CHAPTER I
INTRODUCTION

1.1 Object Review

1.1.1 Telkomsel

1.1.1.1 Profile

Telkomsel started operations in 1995, and within 20 years has established itself as the leading cellular operator in Indonesia, with more than 152 million customers, 103,000 BTS as well as more than 4,900 employees operating in 11 regions across Indonesia. Telkomsel go-to-market brand for postpaid customers is kartuHalo, while for prepaid customers, who account for almost 98% of Telkomsel base, they have three different brands targeted at different customer segments: simPATI, Kartu As and LOOP.

Figure 1.1 Telkomsel Logo

Telkomsel is the subsidiary of PT Telekomunikasi Indonesia Tbk (65%) and Singapore Telecom Mobile Pte Ltd (35%). We have the country's widest network coverage, with an estimated 2G population coverage of around 99% and 3G population coverage of around 65%.

In 2015, Telkomsel deployed almost 18,000 new Base Transceiver Stations (BTSs), of which 89% were 3G/4G-based. Telkomsel was the first operator to

commercially market the 4G LTE technology in Indonesia and by the end of 2015 we had coverage in 14 key cities with 2.2 million LTE users.

1.1.1.2 Vision & Mission

Vision

Be a world-class, trusted provider of mobile digital lifestyle services and solutions.

Mission

Deliver mobile digital services and solutions that exceed customers' expectations, create value for our stakeholders, and support the economic development of the nation.

1.1.1.3 Product

kartuHalo

Positioned as the postpaid brand of choice amongst the professionals and corporate customers segments. kartuHalo provides an unparalleled suite of full mobile services and exclusive privileges.

simPATI

Positioned as the prepaid brand for the savvy middle class segment, simPATI is Telkomsel's award winning lifestyle prepaid brand. simPATI continued to offer an exciting range of innovative packages and campaigns to drive demand for mobile data

Kartu As

Positioned as an 'Affordable, Value Prepaid Brand', Kartu As is Telkomsel's most popular prepaid brand which offers the best value to their customers.

LOOP

Officially launched on 9 March 2014, LOOP is Telkomsel's new prepaid brand, targeted at the youth segment. With the tagline "Ini KITA" (This Is Us), LOOP gives a youthful impression with its brand proposition "being better together", and its focus on offering attractive Data and Digital Services.

Telkomsel Flash

Telkomsel Flash is a superfast wireless internet service provided by the best, fastest and largest internet service provider in Indonesia - Telkomsel for all customers (kartuHALO, simPATI, LOOP and AS). The service is supported by technology LTE / HSDPA / 3G / EDGE / GPRS TELKOMSEL which can produce download speeds up to 42 Mbps.

1.1.2 Indosat

1.1.2.1 Profile

Figure 1.2 Indosat Logo

Established in 1967, PT Indosat Tbk (Indosat Ooredoo) is a leading telecommunication and information service provider in Indonesia and a member of Ooredoo Group, a global telecommunications provider. Indosat Ooredoo provides cellular, fixed data and wireless broadband services as well as fixed telecommunication or fixed voice offerings including IDD, fixed wireless and fixed phone services, and digital services. In addition, together with its subsidiaries PT Indosat Mega Media (IM2) and PT Aplikanusa Lintasarta, Indosat Ooredoo provides fixed data or Multimedia, Internet & Data Communication services such as IPVPN, leased line, internet services and IT services to corporate segments. The Company is listed on the Indonesia Stock Exchange (IDX: ISAT).

1.1.2.2 Vision & Mission

Vision

Indonesia's leading digital telco

Mission

- Liberating Product & Services
- Data Strong Network
- Treat Customer Like a Friend
- Digital Transformation

1.1.2.3 Product

Indosat Ooredoo offer a comprehensive range of high quality products in mobile voice and data services, including wireless broadband services on the GSM 900, DCS 1800, 3G and 4G-LTE cellular service. Indosat Ooredoo main cellular brands were rebranded in November 2015 as Matrix Ooredoo, Indosat Ooredoo iM3, and Mentari Ooredoo.

iM3 Ooredoo

Which provides prepaid cellular service for the youth market at affordable rates

Mentari Ooredoo

Prepaid GSM cellular targeting mature segment which offers simplicity & lifestyle.

Matrix Ooredoo

Postpaid GSM cellular service for high end professional corporate users that offers best service quality and experience.

1.1.3 XL

1.1.3.1 Profile

Figure 1.3 XL Logo

Initially starting business as a trading and general services company established on 6 October 1989 under the name of PT Grahametropolitan Lestari. In 1996, XL entered the telecommunications field after obtaining a GSM 900 operating license and officially launching its GSM services, becoming the first private company in Indonesia to provide cellular mobile telephone services. Later on, following a cooperation agreement with the Rajawali Group and three foreign investors (NYNEX, AIF and Mitsui), the Company's name was changed to PT Excelcomindo Pratama. In September 2005, XL launched an Initial Public Offering (IPO) and listed its shares on the Jakarta Stock Exchange now known as the Indonesia Stock Exchange (IDX). At that time, XL was a subsidiary of Indocel Holding Sdn. Bhd., which is now known as Axiata Investment (Indonesia) Sdn. Bhd., which all shares owned by TM International Sdn.Bhd., ("TMI") through TM International (L) Limited. In 2009, TMI changed its name to Axiata Group Berhad ("Axiata") which later in the same year PT Excelcomindo Pratama Tbk. also changed its name to PT XL Axiata Tbk. for synergy purpose. Currently, the majority of XL's shares are owned by Axiata through Axiata Investments (Indonesia) Sdn. Bhd. (66.4%) and the remaining is held by the public (33.6%). As a leading market player in Indonesia, XL provides services for retail customers and offers business solutions to corporate customers with wide network and service coverage throughout Indonesia. The services include Data, Voice, SMS and

other value-added digital services. XL operates its network on GSM 900/DCS 1800 and IMT-2000/3G technologies. XL also holds a Content Provider License, Internet Services Provider (ISP), Internet Interconnection Services License, Voice Over Internet Protocol License, Leased Line License, Money Remittance as well as E-Money Issuer License from the Central Bank of Indonesia, which enables XL to provide remittance service to its subscribers.

1.1.3.2 Vision & Mission

Vision

To be a leader in providing easy-to-use mobile internet experience at a lower price to Indonesians, with the XL brand having strong appeal to the Emerging Middle-Class segment

Mission

Enrich lives by digitally connecting Indonesians in a simpler way.

1.1.3.3 Product

XL Axiata offers various products to satisfy corporate communication needs, from Corporate GSM, Corporate Data Service, Domestic Network, International Network, Machine to Machine, M-Ads, XCloud, to Digital Merchant.

1.1.4 Tri

1.1.4.1 Profile

PT. Hutchison 3 Indonesia (H3I) is a rapidly growing telecommunications service provider operating under the National 2G/GSM 1800 MHz and the 3G/WCDMA licenses in Indonesia. H3I provides quality, innovative mobile data, and affordable voice and SMS services under the “3” brand, and moves with nationwide 3.5G network expansion to provide world-class internet experience for Indonesia. H3I is a member of CK Hutchison Holdings Group which comprises mobile telecommunications operations in the markets of Indonesia, Vietnam, and Sri Lanka, Australia, Austria, Denmark, Hong Kong, Ireland, Italy, Macau, Sweden, and the UK. Tri is here in Indonesia to provide a better internet experience to more users, offering

real flexibility according to what they really needs. Tri continuously develops innovations and breakthroughs in order to maximize overall user experience in enjoying mobile internet. Tri focus on presenting internet freedom for Indonesia, combining high-speed access and convenient to use services.

Figure 1.4 Tri Logo

1.1.4.2 Vision & Mission

Vision

Present internet freedom for Indonesia, combining high-speed access and convenient to use services.

Mission

Continuously develops innovations and breakthroughs in order to maximize overall user experience in enjoying mobile internet.

1.1.4.3 Product

AlwaysOn

Enjoy free internet connection with bonus quota every month and validity period that lasts up to one year.

Indie+

Indie+ gives phone credit and Internet quota worth Rp 200,000. Use now, pay later.

1.2 Research Background

Internet positively impacts the economy since it spreads information, stimulates innovation, builds up network, fosters business, deepens capital, improves labor market, strengthens market competition, and helps firms to profit from emerging markets. Internet facilitates access to information and reduces search costs. Firms adopting internet are able to communicate better, faster and at lower costs. This reduces internal as well as external transaction costs and thus lowers production costs and enhances productivity and generates economic growth (Harris, 1998).

According to a research conducted by Asosiasi Penyelenggara Jasa Internet Indonesia in last 2 years, The internet users in Indonesia has increase significanlly. On 2016, there are 132.7 million internet users out of the total population, Increase from 88.1 million users in 2014.

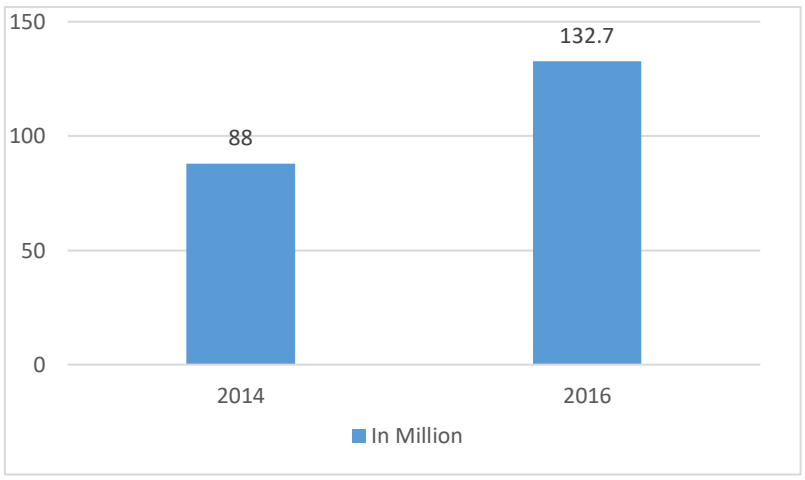

Figure 1.5 Internet Users in Indonesia

Source: Asosiasi Penyelenggara Jasa Internet Indonesia (2016)

From the total internet users in 2016, APJII found that most of the internet users in Indonesia prefer to use internet directly from their smartphone compare to use internet from their computer. Out of 132.7 million internet users, more than 130 million of them use smartphone to penetrate internet connection, while the rest only 2.2 million that still used computer to access internet.

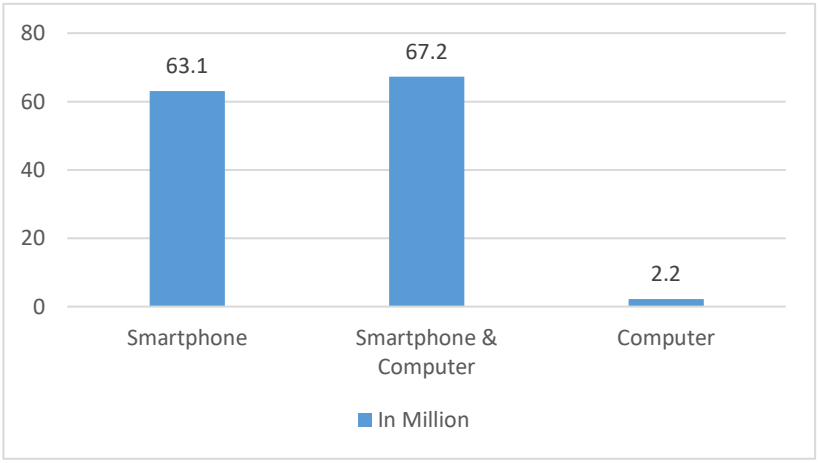

Figure 1.6 Devices That Used By Internet Users in Indonesia (2016)

Source: Asosiasi Penyelanggara Jasa Internet Indonesia (2016)

Availability of mobile services generates numerous economic benefits to a country's economy. Mobile telephony positively affects the supply side of the economy through the operations undertaken by mobile operators and actors in the wider mobile ecosystem, including providers of network services, providers of other support and commercial services, and the network of formal and informal points of sale througout each country. These positive economic impacts of mobile telephony services have been quantified by Waverman et al (2005), who concluded that 10 more mobile phones per 100 people would increase GDP per capita growth by up to 0.6 percentage points. Meanwhile, studies on developing countries founded that the impact to be larger, between 0.8 and 1.2 percentage points.

As mobile telephony markets become more mature, the positive impacts of basic mobile voice and text services on growth and productivity are achieved. Whereas the impact of 2G services is significant, as more developed 3G technology replaces 2G, an incremental economic impact is observed. Differential economic growth is supported as these technology changes allow consumers and businesses to benefit from high value wireless data and content services. An econometric analysis of the relationships between 3G connections and economic growth in developed and developing market finds that increases in penetration of 3G services generate significant economic benefits. According to deloitte, a 10 per cent substitution from 2G to 3G penetration increases GDP per capita growth by 1.5 percentage points.

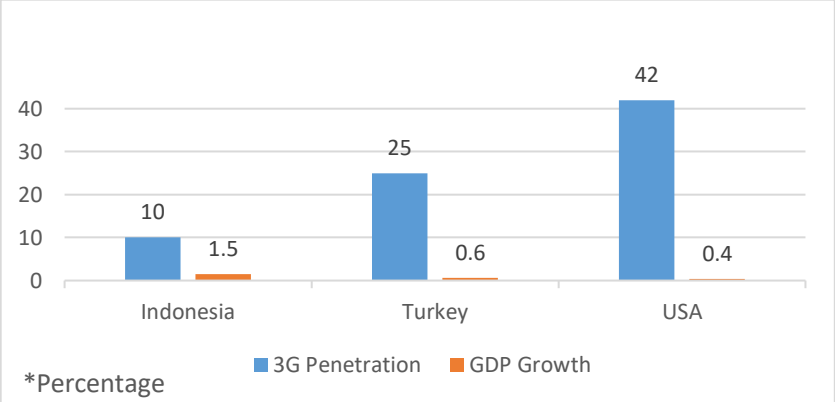

Figure 1.7 Impact of 3G Penetration on Economic Growth

Source: Deloitte (2015)

In Indonesia, where the average penetration of 3G services was 10% over 2008-2011, 10 more 3G connections per 100 connections, would have increase the GDP per capita growth by 1.5 percentage points. While in Turkey, where the average penetration of 3G services was 25% over 2008-2011, 10 more 3G connections per 100 connections, would have generated an additional growth in GDP per capita of 0.6 percentage points. In USA where the average 3G penetration was 42% over 2008-2011, 10 more 3G connections per 100 connections, would have increase the GDP per capita growth rate by 0.4 percentage points.

From the data above, the author assume that 4G adoption in Indonesia potentially increase the national GDP if the 4G users in Indonesia successfully increase. According to Rudiantara, Minister of Telecommunication and Information of Indonesia, approximately there are 20 million of 4G users in Indonesia in 2016.

In Indonesia itself, there are number of service providers that offers 4G services to their customers. Some of them are Telkomsel, Indosat Ooredoo, XL Axiata and Tri Hutchinson. These providers are the four biggest provider in Indonesia.

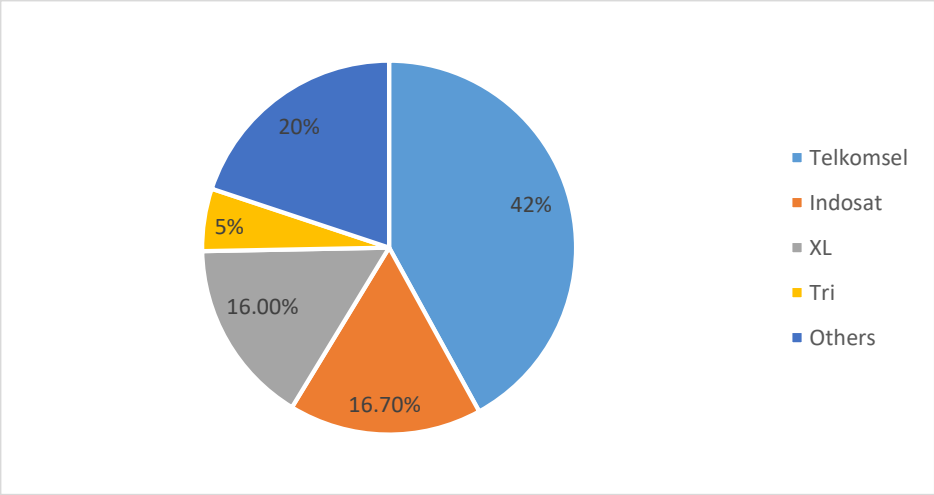

Figure 1.8 Service Providers Market Share in Indonesia (2015)

Source: Aziz (2015) The Competition Strategy of Mobile Telecommunication Operators

Until 2015, Telkomsel still dominating the service provider market by owned 42% of market share. Indosat is on the second place with 16.70% shares, while XL is on third place with 16% of market share, and Tri on the fourth place with 5.4% of market share. While the rest 19.9% is own by the other service providers (Smartfren, Esia, Bold and Axis).

In Indonesia itself, 4G network was launched by President Joko Widodo on December 11, 2015. After the inauguration, the five leading operators directly spread

the network to the rest of Indonesia. They are Telkomsel, XL, Indosat, Tri, and Smartfren. With the implementation of 4G networks, mobile phones and tablets are supposed to effectively perform every internet role. In theory, 4G networks can operate at between four and 10 times the speed of 3G, significantly increasing bandwidth and throughput capabilities for users. For LTE market share in Indonesia itself, is dominated approximately 50% by Telkomsel from total LTE market in Indonesia.

By making the switch from 3G network to 4G network, businesses will gain certain important benefits. While many 3G networks are fast enough to perform common mobile internet functions, they can be seriously slowed down during peak times when a large number of users are online simultaneously. Having the internet slow to a crawl can be a frustrating experience for those working on the go and can decrease productivity. Switching to 4G may alleviate these problems, although not eliminate them. 4G will still be affected during peak times but its higher base speed should make it possible to continue surfing comfortably. There are other benefits of 4G unrelated to speed. Sending and receiving calls becomes vastly more secure as conversations go through a Voice-over-Internet Protocol. 3G calls by contrast go through the airwaves, making it easier for information to be intercepted. Making the switch can both alleviate fears of important information falling into the wrong hands and allow businesses to save money on security technology.

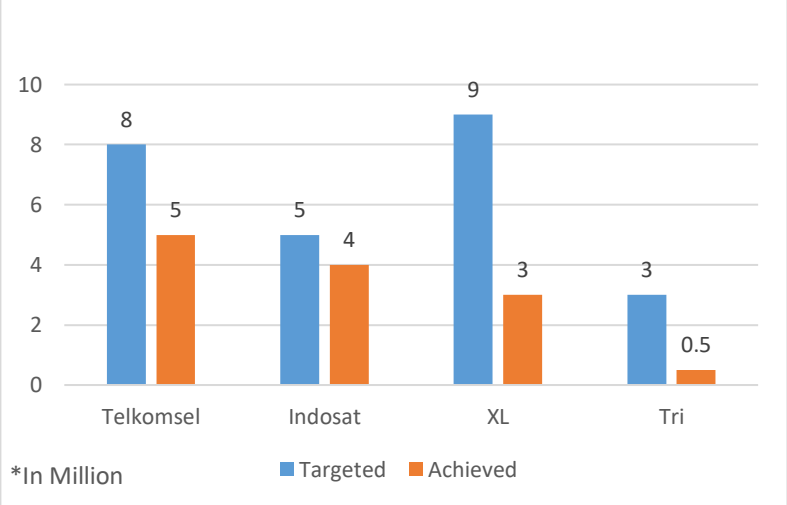

Figure 1.9 Targeted and Achieved Customers of 4 Biggest Service Provider in Indonesia (2016)
Source: www.indotelko.com, www.kabarbisnis.com, www.cnnindonesia.com, tri.co.id, inet.detik.com

According to the data that collected from several sources, in 2016 Telkomsel has a target to reach 8 million 4G customers, while their current achieve has only reach 5 million customers. Hutchinson Tri has 3 million 4G customers, while their achievement has only reach 500 thousand customers. XL targeting the highest number of 4g customers with 9 million 4G customers, while their achievement so far only reach 3 million 4G customers. For Indosat itself, they targeting 5 million 4G customers in 2016, while they only achieved 4 million customers so far. Figure 1.9 shows that there is still a gap between targeted 4G customers with achieved 4G customers of each providers, means by making a switch from 3G to 4G services, it will not only give a positive effect on national economic, but also will help service providers to achieve their profitability.

On this research, used only 4 service providers as the research object, Telkomsel, Indosat Ooredoo, XL Axiata, and Tri. The other providers are not included, since Esia is no longer exist on the service providers market, Axis is already takeover by XL Axiata. While Bolt provider is only provide a 4G services for JABODETABEK area, and Smartfren is still on the transition era (from CDMA to LTE technology).

Analyzing the factors that influencing consumer intention on using 4G services may be a major obstacle on the adoption of 4G services itself, the present study proposes that consumer intention will moderate causal relationships among variables in the UTAUT 2 model. UTAUT 2 is a model of the acceptance and use of technology

in the context of the consumer. There are three types of expansion / integration UTAUT, testing UTAUT in the new context (new technologies, the population of new users and new culture). There are 7 factors included inside UTAUT 2 model, *performance expectancy*, *effort expectancy*, *social influence*, *facilitating conditions*, *hedonic motivation*, *price value* and *habit*. These 7 key constructs will help the researcher to identify the reasons of acceptance and to determine the factors that influence the informants that affect their intention to use 4G services. Moreover, the researcher also add one more variable, which is *Content*.

Indrawati (2012) who studied UTAUT in the context of 3G mobile multimedia services adoption in Indonesia in 2012 and in the context of website adoption in 2014 modifies and provesd that the model of original UTAUT of Venkatesh et al., (2003) added with content construct. Kargin, Lee & Brown (2009) stated that content is one of the most important factors contributes to the global adoption of broadband. Content is also as one of the three most essential predictors of mobile service preferences (Bagoslu & Daim, 2009). Garcia-Murillo (2005) stated that content is an important factors and positively affects broadband subscriptions.

From the background above, the author conduct a research with the title **"Analyzing 4G Adoption in Indonesia Using a Unified Theory of Acceptance and Use of Technology 2 Case Study: 4 Biggest Service Provider in Indonesia"**

1.3 Problem Statements

Growth in mobile data consumption has the potential to transform the way in which consumers and business operate and communicate, and as such increase economic growth through productivity effect. As we know, from the previous part, Indonesia has a potential to increase 1.5 % of GDP if they success to increase the number of 4G users by 10%.

Unfortunately, the 4G penetration in Indonesia has only reach less than 15%. The factors that affecting consumers on using 4G services in Indonesia still not clearly observe, and UTAUT 2 is found as the latest model that suitable for technology acceptance issues.

1.4 Research Questions

1. According to UTAUT 2 model, what are the factors that affect consumers on using 4G services in Indonesia?
2. Do age and gender affect the factors inside UTAUT 2 model in the context of 4G services in Indonesia?

1.5 Research Objective

1. To test the factors inside UTAUT 2 model that influence the consumers on using 4G services in Indonesia.
2. To test that age and gender are affecting the factors inside UTAUT 2 model in the context of 4G services in Indonesia.

1.6 Significance of Study

This research is expected to be useful for any parties who want to use this research. The purposes of this research are:

1.6.1 Academic Aspects

For researcher, this research can provide the opportunity to apply the theories that have been learned in the classrooms which will increase the researcher's knowledge and experience. The results from this research are hopefully be able to give useful information to develop more knowledge in the field that related with UTAUT 2.

1.6.2 Business Aspects

For company, this research is expected to contribute ideas and references that are useful to know the perception from 4G users and also provide suggestions and steps that can be done further in solving problems that may arise with regard to adoption of 4G services in Indonesia.

1.7 Scope of Study

This study provides a restriction to maintain consistency purposes of this study, so that the problems encountered are not widespread and more focused discussion.

1.7.1 Location and Object of Study

1. The location of the object study is conducted in Indonesia.
2. The object of this research are 4G service users of Telkomsel, XL, Indosat Ooredoo or Tri in Indonesia.

1.7.2 Time and Period

The period of this study is during December 2016 – March 2017

1.8 Systematic of Writing

Systematic of writing in this study are divided into five chapters as follows:

Chapter I: Introduction

This chapter is describing the review of the research object, research background, problem statement, research objective, and scope of research

Chapter II: Literature Review

This chapter contains a description of literature review, theories related to research and solution of the problem, theoretical framework and scope of the study.

Chapter III: Research Methodology

This chapter contains the type of research used, the operationalization of variables and measurement scales, phases of the research, population and sample, data collection validity, and reliability test, and data analysis techniques.

Chapter IV: The Research Result and Data Analysis

This chapter describes the characteristic respondent, result of research and discussion about the result of research itself.

Chapter V: Conclusion and Suggestion