

AN ANALYSIS OF GLOBAL MOBILE TELECOMMUNICATIONS AND DEPLOYMENT PROJECTIONS: A STUDY CENTRED ON HUAWEI TELECOMMUNICATIONS.

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**ABSTRACT**

The mobile telecommunications industry is pushing digitalisation, new ideas, and economic development in many other sectors. Businesses in the telecommunications industry utilise these forecasts as a strategic tool to help them plan their investments, enhance their infrastructure, and be ready to deal with any problems that could come up in the future. Huawei is one of the best telecom service providers in the world, so it can turn subscriber projections into reality by using new technology and getting into new markets. The primary objective of this research is to examine the strategies used by Huawei Telecommunications to attract a greater number of clients. This example shows how the company's strategy, the creation of new services, and its ability to compete on a global scale are all affected by demand estimates. The findings of this study indicate that for sustainable growth, it is essential for subscriber forecasts to align with operational capacity, ensuring that service quality and customer happiness are not compromised. This is because customers are more likely to be happy with the service they obtain. The study's findings show that Huawei's investment strategy, partnerships, and the way the company uses technology in nations like China that are growing quickly economically are all affected by global forecasts. The study's findings indicate that telecoms service providers must precisely project the growth of their customer base to maintain competitiveness and resilience over time. Huawei's reaction to worldwide expectations shows that it is the best company in its area. It also shows how important predictions are for setting the course for the future of mobile information and communication technology.

**Keywords:** Global telecommunication, deployment projection, telecommunication industry, 5G technology, Huawei.

**INTRODUCTION**

The mobile phone business has had its ups and downs over the past ten years, but China has become a major player in the growth of both new ideas and infrastructure. This is true even if the industry has had its ups and downs. 5G technology and other improvements to mobile networks have changed how people communicate with each other, how much data they use, and how well the telecom firm works. This is because individuals are using more and more data. Predictions about how many subscribers there will be, how much mobile data traffic there will

be, and how long it will take to build new infrastructure all have an effect on all of the strategic decisions and investment plans that are made in the sector (Attaran, 2023).

China has sped up the installation of modern mobile networks for a number of reasons, including the fact that it has spent a lot of money on them, that it has the legal right to do so, and that it has a lot of official support. China is now leading the world in the development and use of new telecommunications technologies that will be used in the future. To analyse the effect of global mobile telecommunications forecasts and adoption methods on the profitability of Chinese telecommunications companies, it is important to have a good understanding of how these two things are related (Li, 2024). This study utilises a quantitative research methodology to assess the influence of global mobile telecoms deployment projections on the efficiency of China's telecommunications networks. The study specifically seeks to examine the impact of these projections. The aim of this study is to elucidate the interrelations among strategic planning, technological adoption, and market development through a comprehensive analysis of their relationships. As a result, the researcher gained a more profound understanding of the ever-evolving realm of mobile telecommunications.

### **BACKGROUND OF THE STUDY**

China has been the world's leader in mobile telecommunications over the past six years. This has had a big effect on how 5G technology is being used around the world and how industry infrastructure is being built. Experts think that by the end of 2020, the country will have set up about 1.2 million 5G base stations. At its peak, about 3.8 million in the middle of 2024, this number made up almost sixty percent of the total worldwide. At the same time, China's fifth-generation (5G) network has seen an unprecedented rise in the number of subscribers (Bell, 2024). In 2020, 129 million people used the 5G network. By the end of 2022, that figure had grown to 570 million. By the middle of 2023, this figure had grown to 700 million, which means it makes up nearly 40% of all mobile customers in the country. These changes are happening because China has big plans for its digital economy. In 2022, the digital economy was worth 50.2 trillion yuan (\$6.93 trillion), which was 41.5% of the country's gross domestic product. More than 10,000 pilot apps and industrial internet projects that use 5G are also going live, which is a big boost to this growth. Businesses in the tourism, education, and healthcare fields are just a few examples of those who are using apps and programs that are similar (The State Council, 2023).

Taking into account this constantly shifting environment, Huawei Telecommunications comes out on top. Huawei is a leader in the telecommunications business and is very important to the building of China's fifth-generation (5G) infrastructure. Even though the company is having problems around the world, it has gained market share in China. This shows that it is a very important aspect of the telecommunications business in the country (Prestes, 2022). The quantitative analysis of this study indicates that Huawei's performance has been influenced by forecasts concerning mobile deployment and telecommunications on a worldwide scale. The

researchers conducting this study are optimistic that their results will elucidate the dynamic interplay between business strategy and market fluctuations.

### **PURPOSE OF THE RESEARCH**

The primary objective of this research is to analyse the correlation between forecasts for mobile telecommunications and deployment in various regions worldwide and the performance of Chinese telecommunications businesses such as Huawei. This study extensively focused on assessing the telecommunication as well as deployment projections of Huawei in China. The primary objective of this research is to deliver a quantitative analysis of the impact of trends such as subscriber growth of telecommunications businesses such as Huawei. The research also focus to identify trends and connections that could inform decisions about investments, strategic planning, and business development scope for Huawei. China, which has a lot of people, is home to one of the biggest and fastest-growing mobile marketplaces in the world. This study also aims to examine how projected growth in mobile telecommunications and planned network deployment affect the dissemination of new technologies and the enhancement of existing infrastructure based on assessing deployment strategies and global telecommunications forecasts affect corporate operations on a global scale.

### **LITERATURE REVIEW**

The mobile phone industry has changed a lot during the past six years. China has been a leader in building and using 5G networks. By the middle of the 2020s, it is expected that over a billion people in China would be able to use 5G networks. This makes it quite clear how far the country has come in terms of industry and technology up to this point. Another source gave us the data the researcher utilised to create this prediction. Regulations that promote the advancement of technology and the digitisation of processes, along with substantial expenditures in network infrastructure, are among the most crucial components (Omar et al., 2024). There has also been a big rise in the amount of data that mobile devices send. Studies show that the amount of data used on mobile devices will grow by about 25% each year until the late 2020s. This speedup is mostly because apps utilise a lot of bandwidth. There are a number of apps like this, some of which include cloud services, video content, and other apps that are similar. To meet the rising demand for the service, the telecommunication companies need to build a new network infrastructure. Inclusion of base stations as well as fibre-optic networks to this infrastructure would be important (Tang et al., 2021). Rise in mobile phones is primarily due to corporate strategies, not technical issues. This is true from both a political and an economic point of view. It has been shown that countries with good policies that encourage investment in research and development as well as infrastructure have higher adoption rates and more competitive markets. The political and legal systems that have been in place in China since the country was founded have had a big effect on plans for investments and deployments, as well as on other choices about how to carry them out (Iftikhar, 2024).

Research on network deployment shows that a lot of money has to be invested on both infrastructure and capital to keep the growth that has already happened. If businesses spend a lot of money on private networks, automation, and 5G networks, they might be able to make new uses for smart cities, healthcare, education, and companies. These costs might make it easier to create these apps. It is also vital to raise this exact quantity of money because there will be a lot of demand for it (Shehab et al., 2021). The previous research showed that there is a strong link between what the industry thinks will happen and what plans are being made to start offering mobile phone services. There are a variety of things that affect how quickly individuals start using new technologies. These things are the number of subscribers, how much data they utilise, and how much they spend on infrastructure. Changes like this also affect how competitive a country or area is in the global economy. These trends are linked to the progress being made in technology. It may be quite important to know how these things work when trying to figure out how the telecom network and services will grow in the future and how this will affect the long-term strategy of the industry and the use of new technologies (Porter, 2023).

### **RESEARCH QUESTION**

What is the effect of subscriber growth forecast on Huawei telecommunications?

### **METHODOLOGY**

#### **Research Design**

SPSS version 25 was utilised for the quantitative data analysis. The odds ratio and 95% confidence interval were utilised to determine the intensity and direction of the statistical association. The researchers established a statistically significant criteria at  $p < 0.05$ . A descriptive analysis was conducted to identify the most significant details from the data. Data obtained from questionnaires, surveys, and polls, along with data augmented by computational tools for statistical analysis, are often assessed using quantitative methods.

#### **Sampling**

Participants were requested to complete questionnaires to participate to the research. Researchers employed the Rao-soft technique to estimate the research population at 1150 individuals; hence, 1300 questionnaires were distributed. Following the collection of 1263 replies, researchers excluded 63 due to incompleteness, yielding a final sample size of 1200.

#### **Data and Measurement**

The main technique of data gathering in the study was a questionnaire survey. Part B used a 5-point Likert scale to gather responses about online and offline channels, whereas Part A of the survey aimed to get fundamental demographic information. The secondary data was obtained from several sources, mostly internet databases.

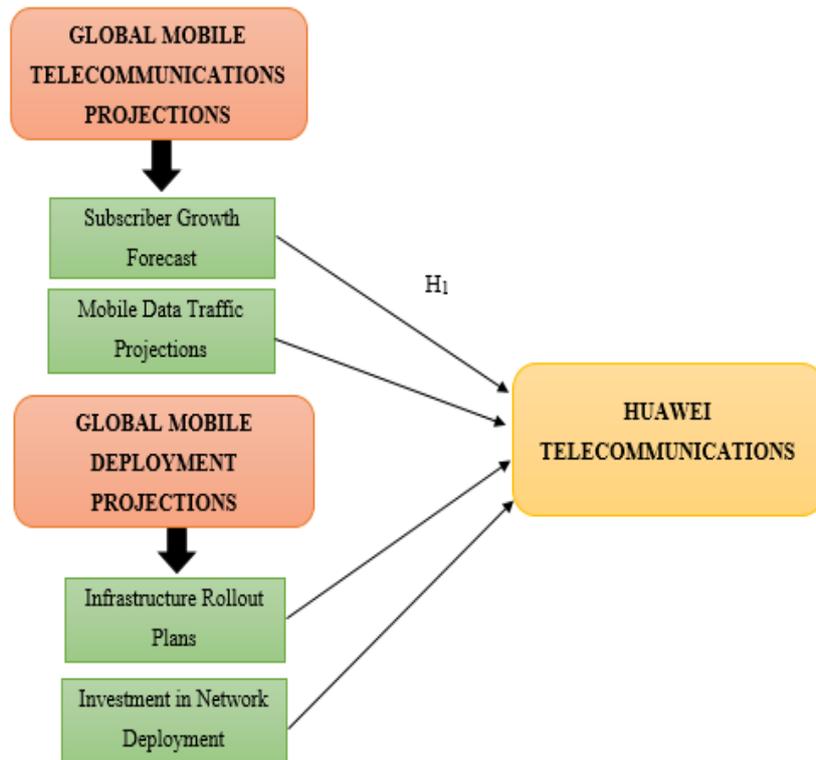
### Statistical Software

Statistical analysis for this study was conducted using SPSS 25 and MS Excel.

### Statistical Tools

In order to have a basic understanding of the data, the researcher used descriptive analysis. Using ANOVA, the researcher must examine the data.

### CONCEPTUAL FRAMEWORK



### RESULT

**Factor Analysis:** A common use of Factor Analysis (FA) is to validate the fundamental component structure of a collection of measurement items. Factors that are not readily apparent might theoretically affect the scores of the observable variables. One model-driven methodology is the FA method. The primary objective of this research is to delineate the links between observable phenomena, their underlying causes, and measurement errors.

The suitability of data for factor analysis may be evaluated using the Kaiser-Meyer-Olkin (KMO) Method. The researcher assess if the sample size is sufficient to effectively represent the whole model and each constituent variable. The statistical metrics assess the degree to which many variables may exhibit shared variation. In factor analysis, data of a lower hierarchical level is often more advantageous.

KMO generates integers ranging from 0 to 1. A KMO score ranging from 0.8 to 1 indicates sufficient sampling.

If the KMO is below 0.6, remedial steps must be implemented due to insufficient sampling. Exercise ones' best judgement; writers often utilise 0.5 for this purpose, hence a range of 0.5 to 0.6 is defined.

Partial correlations constitute a significant fraction of overall correlations as the KMO value approaches 0. It is important to emphasise that significant correlations severely impede component analysis.

Kaiser has established the following approval criteria:

Unsatisfactory readings ranging from 0.050 to 0.059.

Below standard is considered as 0.60-0.69.

A mediocre grade often ranges from 0.70 to 0.79.

A value ranging from 0.80 to 0.89 indicative of quality points.

The range is notable, spanning from 0.90 to 1.00.

**Table 1.** KMO and Bartlett's Test.

<b>KMO and Bartlett's Test</b>		
<b>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</b>		0.834
<b>Bartlett's Test of Sphericity</b>	<b>Approx. Chi-Square</b>	3252.968
	<b>df</b>	190
	<b>Sig.</b>	.000

The KMO and Bartlett's test confirms the veracity of claims on the execution of a sample. Researchers assessed the importance of the correlation matrices by Bartlett's Test of Sphericity. The KMO measure of 0.834 indicates that the sample is adequate. The p-value from Bartlett's sphericity test is 0.00. The results of Bartlett's sphericity test indicate that the correlation matrix deviates from an identity matrix and is statistically significant.

## **INDEPENDENT VARIABLE**

**Global Mobile Telecommunications Projections:** In order to predict trends in the global markets for mobile connections, data use, and network demands, it is important to make predictions about the future of mobile telecommunications throughout the globe. This is what forecasting is for, in other words. Predictions are employed to help reach this aim. These forecasts have increasingly emphasised the importance of fifth-generation wireless (5G), cloud integration, and digital services in the upgrading of communication infrastructures throughout

the last decade, particularly in the last five or six years. This is particularly true when one think about the previous five or six years. To make a good guess about the future of mobile telecommunications, one need to look at how people are using their phones, how quickly they are adopting new technologies, and how many services are available. This is also important in developing countries like China, where the situation is very bad. It is extremely important to have estimates like this so that one can fully understand what has to be done to make investments in infrastructure, technology leadership, and global connections possible. Their research shows how governments and businesses are trying to tackle the problems of quicker data transfers, shorter wait times, and better mobile experiences (Zou et al., 2022).

## FACTOR

**Subscriber Growth Forecast:** It is anticipated that there will be a greater number of people who make use of mobile devices in the future, as shown by the anticipated development in the number of subscribers. It is anticipated that this new development will take place. This group consists of people who utilise services that are reliant on the internet, data, and cellular phones. Those folks are included in this category. The continual increase in the number of subscribers that are available in China might be attributed to a broad variety of possible factors. These causes could be responsible for the growing number of subscribers. Few of the elements that contribute to this widespread issue include urbanisation, the growth of digital lifestyles, and the efforts made by the government to encourage more people to use their mobile phones. These are only few of the factors that are among the variables that contribute to this widespread problem. The number of individuals who make use of mobile broadband services has been steadily increasing over the course of the last five years. This trend has been seen in a progressive manner. This pattern has been seen happening. On the other hand, the number of people who are making use of 5G has experienced a significant growth over the course of the last few years. The rapid increase in the demand for mobile services is one of the factors that is contributing to this trend. There are a number of factors that are contributing to this problem, including the changing demographics of the population, the growth of cities, and the decrease in the cost of gadgets that are capable of performing intelligent activities. The relevance of these subscriber estimations cannot be overstated when it comes to the endeavour of making an educated forecast about the quantity of network capacity that will be required, the services that will be provided, and the level of competition that will be present in the market (Su et al., 2024).

## DEPENDENT VARIABLE

**Huawei Telecommunications:** Huawei Telecommunications is a big part of China's communication ecosystem. It is a fantastic illustration of how the sector works and what it accomplishes. Third-party predictions and projections have an impact on a lot of things, including the current state of the market, the creation of new ideas, and the evolution of technology. The company's activities over the last five years have had a big effect on the expansion of the internet in the US and throughout the world. China's national plan includes

staying ahead in the next generation of telecommunications, and this will assist the government reach its goals. There might be several reasons why this technology was created. An increase in subscribers, improvements in mobile technology, and forecasts of future global data demand are all examples of these kinds of things. By looking at Huawei as an example, the researcher may be able to learn more about how changes in the global market effect how much money corporations spend on research and development and their whole strategy. Responding to projections about mobile telecommunications provides China an advantage over its rivals and helps the country reach its goal of modernising and internationalising its communication infrastructure. It is quite astonishing that one can do both of these things at the same time (Abels & Bieling, 2023).

**Relationship between Subscriber Growth Forecast and Huawei Telecommunications:**

There is a connection between Huawei Telecommunications and the projections of how many more subscribers there will be. This connection is how demand expectations affect the growth of enterprises, the building of infrastructure, and the launch of new services. Huawei is putting money into expanding 5G infrastructure, adding new services, and making the mobile user experience better in order to meet the growing demand for dependable network solutions in China. These investments are being made to accommodate the rising demand. The number of customers is expected to keep going up, which is why these costs are being incurred. Huawei is making technology changes to suit the increased demand for faster speeds and lower latency. This is a response to the reality that more and more people are using services that demand a lot of data. Huawei may use the expected increase as a roadmap to better plan their production, research and development, and investment operations in the future. Because of this, they would be able to run their business more smoothly. As the number of clients grows, so does the need for sophisticated network solutions. This means that Huawei can expand its company both locally and worldwide. This basically implies that Huawei can keep growing its business. It has been shown that Huawei's role in shaping China's communications modernisation is influenced by the limitations and opportunities presented by the expansion of the subscriber base in relation to technical progress. The links that have been given show this. This is because the growth of the subscriber base is something that technology is helping to happen (Yang & Zhang, 2025).

The researcher investigated the idea of examining the association between Huawei telecommunications and subscriber growth estimates, building on the prior discussion.

“H<sub>01</sub>: There is no significant relationship between subscriber growth forecast and Huawei telecommunications.”

“H<sub>1</sub>: There is a significant relationship between subscriber growth forecast and Huawei telecommunications.”

**Table 2.** H1 ANOVA Test.

ANOVA					
Sum					
	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	39658.730	347	5913.439	1061.849	.000
Within Groups	4189.680	852	5.569		
Total	43848.41	1199			

The outcome of this investigation is significant. An F-value of 1061.849 is deemed statistically significant, given that the p-value is .000, which is below the .05 alpha threshold. The researcher rejected the null hypothesis and endorsed “*H<sub>1</sub>: There is a significant relationship between subscriber growth forecast and Huawei telecommunications*”.

### DISCUSSION

The mobile telecom business has grown quickly over the last several years for a variety of reasons. For instance, the networks that the next generation will use will be more active, and the number of people who may now subscribe will expand quickly. When deciding what to do next, the industry thinks about a lot of crucial things, one of which is how many new customers it expects to get. There is confirmation that better mobile services and the infrastructure needed to meet that demand are needed. The fact that they are there shows that this need is real. The capacity of telecommunications companies to adapt to expected growth may be the key to whether or not they can stay competitive and stay relevant in the market.

The number of new customers in China is expanding faster than almost anywhere else in the globe. This is because the country has a large population, more people are moving to cities, and a lot of work has been done to make the country’s infrastructure more digital. Based on subscriber forecasts, it is evident that new technology has to be created and put into use all the time in order to keep up with the growing need for mobile data, internet access, and other services. The reason for this is that demand will keep growing up. Given the present scenario, it is likely that this demand will continue to be rather strong. Even while there are potential to join new markets and generate more money, there are also problems that might come up. Some of the problems that can come up include maintaining the infrastructure up to date, following the regulations, and having more competitors.

The number of subscribers is strongly related to the dependent variable that helps decide whether the telecoms firm is profitable or not. This is because service providers can’t improve their resources if they don’t have accurate estimates of how much people will use them. This is what happened and why it happened. When the expansion in subscribers matches the telecom network’s capacity just right, consumers are satisfied, service quality is greater, and the

network is more resilient. This is because it makes it easier to help clients. If there isn't enough supply to meet demand for a product or service, there might be problems with service, inefficiency, or even harm to one's reputation. In telecoms, the expected increase in the number of subscribers in the future is one of the strategic elements that helps decide where to put money, what new products to make, and how to position the company in the market. These projections are more than just statistical estimates now.

## **CONCLUSION**

In short, one of the most important things to do to figure out how well a telecoms company is doing is to make predictions about how many new customers it will get. This tendency is particularly obvious in countries like China, where the populations are growing at an alarming rate. They provide the basic building blocks that make it feasible to do other important activities, such as anticipating demand, optimising resources, and improving service quality. The success or failure of a telecom firm is directly linked to the expectations of its customers. If people respond positively to growth patterns, the market may become more competitive. On the other hand, if people react negatively to growth patterns, development may slow down a lot. This is why this is the case. Companies in the telecoms business may do well in today's digital world if they make accurate predictions and change their strategies accordingly. They will only be able to keep coming up with new ideas, fulfil the growing demand, and be successful in the long run if these things happen. This means that they may keep making things while also meeting the needs of the industrial sector.

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