
The Reliance On Telecommunications

Introduction

Telecommunication is defined as communication over a distance by cable, telegraph, telephone, or broadcasting. From a single individual to the entire world, the role and business of telecommunications has a very strong reach that has made it an essential for the function of our everyday lives. These functions can be either recreational, social or even business related. The functions can also be applied to the internet which also plays a part in this relationship as being a telecommunication network that transmits data to single or multiple access points as a telecommunication network.

Given how vital a role telecommunication has played in the function of day to day living, this paper will explore how vital that role is in and the effects of telecommunications' absence. This paper will look at how vital telecommunications is economically based on how telecommunications has had an effect on economic growth from one scholarly article about economic growth in twenty-one Asia countries and another of twenty-one European countries. Another research used will be the effects and reliance of mobile learning on college students that will show how telecommunications has been integrated into the education field. In the government field, a case of Australian telecommunications will be utilized to show how a government owned telecommunications company has had strong power over their determining prices of their services and how it affects the people and from how it's gone from a monopoly to being in competition with a new company opening that allows for a great competition and more job benefits. And

Looking at how telecommunications affect a business when it is not available will be explored based on a situation that happened in a region of Australia where a clinic that heavily relies on telecommunications was facing strong hardships and forced to adapt without it when their telecommunication company was temporarily inoperable. This will help to paint a picture as to how other businesses would have to be forced to adjust to the lack of communications. Another case that will be used will be a study done after an earthquake in New Zealand affected their telecommunications company and how it affected a proposed taxonomy and dependency issues.

Based on what will be learned in this paper, we can see just how strongly telecommunications is relied on, not just for its intended usage, but also how it has a hand in so much of what we know. The benefits telecommunications bring to people as students and in terms of the job market and its contribution to the economy. The absence or lack of telecommunications and the effects it'll have on a business will show how strongly we rely on it.

Economic Importance – Economic Growth of Twenty-one Asia Countries

To explore the relationship between telecommunications and its importance economically, we will look at how the telecommunications infrastructure and usage (TEL) and foreign domestic

investment (FDI) have shown to play a part of economic growth in twenty-one countries. Although TEL plays a bigger role, the article aims towards showing more of how FDI helps to contribute to economic development, the connection between FDI and TEL and integrates the data on twenty-one Asia countries over the span of 1965-2012 for further explanation. The importance of TEL is highlighted when one study had shown that TEL proved to be a prerequisite in order for economic growth to be possible in Asia countries. TEL's role of importance in the economy had been shown to include delivery of information along with communication products and positive "spill-over" effects, one of which being that it could attract high quality FDI's, further proving that TEL already has an influence over FDI in economic development. Many of the findings looked at causality tests that looked at the previously mentioned years and used TEL and FDI as either independent or correlating variables against other variables such as GDP or the number of people who owned a telephone in Asia countries. These studies had mainly shown a unidirectional causality from telecommunications infrastructure towards economic growth and FDI and a bidirectional causality from FDI to economic growth. What this meant in the conclusion of the findings was that there was a very close connection between TEL, FDI and economic growth. A strong telecommunication infrastructure would go on to influence FDI and FDI would enhance economic growth. (Pradhan, Arvin, Nair, Mittal, & Norman, Telecommunications infrastructure and usage and the FDI-growth nexus: evidence from Asian-21 countries)

Telecommunications' Effect on The Goods and Services Market

Telecommunications has shown to be able to have other impacts, one such on the services and goods market where telecommunications have caused an increase in product market competition in services and goods market which would then determine economic performance. Twenty-one European countries were used as the basis of a finding for this topic in one study. The study goes on to show that because of online market competition, this already increases competition because online firms will get an edge over other competitors from saving in operating and entry costs as they do not rely on a physical space to operate as much as firms based out of a worksite. Keeping in line with labor regulations is one factor that hinders onsite competitors as they must allocate funds to other areas of work that would keep the business in line with labor laws.

Findings have shown that countries high in telecommunication diffusion, the competition is intense if the economy has a high growth potential. Other than costs in entry and labor regulation where telecommunication would be ahead in the market, other variables have shown to be the same for telecom and other market competitors. Telecom diffusion and dependence was also shown to yield a positive effect on the services and goods market. With telecom diffusion having an easier time in marketing themselves to consumers, this motivates other firms to push the marketing of their services and goods more to meet telecom marketing. However, in the measure of dependence on telecommunications might fail to identify the rank of telecommunication industry ranking accurately. The study had actually gone to search whether or not the findings for industries that use telecommunications least had any differences which they did not, results had proven to be about the same. (Jerbashian & Kochanova, 2012)

Reliance on Telecommunication in Education

With the advancement of technology and telecommunication, mobile phones and tablets are

quickly becoming effective useful tools for socializing, networking and now used in the education field. Mobile devices have grown to become another tool for students to use in their education and to make learning easier, something that a study had gone on look further into regarding the possible cause of this relationship. To gather this information for the study that had been conducted, a data collection instrument was designed involving an ad hoc questionnaire and used with the participation of 370 bachelor's degree students from the University of Huelva. Based on the analysis of the data, it had been found that performance expectancy and effort expectancy have had important influences on students using mobile devices for learning. Other factors have included a reduction in time when completing assignments and tasks, technical support and institutional assistance (Aliaño, Hueros, Franco, & Aguaded, 2019).

Although the device used to gather information should have included three other constructs to better analyze influences for using mobile phones, the study was still able to show with high certainty that the students preferred using mobile devices as a learning tool. Overall, the article sounded like it needed to be redone with more factors to be taken into consideration to get a better understanding for what makes students feel that it is okay to use mobile devices in an educational environment.

To further add onto the role telecommunications has in the field of education, I myself work in the public school system here on Saipan and having experienced the database systems, known as Rediker, used for inputting grades, attendance and student information, internet connectivity is vital in accessing the database when needed. Schools also use this system when a student transfers from one school to the next by transferring this data to the other school so that their digital records are up to date with the current situation and status of that student. Teachers also make use of an application on their mobile phones that allows them to take attendance without having to use the system on their laptops which makes recording attendance and grades easier to save on time. Loss of internet connectivity puts a great big halt to all of these functions as accessing the online database will not be possible, which means student information, attendance and grades will be unreachable and unable to receive, record or edit. Internet connectivity is vital a school working functionally and adequately.

Government Telecommunication Monopoly to A Market Competition and Its Effects

What happens when a government has sole control over telecommunications? What happens when it goes from being a government owned monopoly to a market competition that has direct effects on the people? A study was recorded about the direct and indirect effects of structural change in telecommunications on income distribution of something that had happened like this where such questions had experienced the effect. Telecom, (later called Telstra), is the single government-owned telecommunication network provider in Australia, basically giving it monopoly over telecommunications business. The areas that the study looks at that are effected directly and indirectly are in households, business and other industries and other chain of effects that can happen should any structural change occur with this huge power that the government has over Telecom (Verikios & Zhang, 2016). An economy-wide framework is utilized to be able to calculate the direct and indirect connections in structural change.

In the 1990's, the government began a reforming of infrastructure of industries to increase

competition and performance. This meant that there were no longer any barriers to entry for new carriers, carriers may also have access to public switched telephone network owned by Telecom and an introduction to anti-competitive conduct provisions for telecommunication services. From there, the study first looks at the number of employment, any changes in employment and prices for telecommunications. Here, it was found that employment in telecommunications had improved with new service providers coming onto the fray. There also happened to be a price drop that was very likely to have competing telecom providers compete with others in the market. Here is where the change in price creates a ripple effect.

Reduction in price costs raises employment of labor as production costs are reduced. When the price drops, welfare gain improves because so much of people's spending goes to telecommunication, either in mobile or landline phones, internet or cable. It's difficult to not be spending for at least one of these. With household welfare being a direct effect, the indirect would be the economy and how much it gains based on the value of the telecommunications business.

The Loss of Telecommunication Effects and Adjustments Needed to Function Without It

Brief mentions of the loss of telecommunications were previously mentioned in different scenarios and topics. Here, how a business/service is affected by the loss of telecommunications will become a focus based on an incident in south-west Victoria of Australia, where a fire had broken out that damaged the Warrnambool Telephone Exchange network provider Telstra, was a focus of the research regarding the impact of the loss of telecommunications. Using this time where so many places were affected by the loss of telecommunication, the main source of research was the General Practice clinics and other health services to see how they were impacted by the event. To work around the temporary loss of their telecom service provider, staff resorted to using their personal mobile phones (given that their service provider was other than Telstra) to send information regarding notes on patients and operations of their clinic. Business function of clinics also suffered as digital payments requiring a network were unusable, resorting to cash, check and invoice means. Preparing forms or paperwork, especially for the next day had to be done to ensure a better workflow. Because of the lack of telephone communications for setting up patient appointments, people had to do walk-in appointments. Other data however couldn't fully be released as they were regarding patients. Staff were limited in ways of contact and had to use their personal phones (again only if provider was not Telstra) or meet in person to give information (Tran & Pedler, 2016).

To better overcome the impact, a response strategy was formed which essentially lead to more work and less reliance on electronic tools. Areas they had struggled with the most were mainly because of no emergency plan set up for the situation. All staff were forced to adjust as best they could to ensure a better function of the general practice. This impact greatly shows how heavily we rely on telecommunications, most especially in a business environment as it smoothens and hastens work flow. Having an emergency plan in store to be prepared for a situation like this in the future will help keep operations afloat amidst the chaos of having to function without what we may come to take for granted.

The Far Reaching Effects That Telecommunication Loss Can Be

Felt

To look at a bigger effect that the loss of telecommunications has outside of a specific location like the previously mentioned clinic, a study that researches the aftermath of an earthquake in New Zealand reports on the affects after the event. The Kaikoua earthquake had hit the South Island of New Zealand, with most of the damage from landslides the earthquake's effects impacting the areas of Kaikoura, Ward, Hundalee, Clarence and Waiiau which lost all telecommunications. The affected forms of telecom that were damaged were telephone poles and phone lines, cell sites and cellular towers, aerial cables, buried cables, and some landline damage. So much damage was left in the wake of this event and issues that had to be addressed needed to be repaired as quickly as possible or see more damages arise. One example being that continued exposure to water for damaged cables will cause moisture to go into the cables. The study makes further mention that telecommunications is very essential and must be heavily prioritized as internet connectivity of smart devices like driverless cars, smart power grids and other smart devices rely on telecommunications to properly function. Even in the cause of natural disasters like this event forced a delay in generator arrivals due to the lack of telecommunication needed to keep the process working as quickly as possible which as another chain of events delayed repairs in the area that needed a generator (Giovinazzi, et al., 2017).

Conclusion

Telecommunication has shown to have a relationship between much of what we experience in our everyday lives and very harmful side effects should it not be readily available. It has grown to become a resourceful tool in the education field for both students and teachers. It affects the economy by creating jobs, regulating business between companies and customers while also providing jobs and even strengthens the economy of some places that heavily rely on it as a contributing factor. How other telecom companies compete with each other can also influence the telecom market as people always need this service and will go with the most affordable and well performing option possible to conduct their work and/or leisure activities that require this service.

Loss of telecommunications is very difficult, because other than the usual keeping in touch with people that we are used to for leisure, crisis events have shown the vitality of this resource. In a very disastrous event, communication between multiple parties take longer to complete which can lead to delayed actions that could will in turn prolong recovery efforts. Or even in a non-disastrous event, business and other service providers will not function as quickly or accurately as possible. Information can't be sent or shared between multiple parties, contact between people will be limited to other means, telecommunication based products will no longer be operable or accessible and alternate means will be needed.

For all these reasons, telecommunications have proven to be not only an essential part of everyday life, but is vital to its success. Alternate means of functioning without telecommunications only slows progress which in turn slows real development. Our continued usage and integration of a proper working telecommunications ensures more innovation for even better services with even better assistance for all functions of every day life.