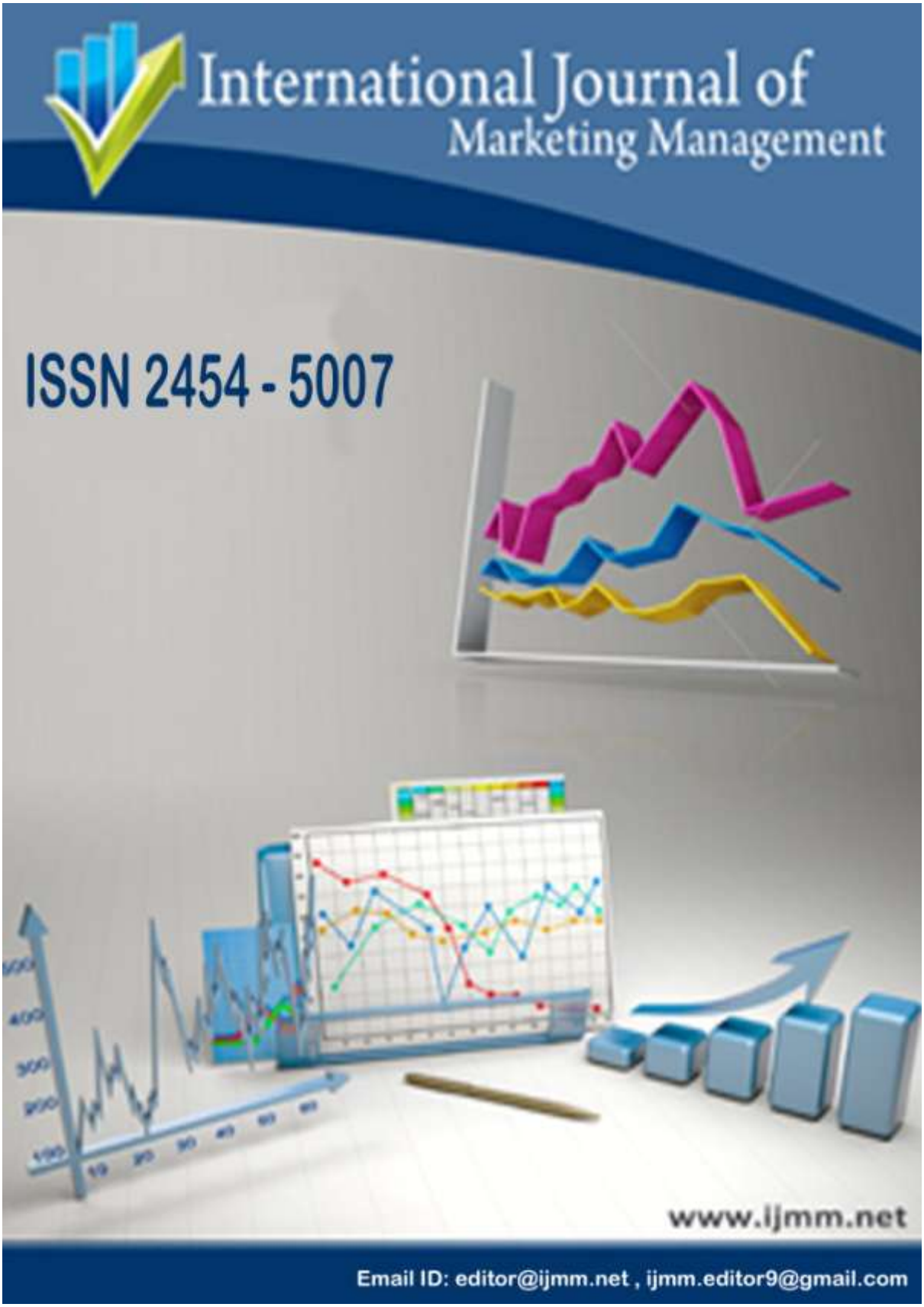
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Impact of Information and Communication Technology (ICT) In the North East Region with Special Reference to Nagaland.

TsotaluNakro

Abstract - This article examines the influence of ICT in the North East region, with a focus on the state of Nagaland in particular.. The study covered the historical entry of ICT into the region, establishments, issues, development and its impact..etc.. etc.. In contrast to other Indian states that have long since flourished, globalization and information technology have only recently begun to develop in the Naga environment. Improved health care, more income, and better education are already commonplace in Naga society because to the implementation of ICT. In addition, ICT has made government services more easily accessible and improved communication both within and outside the country. However, because of the usual land structure, low governance, and insufficient infrastructure, there are significant obstacles to execution.

Keywords-Information technology and development in Nagaland, as well as the rest of the world

DATAANDMETHODOLOGY

INTRODUCTION

In today's global modern civilization, information and communication technology (ICT) has received unprecedented attention. A new means of instant communication has emerged in the previous few decades, giving rise to new levels of power, riches, and profit. The rise of information and communication technology (ICT) in the social, economic, and political sectors has marked the beginning of the twenty-first century. The dawn of a new information society has been ushered in by the change in human life brought about by new technologies. There are many new ways to produce, trade, and communicate as a result of the new network society. At the global and local levels, ICT has become a model for economic growth. Education has been revolutionized by the rise of information and communication technologies (ICTs). Consequently, Information Technology (IT) has emerged as a major growth engine in many countries that have established connections to global markets and industrial networks. Faster global infrastructure may be made possible by allowing tighter interactions between and within national borders. The current article examines the rapid growth of ICT infrastructure in the state and looks at how ICT is evolving. In an effort to see if ICT is benefiting the state and if it has made any good improvements, this study is being conducted.

ProfileofNorthEastIndia

ResearchScholar,DepartmentofHistory,NagalandUniversity,Nagaland

Correspondingemail:tsotalu09@gmail.com

Assam, Meghalaya, Mizoram, Nagaland, Tripura and Sikkim make up India's North East region, which is located in northeastern India's subcontinent. Because of its proximity to the area and the similarity of its developmental and other issues, this region is grouped together. The international borders with Bangladesh, Bhutan, China, Myanmar, and Nepal give the region crucial geopolitical significance. Arunachal Pradesh is the largest state in North East India (NER), whereas Mizoram is the least populous.

Until the country's independence, the hilly region of North East India was separated from the rest of India. Because of its remote location, the economy grows at a snail's pace due to a lack of infrastructure and technological advancements. Additional geopolitical factors have kept the area from developing economically at the same pace as other parts of America. To understand why the North East, particularly the hill regions, remain underdeveloped, one must look beyond the region's socio-cultural and geographic characteristics. Village Development in North East India by SinghaKomol, New Delhi: Concept Publishers, p.20, 2009.

Research shows that this region is trailing behind the rest of the country in terms of economic development since the early 1990s. New social structures are linked to global networks of money, power, and profit making, according to Castells (2000). It's this lack of a market for goods and services that has prompted many academics and authors to label the North Eastern region as 'backward'. This is owing to the remote position of the area, which is surrounded by dense forests, mountains, rivers, and heavy rainfall. But in terms of society, the North East has certain benefits because of the diversity of the state's races and people, including hill and plains people who speak multiple languages. With its diverse culture, people, and beautiful landscape, the North East attracted many anthropologists from all over the world who wanted to learn about the region and see how it could be improved. Furthermore, since the country's independence, the government has made a number of steps to enhance the lives of its citizens. Significant changes have occurred as a result of a large number of development programs. As time progresses, tradition and modernity continue to merge. After this paradigm change, the state was transformed by significant social and economic growth as well as technological advancements that brought the techno world to the state in terms of e-learning and ICT education at all educational levels in the 1990s, which was a major transformation.

Nagaland

Located in India's far north-east, Nagaland is a lively hill state bordered by Myanmar to the east, Assam to the west, Arunachal Pradesh to the north, and a portion of Assam to the south with Manipur. According to the 2011 census, the state of Nagaland has a population of 1,980,602 people spread across an area of 16,579 square kilometers. As a previously undiscovered state, Nagaland has its own unique set of obstacles and limitations. Since Nagaland is located in the outer reaches of the country, it is difficult for it to grow economically. Due to a lack of economic support, the development process has been plagued by sluggishness. The state of Nagaland has been steadily charting new paths of development and has displayed a unique model in many respects as a result of this process. Throughout its history, Nagaland has been a major player in the transformation of the agricultural economy into a modern industrial economy. To achieve national goals and self-reliance and socioeconomic growth, the state administration has continually placed emphasis on the development of research and technology.

Problemsofexcessandinfrastructure

For a community or country to benefit from economic activities and provisions, infrastructure can be defined as the foundation of a global system (i.e. economy, society, organization) or as the equipment required for a specific system to operate. There are a wide number of services,

institutions, and facilities included in infrastructure, ranging from transportation systems and public utilities to financial systems and law enforcement as well as educational and research facilities. Id. at p. 166, ibid.

For a country's economic growth to be sustainable, it must have a well-functioning infrastructure. Investment in infrastructure and use of its services have substantial ramifications for social and economic achievement, and the country will be affected by failures across the state if they are not made. Agriculture, industry, trade, and commerce all rely on developed-country infrastructure for growth and development. North East India places a strong premium on improving the lives of its citizens and bringing cutting-edge technology to all corners of the region through infrastructural development. North East, on the other hand, is lagging behind in terms of science and ICT in many regions of the region. Many social, economic, and ecological issues make infrastructure development in this region difficult and even impossible. Furthermore, infrastructure development is a severe barrier because of the growth and high transaction costs that occur from inadequate and inefficient infrastructure, and the North East regions suffer from a lack of finances.
It's also worth noting that the state of NER lags considerably behind other states in India's union when it comes to basic necessities like health and education as well as banking and food supply. If educational facilities are provided in all tribal areas and new economic policies are adopted for economic growth, the need for rapid infrastructure development in the North Eastern region is possible. This will help improve market efficiency and integrate the entire region's economy with the global markets. However, because the majority of the North Eastern regions are hilly and have shaky infrastructures and primitive industrial technologies, there are significant obstacles to overcome. But despite all these efforts, imbalances persist despite the North Eastern states being treated as a unique category of states for the purposes of financial plans. North East India's Infrastructure Development in 2009 by Singha RKPG and Kabra KC (ed), Village Development in North East India: Concept Publishers, New Delhi. P.

Because of the region's typical land layout, which is regarded as the economic backbone, infrastructure development is a big challenge. A lack of proper transportation infrastructure has been a key impediment to the growth and development of the North East region's agriculture, horticulture, tourist, transportation, and technology sectors. It's tough to get information and communication moving quickly in a mountainous area because of its rough terrain and climate.
Disputes within the North Eastern states are already numerous. Insensitivity and incompetence on the part of the government administration exacerbate the problem. Poor governance and a shaky infrastructure have kept Nagaland behind other Indian states when it comes to technology, and this is seen as a model for future growth in the rest of the country. Many departments and institutes of Information Technology have been established, but their effectiveness and underlying suitability remain a matter of doubt. Because the freshly launched ICT program has not been widely publicized, the people, wherever they are, is mostly uninformed of what this new technology can do for them. Furthermore, there was a lack of encouragement because there was no long-term understanding of its value and management. Rather than enrolling in professional programs, the majority of people opt to work for non-profits, government agencies, or the civil service.
Althoughthegeneralpublicisnowbeginningtotakeuptheseictcourses,theyremainbasicandshort-term,away from studies, work and other commitments, whereas the emphasis should be on amalgamation andintegration.

As a result, the North East suffers from inadequate governance and a lack of state capacity to absorb large sums of money needed to successfully facilitate and develop specific infrastructure projects. Because of the

rugged topography, many of these regions are cut off from the rest of India. The adoption of new technologies is nearly impossible and in some circumstances unfeasible due to lack of or unstable telecommunications lines. When a policy is committed, it often gets lost on the bumpy and often nonexistent route to implementation. Additionally, low per capita income in the North East states makes it difficult for these states to engage in ICTs because of a lack of initial allocations and matching funds. All of these issues can be addressed if civil society and nongovernmental organizations (NGO) contribute adequately, rather than relying solely on the government to do so. In order to plan, design, and implement a new vision for the growth of well-being, it is important to understand the ramifications. Learning and teaching approaches and management must be used in order to make efficient use of technology, which is not only found in hardware and software but also in hardware and software.

ImpactofICT:

Development is a multi-dimensional process that relies heavily on the availability of resources and infrastructure facilities. Diverse, vibrant, and full of opportunity characterize the North Eastern Region (NER). The key to economic freedom lies in vast tracts of arable land, tropical rainforests, and navigable canals. As a result, there are striking disparities in the eight republics' contrasting ecologies and cultures, as well as considerable continuities. Because of its unique physical, economic, and cultural attributes, the economy of NER has developed a distinct personality. In terms of modern indicators and development, the states were judged to be lagging behind other states at the time of independence. An agriculture- and cottage-industry-based economy was the norm in the region. There hasn't been any use of incentives that are more up to date. Despite this, there are still government-sponsored economic development initiatives. NER, which aspires for a more advanced and globalized economy through the implementation of India's New Economic Policy in 1991, has made profit-making development its guiding premise. The North East region, where education is not extensively distributed throughout all tribal communities, was thought to require special attention for total development in all realms of society. Consequently, the state decided to devise a new educational strategy for its multi-dimensional growth.

In the 1990s, with the advent of the World Wide Web and Microsoft products, people from all over the world could now communicate virtually. Although it is a technologically and economically disadvantaged region, the North East is touched by new projects. Now, organizations like cyber learning are democratizing education by making the best educational content accessible online from the most remote corners of the globe. ICT education is now a collaborative effort in all schools in Nagaland, where computer studies are made mandatory as one of the required subjects. The goal was to launch a pilot initiative to give North East residents with ICT education and certificates. An efficient and creative use of technology is helping to drive creative innovation, growth and competitive advantage. In the near future, the project will have a positive impact on the economy, creating jobs, and raising the standard of living. CIC is a community-based initiative launched by India's President in 2000 to link Indian citizens to the internet and deliver government services in their local communities.The main aims of this project are connectivity to internet, distance learning programme, enabling IT enabledservices and generating employment opportunities. Thus, slowly the region could get connected with the outsideworldandnowprojects,institutesandde partmentweresetupforspeedycommunication andadvertisement.

People in Nagaland have been deprived of contemporary technology for a long time because of their remote location and inaccessibility to modern infrastructure. There are a number of interrelated elements at play in the current Information Age that have the potential to permanently alter society as we

know it. These include significant shifts in social, political, economic, and technological variables. The internet and other recent technology breakthroughs have transformed the world into a "Global Village" by breaking down geographical, physical, political, and even sociological boundaries. Because of this, Nagaland's government has established a number of information technology (IT) businesses throughout the state. At this point in Kohima served as the capital of Nagaland for a long period of time, coordinating with all the districts. Nagaland's IT infrastructure is on par with other states', if not better, than it is in the rest of the country. With its nationwide satellite-based computer communication network, it had been a pioneer in bringing IT-based culture to Nagaland far back in the early 1990s (NICNET). It provides e-mail, internet access, file transfer, office automation, and the construction of a computer-based Management Information System (MIS) among other services. – It had also made it a global village by extending its services to rural areas.

ITInfrastructureintheState:

1. KhelhoshePolytechnicInstitute

2. The first Polytechnic in Nagaland, Nagaland Polytechnic Atoizu was established on September 14th, 1972. Educational policy is overseen by the Directorate of Technical Education of the Naga State Government. It was renamed Khelhoshe Polytechnic Atoizu on April 26, 1984. Civil, electrical, mechanical, and vehicle engineering are all taught at the school. Academic and examinations were handled by Assam University for the first three decades. However, the State Council of Technical Education-Nagaland will now be in charge of staffing it going forward.

3. **NationalInformaticsCentre,Kohima**

On January 1, 1989, the National Informatics Centre was opened in Kohima, India. In the early 1990s, NIC pioneered in bringing the IT-based culture to Nagaland with its satellite-based computer communication network that covered the entire state (NICNET). All these services are available to you: e-mail and internet connection; file transfer; office automation; construction of a computer-based Management Information System. (MIS) In 2000, 52 Community Information Centres (CIC) were established to extend the reach of NIC to the grassroots level, transforming Nagaland into a global community..

4. **NagalandScienceandTechnologyCouncil**

When the Nagaland Science and Technology Council was founded, it was based in Kohima in 1991. It was created and registered as a society on 6th August 1999 under the Nagaland Societies Registration Act of 1983 along with the rest of the country. In India, the government's Department of Science and Technology provides financial assistance for the council. In order to reap the benefits of modern science and technology and the growth of the state, the organization was created in the first place. It has then been carrying out a lot of initiatives and projects to promote Science and Technology throughout the state. Another goal is to help rural populations by using science and technology to improve their economic condition, as well as push for the latest technologies to improve socio-economic development. The council carried out yearly programmes such as Science Popularization Activities, Entrepreneurship Development Programmes and Technology Demonstration. In addition Research and Development projects spanning studies on the natural resources and its exploitation, biotechnology, remote sensing applications and identifications are carried out.

5. **GovernmentPolytechnic,Kohima**

It was founded in 1994 as Women Polytechnic Kohima with a focus on Modern Office Practice and Fashion Technology for female students alone. When it became a coeducational school in 2002, it was given the name Government Polytechnic Kohima and a new Computer Engineering program was added. Creating a skilled workforce in the domains of engineering and technology was the only motivation for the establishment of this institute. Events like Earth Day and Science and Technology Awareness Programs are hosted by the institute. They offered

courses in Computer Science and Engineering, Fashion Design and Apparel Production, and Modern Office Skills. The Gandhi Institute of Computer Education and Information Technology, as well as Community College and Community Development through Polytechnic, are all part of the institute's free educational offerings.

6.

InstituteofCommunicationandInformationTechnology,Mokokchung

Founded in 2003, the institute's mission is to serve the state's residents by providing access to cutting-edge technological knowledge and by providing the local community with technological resources. The Directorate of Technical Education oversees the program's administration and funding. The school has state-of-the-art machinery to help students become specialists in their particular professions. Computer Engineering, Information Technology, and Electronics and Communication Engineering are all diploma programs now available at the institute. Rural communities can also benefit from ICIT's training programs. Proactive leadership, innovation, and entrepreneurialism are the institute's responsibilities. Women's engagement and access to technical education is also a primary goal of these organizations. One of their primary goals is to train engineers and consultants, as well as to provide educational opportunities for underserved youngsters. They also hope to become a hub for technological research and development, and to obtain national and international reputation. ICIT is one of the country's leading technological centers, providing state-of-the-art resources to students and faculty alike.

7.

DepartmentofInformationandCommunicationTechnology,Kohima

8. At some point in November of that year, the Department of Information Technology and Communication was established. A primary goal of the Department is to promote and facilitate the use of information technology (IT) throughout the state and to create an IT connection to the rest of the country and the rest of the globe. E-governance and ICT-enabled services will be provided to the state to help it become a destination for investors from both inside and outside the country, and the people will be encouraged to take benefit of this technology through e-governance and ICT-enabled services. The department is responsible for developing and implementing the government's information technology strategy. ICT enabled Citizen Centric services and numerous IT events have also been promoted by this organization. In order to connect the state capital, the district headquarters, and the block headquarters, the State Wide Area Network (SWAN) was established. With this project, the state's data, voice, and video networks will be strengthened.

9. **NationalInstituteofElectronicsand InformationTechnology**

NIELIT was established in 2004 to help with information technology and offers training programs to improve employment prospects that would help the ICT industry flourish in the region, notably in Nagaland. The institute's goal is to produce industry-employable professionals through training programs and to encourage ICT sector entrepreneurship. To this end, it has formed alliances and collaborations with academic institutions throughout Nagaland in the field of information, electronics, and communication technology (IEC). Various government departments rely on it for IT and related services as well.

It offers courses in Bachelor of Computer Application, IT and other Soft Skills Training Programme. Theinstitute has already trained more than 8000 trainees and more than hundreds have found placements. TheinstitutehavealsosetupruralextensioncentreinChuchuyimlangvillageunderMokokchungdistricttoprovideITliteracyamongtheruralyouthsinandaroundthedistrict.

10. **NationalInstituteofTechnology(NIT)**

National Institute of Technology, a premier institute of higher learning, is one of the thirty NIT's in India,establishedbytheMinistryofHumanResou

rceandDevelopment(MHRD).Itwassetupbythe Governmentof India in 2009 primarily for enhancing the scope of technical education in the North East states of thecountry. The Institute started functioning in 2010 under the mentorship of NIT Silchar. In 2012 a permanentcampus came up in Chumukedima, Dimapur with excellent facilities. The institute facilitates research at variouslevels and to make the students competent to face global challenges. The institute also strives to provideexcellenttrainingandplacementopportunitiestopre-finalandfinalyearstudentsrespectively.

The Computer Society of India declared Nagaland as a top performing states from among the north EasternstatesinInformationtechnologyande-governancesector.NagalandistheonlystateinIndiawherethestateisactingasServiceCentreAgencywithoutengagingprivatecompaniesforrunningCommonServiceCentres.

CONCLUSION

But even as technology advances, and despite the many efforts made on behalf of the people, North East ICT and infrastructure still need to be strengthened and extended to all places that have been ignored. Citizens will have more money, better health, better education, and greater access to jobs if additional ICT sectors are established. It is imperative that new credit and digital payment options, as well as online business opportunities, be developed in order for the developing world to be linked. Computer-related subjects should be taught in all grade levels to make pupils aware of their benefits. Efforts must be made to ensure that all people have equitable access to and employment opportunities in the face of the growing importance of technology.

As a growing area, North East India is placing a lot of emphasis on the ability of development organizations to use ICT. Meghalaya's Digital Empowerment Program aims to increase information and communication and bottom-up development at the grassroots level through a series of initiatives. By setting up free websites and offering basic maintenance training, e-facilitate NGO's this program. With an eye on expanding access to ICT, the government had developed a long-term strategy. Examples of Centrally Sponsored Schemes (CSS) include the establishment of 220 Common Service Centers (CSCs) encompassing all 11 districts in Nagaland, which will provide various services to residents in outlying areas. The state also planned to disseminate information using SMS services, which will give the official government a simple, rapid, and efficient way. Employing IT professionals and boosting wireless services to new heights is also expected, which intends to recruit trained IT professionals and boost wireless services in order to increase broadband availability and connectivity.

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