listwise)	300				

Table 12 presents a synopsis of the responses to TM1–TM8 on talent management strategies. This provides excellent, useful information. The lowest ratings provided by respondents for each statement fall between 1.00 and 2.00; the greatest ratings given for every area of talent management fall between 5.00 and 55.00. At least three hundred people answered to produce the ratings. With mean ratings ranging from 4.05 to 4.16, most of the respondents felt the organisation handled its personnel quite well. People enjoy these methods, according to the survey findings, since they believe they increase workers' efficiency, motivation, and productivity—qualities of which naturally translate into improved corporate outcomes. Still, individuals see how well and how much talent management techniques apply differently. The standard deviation values—which span about 0.77 to 3.07—show this as well. Although some evaluations are unfavourable, most of them are positive, indicating that courses in talent management are seen as valuable and necessary for keeping the workplace peaceful and attaining corporate success. These thorough statistics might enable businesses to examine and

enhance their people management strategies so that they better satisfy the demands of their staff and enable the business to attain its objectives.

4.3 CORRELATION ANALYSIS

Correlations

		AI	Recruitment	Talent management	Employee productivity
AI	Pearson Correlation	1	.623**	.426**	.372**
	Sig. (2-tailed)		.000	.000	.000
	N	300	300	300	300
Recruitment	Pearson Correlation	.623**	1	.508**	.412**
	Sig. (2-tailed)	.000		.000	.000
	N	300	300	300	300
Talent_management	Pearson Correlation	.426**	.508**	1	.343**
	Sig. (2-tailed)	.000	.000		.000
	N	300	300	300	300
Employee_productivity	Pearson Correlation	.372**	.412**	.343**	1
	Sig. (2-tailed)	.000	.000	.000	
	N	300	300	300	300

**. Correlation is significant at the 0.01 level (2-tailed).

The association analysis revealed that the following factors had significant correlations: installing artificial intelligence, recruiting strategies, talent management, and staff efficiency. Adoption of artificial intelligence ($r = 0.620$, $p = 0.01$), talent management ($r = 0.426$, $p = 0.01$), employee output ($r = 0.372$, $p = 0.01$) are strongly correlated. This indicates that overall corporate efficiency, recruiting, management of staff, and the use of AI are linked in some way. Furthermore, the methods you choose employees have a substantial positive correlation with staff production ($r = 0.424$, $p < 0.01$) and talent management ($r = 0.508$, $p < 0.01$). strong recruiting policies also translate into strong talent management, and the employees of companies with such practices are more competent.

Companies that invest heavily in talent management are more likely to have motivated staff members. This is so because more effective workers are very correlated with talent management ($r = 0.343$, $p < 0.01$). These numbers overall reveal the links among the following elements: firm production, staff management quality, hiring practices, and speedy adoption of

artificial intelligence. Companies which deploy AI effectively, choose the finest candidates, and give talent management top priority should see their staff members working harder. These results may guide group efforts aiming at increasing general performance and competitiveness as well as strategic decisions.

4.4 REGRESSION ANALYSIS

Mediation Regression analysis of Recruitment between the implementation of AI and employee productivity.

Process Macro

```
Model = 4
    Y = Employee
    X = AI
    M = Recruitm

 Sample size
         300

**************************************************************************
Outcome: Recruitm

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .6234      .3887      .1465   189.4693     1.0000   298.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.5262      .1754     8.6987      .0000     1.1809     1.8714
AI            .6012      .0437    13.7648      .0000      .5153      .6872

**************************************************************************
Outcome: Employee

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .4373      .1912      .3562    35.1057     2.0000   297.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.5757      .3064     5.1427      .0000      .9727     2.1786
Recruitm      .3975      .0903     4.3998      .0000      .2197      .5753
AI            .2468      .0871     2.8326      .0049      .0753      .4182
```

The regression analysis examining how recruiting practices impacted the connection between artificial intelligence usage and worker production produced statistically significant outcomes. With R-sq = 0.3887, the model report for the end variable "Recruitment," states that the regression model explains 38.87% of the variance in the hiring process. With an R2 score for

artificial intelligence implementation (X) of 0.6012 and a standard error of 0.0437 With a p value of 0.0001, this indicates a quite high positive correlation between AI application and recruiting strategies. Regarding the end variable, "Employee Productivity," the regression model can account for 19.12% of the variation (R-sq = 0.1912). The approaches used for recruiting (M), the application of artificial intelligence (X), and the effectiveness of personnel demonstrate a favourable connection according the regression analysis. Good recruiting policies increase employee productivity, according to results of the employment practices coefficient, 0.3975 ($p < 0.0001$). Furthermore, the application of artificial intelligence has a coefficient of 0.2468 ($p = 0.0049$), indicating that staff efficiency increases in line with greater AI deployment.

According to the mediation hypothesis, employment policies weaken the connection between efficiency at work and applying artificial intelligence. These findings reinforce that notion. Good recruiting policies help one maximise the impact of artificial intelligence on worker performance. This is so because indirectly via the way positions are filled, the use of artificial intelligence significantly influences the level of productivity of workers.

Mediation Regression analysis of talent management practices between the implementation of AI and employee productivity.

```
Model = 4
    Y = Employee
    X = AI
    M = Talent_m

 Sample size
         300

**************************************************************************
Outcome: Talent_m

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      .4260      .1814      .3992    66.0576     1.0000   298.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.7335      .2896     5.9853      .0000     1.1635     2.3035
AI            .5861      .0721     8.1276      .0000      .4442      .7280

**************************************************************************
Outcome: Employee

Model Summary
```

```
          R       R-sq        MSE          F        df1        df2          p
      .4243      .1800      .3611    32.6084     2.0000   297.0000      .0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     1.8117      .2916     6.2132      .0000     1.2378     2.3855
Talent_m      .2138      .0551     3.8801      .0001      .1054      .3222
AI            .3605      .0758     4.7550      .0000      .2113      .5097

****************** DIRECT AND INDIRECT EFFECTS *************************

Direct effect of X on Y
     Effect         SE          t          p       LLCI       ULCI
      .3605      .0758     4.7550      .0000      .2113      .5097

Indirect effect of X on  Y
            Effect    Boot SE   BootLLCI   BootULCI
Talent_m     .1253      .0640      .0572      .2994
```

Statistically significant findings emerged from a mediation regression analysis examining how talent management strategies affected the connection between artificial intelligence utilisation and worker production. Showed under "Talent Management Practices," the findings of the regression model—which has R-sq = 0.1814—explain 18.14 percent of the variations in this outcome variable. With a standard error of 0.0721 and a regression coefficient of 0.5861, the association between talent management strategies and artificial intelligence adoption is really strong (p With R-sq = 0.1800 the regression model can explain 18% of the variations in the outcome variable "Employee Productivity." According to the model findings, staff productivity is rather improved by means of artificial intelligence (X) and talent management strategies (M.). Good talent management techniques clearly increase employee productivity as the coefficient for these activities is 0.2138 ($p < 0.0001$). The AI implementation coefficient of 0.3605 ($p < 0.0001$) indicates yet another result: greater AI implementation is linked with improved staff productivity.

The research considers direct as well as indirect consequences. The 0.3605 ($p < 0.0001$) direct impact shows a high positive direct relationship between deploying AI and staff efficiency (Y). We estimate that the indirect impact of artificial intelligence on staff efficiency using talent management techniques (M) with a 95% confidence level between 0.0572 and 0.2994 and a bootstrapped standard error of 0.0640. This suggests that indirectly by altering how people are handled, utilising artificial intelligence (AI) significantly influences production. One may argue that talent management strategies help to moderate the connection between implementing artificial intelligence and employee productivity, therefore supporting the

mediation concept. The main secondary consequence demonstrates the need of talent management techniques for optimizing the impact of artificial intelligence on staff performance within the organization.

4.5 FINDINGS FROM LITERATURE

The research on how artificial intelligence influences Pakistani telecom workers' production reveals how technologically advanced we are able to modify the planet. Using artificial intelligence in this context is supposed to increase customer service, lower expenses, and raise output. Studies reveal that artificial intelligence-driven automation might enhance network administration, service delivery, and operational simplicity as well as network security. All of these factors encourage increased effort in completion of tasks. Data driven by artificial intelligence also provide us valuable insights on consumer preferences and behaviour, which enables extremely focused advertising and tailored services. Still, the AI depends critically on efficient methods of personnel recruiting and management to function as desired. Hiring people skilled in artificial intelligence, data analysis, and computing should be a key objective for any company. Using artificial intelligence to screen and evaluate candidates is one inventive approach to find and retain the finest staff members. People management techniques also assist staff members pick up AI-related abilities and foster a development mindset. If staff members have access to training courses, coaching programmes, and possibilities to grow in their professions, they could be readier to use artificial intelligence. Hiring and managing staff members may affect the link between using artificial intelligence and staff effectiveness. Including these techniques into their AI strategies can help businesses maximise AI technology and see long-term increases in production. Promoting an attitude of attempting new things and generating fresh ideas can help one remain current in Pakistan's telecom company and maximise artificial intelligence (AI) at work.

CHAPTER 5: SUMMARY OF FINDINGS, CONCLUSION, AND RECOMMENDATIONS

5.1 INTRODUCTION

We placed a lot of effort on this final section, which provides a comprehensive overview of the findings, analyses the data, and offers advice to those employed in Pakistan's telecom company. This thesis examined in the framework of Pakistan's telecom sector how artificial intelligence adoption, recruiting policies, talent management, and employee output interact in convoluted ways. Investigating this intricate network of impacts allowed us to clarify the game-changing possibilities of artificial intelligence and the critical part recruiting and management of people play in using these abilities for the benefit of companies. In this concluding section, we will review the key findings of our research, discuss what they imply, and provide you some practical advice to enable you to negotiate Pakistan's ever evolving telecommunications sector and make wise choices.

5.2 SUMMARY OF FINDINGS

With an eye on how talent management and recruiting practices influence these developments, this thesis delves deeply into how artificial intelligence influences worker output in Pakistan's telecom sector. Book studies, quantitative surveys, and regression analysis have helped to produce some really significant results. Since they used artificial intelligence, Pakistani telecoms firms have observed significant increase in workforce efficiency. Through automation, predictive analytics, and more individualized client connections, artificial intelligence is most clearly increasing people's productivity. According to the research, corporate processes accelerate, choices are taken faster, and consumers are happier when artificial intelligence is used.

Second, how easily companies can incorporate artificial intelligence depends much on the personnel they choose to employ. Smart recruiting techniques help you to identify candidates with the necessary AI technological expertise. AI may be used to screen and assess job candidates one approach to do this is Strong recruiting practices are essential for companies to identify and retain the type of elite personnel capable of advancing artificial intelligence initiatives.

Third, successful learning of how to use artificial intelligence depends much on talent management strategies. Giving employees continuous training, coaching programmes, and

chances for career promotion will help them to perform in AI-driven environments. Good talent management allows staff members to fully use artificial intelligence technologies, hence increasing output.

Research looking at the past have also revealed how recruiting practices and talent management might alter the relationship between adopting AI at business and output. To maximise AI and provide long-lasting efficiency advantages, it is therefore rather crucial to align recruiting and management strategies with AI initiatives in the firm. According to the idea, artificial intelligence (AI) may transform Pakistan's telecom industry. Talent management and recruiting practices are very crucial if one wants to grab this opportunity. Pakistani telecom businesses might be able to expand and compete in the digital era if they embrace artificial intelligence technologies and use efficient recruiting and management strategies.

5.1 CONCLUSION

Finally, with an eye towards how talent management and recruiting have influenced this transformation, this thesis has offered a whole look at how artificial intelligence has altered production in Pakistan's telecom company. Thanks to quantitative polling, regression analysis, and book studies, we now better appreciate the incredible things artificial intelligence can do as well as the significance of effective HRM practices in enabling these things to occur. According to the results of this thesis, workers of Pakistani telecommunications firms working with artificial intelligence technologies worked much harder and accomplished more. Among the key elements driving higher output are automation driven by artificial intelligence, predictive analytics, and tailored consumer interactions. These have made consumers happy, assisted in improved decision-making, and simplified tasks.

Furthermore, research have shown that companies aiming at using artificial intelligence would find great benefit from strategies for recruiting and managing employees. Effective recruiting strategies that screen and assess candidates using artificial intelligence can help you to identify candidates with the correct understanding in AI technology. Likewise, effective people management techniques—such as continuous training and development courses—are essential to equip employees to perform successfully in companies using artificial intelligence.

Regression studies have shown the role that recruiting policies and talent management play as intermediaries between using artificial intelligence at business and completing more tasks. These

results indicate that companies must match their AI initiatives with their recruiting and management plans to maximize the benefits of AI application and long-term output increases. These results might lead Pakistani mobile carriers to get many recommendations. Companies should first give much thought to how best to use and embrace artificial intelligence technologies and commit a lot of funds to these fields. Second, if businesses want to locate and retain personnel who are excellent with artificial intelligence, they must modify their hiring practices. Last but not least, talent management strategies have to be implemented to ensure staff members are adept in using artificial intelligence technology.

At last, if Pakistani businesses use artificial intelligence and effective HRM, they may be able to flourish in the digital era. Future research and development in this fast-paced sector may expand on the special insights offered in this thesis, which looks at the multifaceted processes of artificial intelligence use and how it influences worker productivity.

5.4 RECOMMENDATIONS

Some suggestions for how Pakistan's telecom company may operate more competitively and effectively abound at the conclusion of the research. Companies should first give artificial intelligence technology great importance so they may utilize data to improve the client experience and manage jobs. Second, with an eye towards locating and maintaining the finest AI professionals via inventive screening techniques and attractive pay rates, the recruiting process should be improved. Strong people management practices are thus equally crucial so that workers may use artificial intelligence properly. These rules need to call for continuous courses of growth and instruction. Along with keeping up with new technologies, encouraging innovation, monitoring the advancement of AI projects, and pushing staff members to cooperate and exchange information, one should consider the moral and societal consequences of employing artificial intelligence. Pakistani telecom businesses might be able to increase output, perform effectively in the digital sphere, and negotiate the challenging process of implementing artificial intelligence by using these ideas.

5.1 LIMITATIONS

Examining the results of this research, which indicate how artificial intelligence has altered productivity in Pakistan's telecom company, one should keep several things in perspective. First,

because the sample size—300 people—was so small and the technique—convenience sampling—was used—the findings may not be helpful for a bigger population. Second, if utilised, self-reported data can exhibit social choice bias. Since it was a cross-sectional research and the findings could only be relevant for the Pakistani telecom company, we are not sure exactly what led what. Poll instruments also have constraints, even if individuals endeavour to guarantee accuracy and dependability of measurements. Though they are not explicitly considered, changes in legislation and the general status of the economy might have an impact on the outcomes. Though we did our utmost to address ethical issues, fresh ones may have emerged. Though it has some restrictions, this research clarifies how artificial intelligence may increase employee productivity. It also prepares the ground for future more in-depth comprehensive handling of these challenges study on this crucial topic.

5.2 THEORETICAL AND MANAGERIAL IMPLICATIONS

Adding AI to a business may make it more efficient, grow faster, and be more competitive, but it needs to completely change how it does things. Using artificial intelligence technology, businesses can take advantage of new opportunities, become more efficient, create new business models, encourage growth and innovation, and come up with new ways to sell themselves. The objective of our multifaceted talent management approach is to improve business success and employee involvement by incorporating AI into HR tasks. This study model shows some important things that are needed to run a business well in today's constantly changing business world. So, when using AI to improve business success and staff involvement, the following things must be thought about, no matter how big or small the company is: Incorporating AI into HR processes helped find and keep great employees. It also helped build strong teams, create a good work environment, support leadership, and reduce staff tasks. For the economic and social changes that the rise of digital technologies has brought about, there needs to be an environment that encourages digital business and the right rules. Businesses, especially small and medium-sized ones, need to be able to get money more easily so they can invest in new technologies, digital change, AI, knowledge, and skills. This will make them more competitive in Slovenia and around the world.

5.7 FUTURE RESEARCH

More in-depth research on how to use artificial intelligence, HR rules, and how they impact

production in Pakistan's telecom company might be planned. Comparative studies of several sectors and nations might help to clarify the elements influencing the outcomes. The best approach to find out long-term performance of artificial intelligence initiatives is by means of longitudinal research. Qualitative research might record staff opinions and feelings on HR rules and technology to help one acquire a better understanding. Investigating the moral consequences of employing artificial intelligence, improving analytic techniques so they may be used more widely, and determining which aspects of a business influence outcomes are some crucial topics for further research. Researching how artificial intelligence influences the design of employment, the composition of the workforce, and the use of technologies to make people more informed about AI and prepare companies ready for it will help evidence-based HR policies also benefit from. Future studies in these areas could help researchers better understand how artificial intelligence is being used and how it influences Pakistani telecom sector personnel production. these will enable us to better address these challenging circumstances.

REFLECTION

The investigation that resulted in this thesis was conducted in various phases: planning, gathering the data, and assessing it. Along this journey, numerous opportunities for development and improvement were presented as well as addressed issues and lessons gained. Considering these factors closely enables one to appreciate the overall value of the research. Investigating the link between artificial intelligence (AI) and worker efficiency in Pakistan's telecom company was the major aim of this thesis. More precisely, it examined how recruiting procedures and talent management influenced this link. These objectives were generally fulfilled, according to the gathered data and assessments; they responded satisfactorily to the research questions.

The findings of the research were somewhat similar to what was anticipated at beginning. The results supported the theory that artificial intelligence will increase worker productivity—what was anticipated. Nevertheless, the findings were improved because of the studies on how personnel recruiting and management impacted this connection. This resulted in a degree of advanced understanding beyond original expectations.

The research was orderly, and the idea and techniques were developed on a comprehensive reading of the body of current work. The data collecting component—an orderly poll—went smoothly even if there were some technological issues. Working with many phone companies and receiving a lot of answers from individuals, some of these positions were becoming really popular.

The study process proceeded rather well in some aspects. Strong features were clear objectives, exhaustive data collecting, and careful analysis. Still, a couple locations may have utilised some improvement. For example, if the group had more than three hundred members, the outcomes would not have been as apparent. Using a combination of approaches including personal data would have been ideal to find more about how artificial intelligence is used and what influences it.

People were constantly aware of the value other people's thoughts and abilities held throughout the research. Telecom firms and their staff members really respected their opinions as it was rather crucial for them to be active and cooperative. The professionals aimed to make the

participants of the research feel comfortable enough to provide honest responses. This programme gave me a lot of knowledge about managing projects, including partners, and seeing data from a manager's perspective. People had to be proficient at time tracking and communication if they were to complete the many phases of the research. Particularly with regard to dealing with large data sets and complex statistical techniques, this training has really helped me improve at research and management.

This event produced some recommendations on how to enhance future research projects. Better understanding of the research issue would come from a larger and more diverse group, a mixed-methods approach, and ongoing data tracking of changes throughout time. Investigating its applications in different sectors can help you better understand how artificial intelligence influences worker production; subsequently, you can compare the outcomes with those in the telecom sector.

At last, this endeavour has taught me a lot and advanced me both personally and professionally.

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APPENDICES

Analyzing the Impact of AI on Employee Productivity in Telecommunication Sector of Pakistan: Mediating role of Recruitment and Talent Management Practices

Gender: 1. Male 2. Female

Age: 1. 20-29 Years 2. 30-39 years 3. 40-49 years 4. 50 or above

Education: 1. None 2. Certificate 3. Diploma 4. Degree 5. Others

Level of Income: 20k-30k **2.** 31k-40k **3.** 41-50k 4. 51 or above

Duration of the Business: 1. Less than a year 2. 1-4 Years 3. 5-10 years 4. Above 10 years

Designation: Front line employee **2.** Middle-management **3.** Top Management

Please select one option.

1. Strongly Agree 2. Agree 3. Neutral 4. Disagree 5. Strongly disagree

Sr. No.	**Statements**	**Degree of Agreement**				
		1	**2**	**3**	**4**	**5**
AI implementation						
1	AI is implemented in all area of business of the company.					
2	Company is using AI in problem solving.					
3	Company is fulfilling future needs through AI solutions.					
4	Company is able to work with data scientist.					
5	Employees have strong leadership support in using AI.					

Recruitment						
6	AI usage reduce the spent-on time in enterprise training courses.					
7	AI technology reduce the attention deficit that employees experienced in classical in enterprise training courses processes.					
8	AI technology increase accessibility to in enterprise training course.					
9	In enterprise training course with artificial intelligence technology lead to successful training program.					
10	Employee Professional knowledge will be kept up to date with in enterprise training course through artificial intelligence technology.					
11	When the in-enterprise training course take place with artificial intelligence technology, the restrictions regarding to place where the training will be given will be removed.					
12	Employee are provided with the required training to deal with AI.					
	Talent Management					
13	AI helps in a better quality of decisions for recruiting and selecting candidates.					
14	AI helps in conducting primary interviews of bulk candidates using chatbots.					
15	AI technology saves the monotony of the job done during the process of finding candidates.					
16	AI technology reduce the time spent in finding candidates.					
17	We hire those candidates that have the right skills to accomplish their work successfully.					

18	We hire those candidates that are very capable of using AI technologies.					
19	We hire those candidates that are effective in data analysis, processing and security.					
20	We take care of retaining suitable candidates with help to acquire the necessary skills for their career plan.					
Employee Productivity						
21	Using AI enhance employee's effectiveness.					
22	Employees are engaged in the quality of their work.					
23	Employees do their work with passion.					
24	Employees are engaged to achieves successful business results.					
25	Employees are aware of the importance of innovation for our enterprise and they are helping to develop the enterprise.					
26	Employees are enthusiastic in their work.					
27	Employees are engaged for business ideas and solution.					
28	Employees believe in the successful development and operation of our enterprise.					

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