THE ROLE OF E-COMMERCE PROVIDER IN SOLVING B2C E-COMMERCE’S LOGISTICS PROBLEMS IN JAKARTA

(A COMPARATIVE STUDY AT PT. ACOMMERCE SOLUSI LESTARI)

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The Panel of Examiners declares that the skripsi entitled “THE ROLE OF E-COMMERCE PROVIDER IN SOLVING B2C E-COMMERCE’S LOGISTICS PROBLEMS IN JAKARTA (A COMPARATIVE STUDY AT PT. ACOMMERCE SOLUSI LESTARI)” that was submitted by Kezia Revina majoring in Management from the Faculty of Business was assessed and approved to have passed the Oral Examinations on January 12, 2016.

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This skripsi entitled “THE ROLE OF E-COMMERCE PROVIDER IN SOLVING B2C E-COMMERCE’S LOGISTICS PROBLEMS IN JAKARTA (A COMPARATIVE STUDY AT PT. ACOMMERCE SOLUSI LESTARI)” prepared and submitted by Kezia Revina in partial fulfillment of the requirements for the degree of Bachelor in the Faculty of Business has been reviewed and found to have satisfied the requirements for a skripsi fit to be examined.

I therefore recommend this skripsi for Oral Defense.

Cikarang, Indonesia, December 7, 2015

Acknowledged by,  Recommended by,

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DECLARATION OF ORIGINALITY

I declare that this skripsi, entitle “THE ROLE OF E-COMMERCE PROVIDER IN SOLVING B2C E-COMMERCE’S LOGISTICS PROBLEMS IN JAKARTA (A COMPARATIVE STUDY AT PT. ACOMMERCE SOLUSI LESTARI)”, is to the best of my knowledge and belief, an original piece of work that has not been submitted, either in the whole or in part, to another university to obtain degree.

Cikarang, Indonesia, December 7, 2015

Kezia Revina
ABSTRACT

Through a qualitative research, the focus of this research is to explain the role of e-commerce providers in solving B2C e-commerce’s logistics problem in Jakarta (a case study at PT. Acommerce Solusi Lestari). Researcher uses the theory from Yin (2010), Erina Audrey (2013) and Miles and Huberman (2013) as references to get valid and reliable data. For the analysis, researcher also utilizes The Kraljic Matrix developed by Peter Kraljic. e-Commerce has growth enormously in Indonesia for the past few years, especially B2C e-commerce in Jakarta. Despite of this rapid growth, B2C players are facing bottleneck on the logistics side that indicates the immaturity of logistics players in supporting B2C e-commerce’s growing needs. There have been some e-commerce providers shown up and taken actions to solve B2C logistic problems in Pre and Post-2013. Researcher got conclusion that one of the current requirements to solve e-commerce logistics problem in Jakarta is technology implementation.

Keywords: e-Commerce, B2C, Logistics, Technology, Pre-2013, Post-2013, PT. Acommerce Solusi Lestari
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CHAPTER I
INTRODUCTION

1.1. Background of Study
1.1.1. Introduction of e-Commerce

e-Commerce or electronic commerce, is defined as a process of buying, selling, transferring, or exchanging of products, services, and/or information via computer networks, including the internet (Rainer and Cegielski, 2011). It began on 1979 through online shopping system, called Videotex, which invented by British man named Michael Aldrich (Linked In, 2015). Videotex was one of the first end-user technologies. It displayed interactive information on a TV screen, enabled people to shop online through TV. Countries around the world started to get involved in this phenomenon and the milestone of e-commerce industry was Amazon.com which created in 1994 by Jeff Bezos. Amazon.com has become the largest interned-based retailer and top model of this industry.

In Indonesia, e-commerce fundamental law is referred to Law No. 11 of 2008 regarding Electronic Systems and Transactions (“Law 11/2008”) and Government Regulation No. 82 of 2012 regarding the Implementation of Electronic Systems and Transactions (“GR 82/2012”). These laws talk about the requirements and regulations that e-commerce players must follow. One of the requirements for e-commerce under GR 82/2012 is that they should provide users with at least: (i) the identity of the party providing such electronic system; (ii) detailed information on the object of any transaction, meaning that the website must provide detailed information on the objects it sells; (iii) safety information; (iv) usage procedures; (v) terms and conditions of usage; (vi) procedures to reach agreement, meaning that in terms of buying a product, the users must be provided with sufficient information on the procedure to complete a transaction; and (vii) guarantee of privacy and/or protection of personal data.
There are 3 major types of e-commerce companies (Dustin Thompson, 2012). The first is business-to-business (B2B) which refers to business that is conducted between companies, rather than between a company and individual consumers, for examples are Alibaba, Bizy, and Ralali. The second is business-to-consumer (B2C) where business conducted directly between a company and consumers (the end-users of its products or services), for examples are Groupon, Lazada and Agoda. The third is consumer-to-consumer (C2C) where customers can trade with each other, for examples are Kaskus, Tokopedia, and Bukalapak.

1.1.2. e-Commerce in Indonesia Pre-2013

In Indonesia, e-commerce was pioneered by Sanur Online Book Store, www.sanur.com, which established on 1996 and sold around 30,000 books online (University of North Sumatra, 2011). In that year also, PT Dyviacom Intrabumi Tbk was established and aimed to build Indonesian internet by becoming Indonesian Internet Service Provider (ISP) that offered information technology (IT) solutions.

In 1999, Bhinneka.com came up, focused on selling technology products. Kaskus also showed up, becoming Indonesia’s largest online forum. Sanur couldn’t last for long time due to Indonesian low interest in reading books, while Bhinneka.com struggled with Indonesia’s internet infrastructure but managed to survive until now.

The milestone of Indonesia’s e-commerce industry was in 2005 where people gained more awareness about online shopping because of Tokobagus.com (now is OLX.co.id) and Air Asia. Tokobagus.com was set up in 2003 but officially launched on 2005. It’s the first marketplace in Indonesia, built by Arnold Sebastian Egg and Remco Lupker, both are Dutchman. Tokobagus.com enables people to sell and buy goods online. Then Air Asia was pioneered online booking for flight tickets, and it was the one who improved people trust of buying goods online.
Starting from 2010, there was another boom in e-commerce industry. Increased traffic congestion and rising internet penetration (more internet users) become one the reasons of why do more Indonesians shop online, as shown in Figure 1.1 and Figure 1.2 below.

![Figure 1.1 Internet Penetration Trend in Indonesia](image1)

**Figure 1.1 Internet Penetration Trend in Indonesia**  
*Source: Asosiasi Penyelenggara Jasa Internet Indonesia (APJII), 2012*

![Figure 1.2 Growth in Indonesia’s Internet Users](image2)

**Figure 1.2 Growth in Indonesia’s Internet Users**  
*Source: Singapore Post, 2014*

It is also supported by the condition that more product categories were available for online shopping since more players were joining the industry, such as Groupon, Agoda, and Rocket Internet’s players. Rocket Internet is a German company, established in 2007, which aimed to become the world’s largest internet
platform outside the United States and China. Rocket Internet has created over a hundred market leading companies in more than fifty countries, and currently Rocket Internet is the largest internet incubator in the world. On 2011, Rocket Internet started to spread its wings to Southeast Asia’s markets and its first player who entered Indonesia was Zalora.

Zalora enters Indonesia on 2012. Within 3 years of operation, Zalora has managed to become Indonesia’s largest online fashion website with 600 local and international brands offering over 30,000 products of cloth, shoes, accessories and beauty products. The second player who also entered Indonesia in 2012 was Lazada, currently the largest online mall in Indonesia. Lazada.co.id has more than 50,000 products ranging. Figure below shows the overall timeline of e-commerce in Indonesia.

**Figure 1-3 Timeline for Indonesia e-Commerce**

**Source:** UBS Global Research, 13\(^{th}\) June 2014
1.1.3. e-Commerce in Indonesia Post-2013

While major e-commerce sites that started to show up since 2010 was more focused on selling daily product needs, on 2013 e-commerce players with various range of market segmentations were started to join Indonesia e-commerce industry. The examples are Carmudi and Lamudi; both are from Rocket Internet too.

Established in 2013, Carmudi is one of the leading Internet Car portals in the Indonesia market that offer a car trading platform with attractive prices to private customers, car dealers and other partners. Carmudi provides wide range of car models including, but not limited to, famous brands such as Toyota, Honda, Audi, Peugeot, Porsche and Suzuki.

Lamudi is more focused on property industry. It provides information for those who want to buy, sell or rent houses, lands, and commercial properties in several big cities in Indonesia, such as Jakarta, Bandung, Surabaya, Denpasar, Jambi, Pontianak, Gorontalo and so on. Lamudi would connect its customers directly with the property’s owner, agent, developer, or the property’s third party.

As e-commerce is showing in Indonesia, global firms/researchers have started to analyze this phenomenon deeper. Two of them were Taylor Nelson Sofres (TNS) and McKinsey who did their research in 2013.

TNS is a leading market research and market information group with headquarter in London, UK. TNS conducted an Online Shopper Study Research in Indonesia. One of its objectives was to know the growth of online shopping in Indonesia by surveying 200 non-online shoppers. From that research, TNS found out that many Indonesian non-online shoppers are interested to try online shopping for the first time. TNS concluded that 46% of Indonesians who have never shopped online expect to buy online within the next 1 year (TNS, 2013).

McKinsey, a multinational management consulting firm with headquarter in New York City, USA, predicted that in the next 5 years, online shop in Indonesia will grow at least 10 times bigger from 3 percent to 30 percent (shown in Figure 1.4.).
Along with this growth, B2C is gaining more dominance in Indonesia rather than B2B and C2C. For B2B itself, the market totaled to the shocking size of only $1.79 Billion (Qoura, 2014). While for C2C e-commerce, a research found that its growth will be outpaced by B2C e-commerce, as shown in Figure 1.6.
According to eMarketer’s forecast of digital sales of retail and travel products and services, B2C ecommerce sales are expected to grow 23 percent in Asia-Pacific, with sales in China and Indonesia growing particularly fast, up 65 percent and 71 percent, respectively (eMarketer, 2013).

Looking closer to this phenomenon, it found out that Jakarta itself has driven 70% of the total e-commerce growth, shown in figure below.

Despite of this prosperous growth, B2C e-commerce in Jakarta is facing a serious bottleneck on the logistics side (Tech in Asia, 2015). e-Commerce needs support from logistics to do quick delivery service as the initial premise of online shopping is to enable customers get their product quickly and convenient without spending much time to shop from one place to another. By the time B2C companies can’t fulfill this premise, the positive essence of e-commerce would
fall in customer perspective, also in business perspective it could affect negatively to companies goal and brand image (Rama Mamuaya, 2014).

One of the major logistics problems in Jakarta faced by B2C e-commerce is the delay of delivery. Facts have shown that e-commerce companies often can’t fulfill the quick delivery service. 25 percent of internet users surveyed by Vela Asia said that untimely deliveries had caused them to think twice about shopping online. Although most Indonesian e-commerce sites aim to deliver the order in two to six days in major cities like Jakarta, 37 percent of respondents waited for a week or more (e27, 2013). As shown in figure below, respondents, who are online shopper, are being asked about the reasons that make them inconvenience to shop online; 11 respondents answered that delivery time has influence them the most.

![Figure 1-8 Consumer Complaints](image)

**Figure 1-8 Consumer Complaints**

**Source:** Daily Social, 2015

This problem happens because logistics in Indonesia has not ready yet to balance e-commerce growth. If we look when e-commerce made its debut in USA, the country already had strong logistics providers such as DHL, UPS, and FedEx, which quickly welcomed the trend by providing special logistics service for e-commerce. The scene here is different. Frankly, there was no logistic provider that ready to welcome e-commerce boom as we saw that none of the players offers focused logistics service for e-commerce by the time e-commerce entered Indonesia (KPMG, 2015). Poor logistic infrastructure, high cost and less
technology implementation in Jakarta are being the bottleneck to fulfill e-commerce logistics needs.

The Ministry of Communication and Informatics Republic of Indonesia (2013) stated that 130 trillion logistics transactions in 2013 were derived from e-commerce. However, only few logistic players have realized how potential this market is and started to make service for e-commerce, such as JNE, First Logistic and RPX (Veritrans, 2015). Even Pos Indonesia, one of the oldest and biggest logistic providers in Indonesia, has just begun to build its e-commerce logistic service this year (Pos Indonesia, 2015).

Looking at the condition where e-commerce logistics market demand is huge but only few players on it, several parties see this condition as business opportunity. One of them is aCommerce. Under the name of PT. Acommerce Solusi Lestari, aCommerce started to enter Indonesia officially on November 2013. Currently, aCommerce is the only end-to-end e-commerce provider in Indonesia which supports those who want to start online business. It has three core services which are technology, marketing and operation service. Frankly, aCommerce can provide all things that offline companies need to go online.

On its early days, aCommerce was started with very few clients, such as Mitra Adi Perkasa and Groupon. It kept growing and now, within 1.5 years of operation, aCommerce already got more than 90 clients vary from SME (Small Medium Company) as well as big companies, local, regional, international brands from various industries (fashion, food and beverage, electronics, lifestyle, services and so on).

As one of aCommerce’s core services is operation, it means that aCommerce also has the responsibility to ensure the quick delivery of its client products. aCommerce knows that they can’t rely on third-party logistics (3PL) such as JNE and First Logistics, therefore they built their own delivery system and for Jakarta area, aCommerce delivers the ordered product with their own riders and fleets.
Lazada also built Lazada Express, their in-house delivery service to keep positive user experience where delivery can be done quickly with more economic cost (Daily Social, 2014). Another party who is also aware of this opportunity is logistics new entrant, Go-jek. Go-Jek actually has been operating in Jakarta since 2011, but it has just launched its app and become serious in expanding its network of drivers at the beginning of this year. Go-Jek now claims to have signed up more than 2,500 drivers, and their trademark green helmets and jackets have become part of the cityscape. It has courier service that enable sender to directly send the package to receiver with terms and conditions apply.

Based on above phenomenon, researcher has chosen “The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta (A Comparative Study of PT. Acommerce Solusi Lestari)”, as the title of this research to further analyze how these e-commerce providers are helping B2C e-commerce to keep growing and fulfill its market needs despite the faced logistic challenges.

1.2. Problem Identification

Jakarta is well known for its worst road traffic jams in world (The Jakarta Post, 2015). The KPPB (Komite Penghapusan Bensin Bertimbel/Committee Against Leaded Gasoline) states that Jakarta citizens spend about 60 percent of their journey time in traffic jams, instead of in motion (Keith Hargreaves and Daim Syukriyah, 2012). It implies a considerable loss in personal productivity of Jakarta citizens which estimated a total annual loss of IDR 9.7 trillion in lost work time resulting from traffic jams. Also, according to the Presidential Work Unit for Development Monitoring and Control, each year Jakarta itself lost IDR 12.8 trillion due to severe traffic congestion.

One of the factors that causing these traffic jams is the troubled infrastructure existed in Jakarta areas. Even almost all transportation modes in Indonesia,
includes Jakarta (The Diplomat, 2014), are concluded to have quite poor logistic network and quality. Figure 1.9 shows the comparison of our infrastructure.

![Table: Qualitative Assessment of Logistic Infrastructure in ASEAN](image)

**Figure 1.9 A Qualitative Assessment of Logistic Infrastructure in ASEAN**

*Sources*: Jones Lang LaSalle; A.T. Kearney analysis, 2015

Then, this poor logistic infrastructure affects the national logistic cost. Indonesia is “awarded” as country with the most expensive logistics cost compared to other Asian nations, shown in Figure 1.10. It showed that 46 percent of the logistics costs were from transportation, 36 percent were from inventory costs, while administration costs accounted for the remainder. The higher costs were due to inefficiencies and bottlenecks in most of the country’s roads which accounted for 92 percent of the country’s logistical traffic (Indonesian Logistics Association, 2011).

![Table: Indonesia Logistics Cost Among Advanced & ASEAN Countries](image)

**Figure 1.10 Indonesia Logistics Cost Among Advanced & ASEAN Countries**

*Source*: State of Logistics Indonesia, 2013

Another challenge is the implementation of technology on Indonesia’s logistic system and infrastructure. Indonesia has not yet provided effective and efficient integrated technology for its logistic sector (Triono Saputro, 2015). By this
reason, Indonesia is quite left behind in terms of logistic competitiveness compared to other countries in Asia-Pacific region, and this matter also contribute to why Indonesia has expensive logistic cost as shown in figure below.

![Figure 1-11 Indonesia Competitiveness Compared to Asia-Pacific Nations, figure shows 2014-2015 rank out of 144 countries](image)

_Hence, this research will try to provide deep analysis to find the role of e-commerce provider in solving the identified B2C e-commerce’s logistic problems in Jakarta._

**1.3. Statement of Problem**

1. What are the requirements needed by logistics players to meet the growing needs of B2C e-commerce in Jakarta?
2. How these requirements are relevant to solve B2C e-commerce’s logistics problems in Jakarta?
3. How effective are the actions taken by e-commerce provider in solving B2C e-commerce’s logistics problems in Jakarta?

**1.4. Research Objectives**

1. To find out the requirements needed by logistics players to meet the growing needs of B2C e-commerce in Jakarta.
2. To find out the relevancy of the found requirements in solving B2C e-commerce’s logistics problems in Jakarta.
3. To find out the effectiveness of the actions taken by e-commerce provider in solving B2C e-commerce’s logistics problems in Jakarta.

1.5. Definition of Terms

**e-Commerce:** A type of business model that enables a firm or individual to conduct business over an electronic network by using internet.

**e-Commerce Provider:** Parties who provide products or services that enable e-commerce transaction.

**B2C:** Business or transactions conducted directly between a company and consumers who are the end-users of its products or services.

**Logistics:** The overall management of the way resources are obtained, stored and moved to the locations where they are required.

**Infrastructure:** The basic systems and services, such as transport and power supplies, that a country or organization uses in order to work effectively.

**System:** A set of detailed methods, procedures and routines created to carry out a specific activity, perform a duty, or solve a problem.
1.6. Scope and Limitation

1. Scope

The research is conducted to “The role of e-commerce provider in solving B2C e-commerce’s logistic problems in Jakarta”, a comparative study of PT. Acommerce Solusi Lestari in Jakarta. Researcher also study the phenomena happened in other e-commerce providers in Jakarta (such as those who work in logistics service, e.g. JNE, First Logistic, POS Indonesia & TIKI) to support the data finding.

2. Limitation

This research is focused on B2C e-commerce type, with regional parameter in Jakarta area. Interview is done to several B2C e-commerce and logistics players. The interviewees are working at PT. Acommerce Solusi Lestari at the moment. All of them are having broad working experiences in e-commerce industry, from the employee of B2C companies until the vice chairperson of ALI (Asosiasi Logistics Indonesia). Researcher limits the logistic problems that are faced in Jakarta. This research only analyzes the role of e-commerce provider in solving B2C e-commerce’s logistics problems in Jakarta through qualitative method by taking PT. Acommerce Solusi Lestari for the comparative study analysis.

1.7. Research Benefits

1.7.1. For Researcher

This research will be in partial fulfillment of requirement for the researcher to obtain a bachelor degree. However, despite of it, this research will definitely give valuable experiences for researcher in conducting a research especially in implementing international business theories, specifically on e-commerce and logistics. Besides, from the technical point of view, researcher will get in-deep knowledge about how to conduct a right research in a right way, from the very
first step of brainstorming a research problem, formulating a topic research, setting the objectives, reviewing literature, research methodology, collecting the data, analyzing the input, and finally making an output of the research. All of these steps will be very beneficial for researcher in conducting the next research.

1.7.2. For President University, International Business Studies and Future Research

Studies about e-commerce industry as the main subject are still limited. Thus, this research would give a valuable contribution regarding e-commerce, and also logistic topic, for international business studies in President University. Besides, researcher really hopes that this research could be used as references by future researcher to develop new studies in the field.

1.7.3. For B2C e-Commerce and Logistic Players

This research indicates that logistic providers somehow can’t catch up with e-commerce rapid growth, especially for B2C e-commerce. Those B2C players end up facing serious logistic problems, majorly causing delay of product delivery. Here, researcher analyzes what are the requirements needed by logistic providers to meet the growing needs B2C e-commerce, what have been the actions taken by current logistic providers and the effectiveness. Therefore this research could be a reference for both B2C e-commerce and logistic players to evaluate their service level, performance, and strategies to survive, growth and compete in Indonesia, especially Jakarta’s emerging market of e-commerce.

1.7.4. For PT. Acommerce Solusi Lestari

As aCommerce has quite many clients who perform B2C e-commerce, this research could be a reference for aCommerce to update its knowledge regarding current logistic needs of its clients and how aCommerce should respond to these growing needs of B2C e-commerce.
CHAPTER II

LITERATURE REVIEW

2.1. e-Commerce

2.1.1. Definition of eCommerce

In the last two decades due to the increased development of the technology and the emergence of the internet and World Wide Web (www), the new term e-commerce was born. From the mid-1990s e-commerce began to grow rapidly and to reshape many industries. The marketplace and the way the business is conducted will never be the same (Chong, 2008).

There have been various definitions of e-commerce. Rainer and Cegielski (2011) defines e-commerce as a process of buying, selling, transferring, or exchanging of products, services, and/or information via computer networks, including the internet. Rayport and Jaworski (2002) add that the process of exchange is technology mediated and that it is based on inter and intra organizational activities for facilitating such exchange.

Table below shows a range of perspectives regarding what is considered as e-Commerce:

<table>
<thead>
<tr>
<th>PERSPECTIVE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communication</td>
<td>To deliver information, product, services and payments over the telephone, communication, networks and other means.</td>
</tr>
<tr>
<td>Business</td>
<td>To automate business transaction and work flows.</td>
</tr>
<tr>
<td>Service</td>
<td>To cut service cost while improving the quality of goods and increasing the speed of service delivery.</td>
</tr>
<tr>
<td>Online</td>
<td>To provide the capability of buying and selling products and information over the internet.</td>
</tr>
</tbody>
</table>

Table 2.1 e-Commerce from Four Perspectives

Source: Kalakota and Whinston (2005)
Efraim Turban and David King (2002) have other two perspectives of e-commerce which are:

1. From collaborative perspective: e-commerce facilitates organizations to collaborate each other, both within its internal members and with another organization (external party).
2. From community perspective: e-commerce is a gathering place for community members to learn, interact and collaborate to one another.

In the context of this research, e-Commerce refers to internet-facilitated sales of products, services, and information by business to consumers, e.g. B2C e-Commerce.

2.1.2. e-Commerce Components

e-Commerce has unique mechanisms which differ it from traditional or offline commerce. Several components included in its mechanism are (Efraim Turban and David King, 2002):

1. Customer

The customer is basically an internet user who becomes a target market for seller who offers goods, service and information through the internet. E-commerce provides better access and communication with customers, which can be used for a better understanding of customer needs and finally offering a product which fully satisfy those (Allen & Fjermestad 2001).

2. Seller

Party who offers goods, service and information to customer (individual and corporate customer). Selling process can be started directly from seller’s website or marketplace.
3. **Product**

One of the differences between e-commerce and traditional/offline commerce is the product itself. Buyers can access information instantly, and even virtually test the product, which in traditional marketing concept would be time consuming. E-commerce changes even the way of delivering the product (Alrawi, 2007). For example a software company can offer the purchased product to be downloaded directly from their website after the payment. Or the physical distribution can be replaced with online distribution.

4. **Technology Infrastructure**

The infrastructure for e-commerce in terms of technology are the electronic tools (hardware, software, networks) that enable people to connect with internet. Technology improvements give possibilities for decreasing the cost of searching, collecting, and disseminating of information from the company and from the customers. Overall, there are two sections of technology infrastructure implemented in e-commerce:

(a.) **Front end**

Front end is a web application which interacts with direct users. Several business processes on this front end are seller, electronic catalog, shopping cart, search engine and payment gateway.

(b.) **Back end**

Back end is application which indirectly support front end application. Every activity related to sales order, inventory management, payment, packaging and product delivery are included in back end process.

Besides those components, Mike Dragan (2013) and Henry Kim (2014) stated that logistics is included as component of e-commerce. It’s not just component but also important role play which determines e-commerce success. Logistic in e-commerce is defined as strategic planning and control of all logistics systems and processes which are necessary for electronic transaction processing as well as their administrative and operational physical form (H. J. Lucke and H. Krampe,
The main focus is, especially in the B2C-division, on the distribution of midget quantities (J. Haka, G. Hackenberg and H. Krampe, 2006:325-384).

2.1.3. e-Commerce Business Models

e-Commerce businesses have adopted a number of different business model which employ the unique qualities of the internet and the web (Timmers, 2006). Wang (2001:304) defines e-Commerce business model as a competition strategy for the marketplace and a structure of business processes for the entire electronic trade including marketing, advertising, negotiation, purchasing, logistics of products, payment with means of security, post-sales service and post-sales intelligence.

Angehrn (1997) cited by Juline Mills and Rob Law in their book titled Business and Economics (2013), developed model called ICDT (Information Communication Distribution Transaction), which facilitated our understanding of the different internet strategies used by companies, shown in Figure 2.1. Today, e-Commerce businesses are found to be operating in one or more (or a combination) of the virtual spaces indicated in this model.

![Figure 2.1 The ICDT Model](Image)

**Source:** Angehrn (1997) cited by Juline Mills and Rob Law in Business and Economics (2013)
The ICDT Model describes the segmentation of the space of new business opportunities created by the Internet, which are the virtual information, communication, distribution and transaction spaces. These four virtual spaces are described by Angehrn (1997) cited by Juline Mills and Rob Law in Business and Economics (2013) as follows:

1. Virtual Information Space (VIS): The VIS consists of Internet based channels through which economic agents display information about themselves, and the products and services they offer. From a consumer perspective, the VIS provides an efficient approach of gathering information and comparing market offers.

2. Virtual Communication Space (VCS): The VCS allows economic agents to meet to exchange ideas and experiences, engage in relationships and create different types of communities. This has created virtual communities of similar interest, e.g., internet-based news and user groups, whose members bypass geographical constraints.

3. Virtual Distribution Space (VDS): The VDS represents three strategic options for Web business. The first option relates to a distribution channel suitable for a variety of products and services. Electronic books, articles, pictures, music and video tracks belong to this category. As a second option, businesses use the Web as a distribution channel for non-physical services such as text, voice or video-based consulting. Thirdly, the VDS can be used to enhance the traditional products and services offered by businesses by allowing customers to access customer-support services such as product-related information, training and product updates.

4. Virtual Transaction Space (VTS): The VTS consists of internet- based channels through which businesses can exchange formal business transactions such as orders, invoices and payments.

Since the publication of the ICDT model in 1997, researchers have analyzed e-commerce business models from many different perspectives and frameworks
(Hogue, 2000; Barua et al., 2001; Weill et al., 2005). In today’s business model, this ICDT model is related to Business to Consumer (B2C), Business to Business (B2B), Consumer to Consumer (C2C), Business to Government (B2G) and Mobile Commerce (Kalakota & Whinston, 2005; Laudon & Traver, 2004; Schneider, 2006). Of these, the B2C domain has been the most widely researched (Wareham et al., 2005), possibly because it has proliferated in a variety of e-Commerce business models.

2.2. **B2C (Business-to-Consumer)**

B2C can be called as e-tailing, retail activities conducted online through internet. There are two general mechanism of B2C e-commerce (Efraim Turban and David King, 2002):

1. **Electronic Storefronts**: electronic storefront is website belongs to company or organization that facilitating retailer to sell goods and services. A storefront can be owned by producer, retailer, and even individual.

2. **Electronic Mall (e-Mall)**: e-Mall is online mall where lots online shop existed. e-Mall unites various online seller into one online mall, or nowadays it’s being called as marketplace.

Efraim Turban and David King (2002) also classified B2C e-commerce into two main classifications. First is based on revenue model, and second is based on distribution network. Here are the types of B2C based on these two classifications:

1. **Revenue Model**
   a. **Product sales model**: seller gets direct revenue by selling goods or service to customer
   b. **Subscription model**: seller gets revenue by determining monthly or annual cost that customer needs to pay
   c. **Transaction-fee model**: seller gets revenue from additional cost of each transaction
d. Advertising-supported model: seller gets revenue from advertisements.

e. Sponsorship model: seller gets revenue from sponsor.

2. Distribution model

a. Direct marketing: producers sell their own production through their own e-commerce site.

b. Pureplay e-tailers: retailers who only have online shop, they don’t have physical offline shop.

c. Click-and-mortar retailers: traditional retailers who have website that acts as supplement of their business

Laudon & Traver (2004), and Timmers (2006) summarize B2C e-commerce based on the common B2C models that common used today (shown in figure 2.2):

<table>
<thead>
<tr>
<th>B2C Model</th>
<th>Examples</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portal</td>
<td>Yahoo.com, ananzi.co.za</td>
<td>Offers an integrated package of content services and content-search, news, email, chat, music downloads, etc.</td>
</tr>
<tr>
<td>E-Tailor</td>
<td>Amazon.com, cyberceller.co.za</td>
<td>Online version of a retail store, where customers can shop at any hour of the day or night.</td>
</tr>
<tr>
<td>Content Provider</td>
<td>CNN.com, Mgr.co.za</td>
<td>Information and entertainment providers like newspapers, sports sites and other online sources that offer customers up-to-date news, and special interest groups how-to guidance, tips, information, and sales.</td>
</tr>
<tr>
<td>Transaction Broker</td>
<td>E-Trade.com, Travelocity.com</td>
<td>Processors of online sales transactions, such as stock brokers and travel agent, that increase customers’ productivity by helping them get things done faster and more cheaply.</td>
</tr>
<tr>
<td>Market Creator</td>
<td>Ebay.com, BidOrBuy.co.za</td>
<td>Web-based businesses that use Internet technology to create markets that bring buyers and sellers together.</td>
</tr>
<tr>
<td>Service Provider</td>
<td>Lawinfo.com, Mybconsulting.com</td>
<td>Companies that make money by selling services, rather than a tangible product.</td>
</tr>
<tr>
<td>Virtual Community Provider</td>
<td>Jvillage.com, About.com</td>
<td>Sites where individuals with particular interests, hobbies, and common experiences can come together and compare notes.</td>
</tr>
</tbody>
</table>

Table 2.2 B2C Models

Sources: Laudon & Traver (2004), and Timmers (2006)
2.3. Logistics

2.3.1. Offline Logistics

Logistics is part of Supply Chain Management that planning, implementing, controlling the efficient flow, and storage goods, services, and related information between the point of origin and point of consumption in order to meet customer requirements (Ballou, 2007, p. 338).

The traditional supply chain has a hierarchical structure in which one or more central distribution centers supply the stores with products, shown in Figure 2.2. For example, the logistics flow starts from producer who then sends the manufactured products to warehouse to be stored. From warehouse, courier will send the products to wholesaler or retailer, and also possible to go to smaller shop before the products finally arrive in consumer who is the end user (CBRE, 2013). Simplify, there are quite many logistic steps for supply chain of offline companies.

Figure 2.2: Traditional Supply Chain

Source: CBRE, 2013
From a distribution perspective, logistic has passed through various general phases (shown in Figure 2.3 and very broadly in the timeline as follows (Cerasis, 2014):

- In the 1970s, most companies were replenished by direct deliveries from suppliers or wholesalers.
- In the 1980s, companies started to centralize their store deliveries through new distribution centers which they controlled.
- In the 1990s, global sourcing (for non-food products) took off, with many companies developing import centers to receive and process mostly containerized imports.

![Figure 2.3 Logistics Evolution in Distribution Perspective](image)

**Source:** Cerasis, 2014

By the entrant of e-commerce, logistic continues its revolution by simplifying the flow of product distribution. e-Commerce began to rapidly expand with pure-play (internet only) retailers leading the way in establishing e-fulfillment distribution networks. Explanation below will discuss the logistic changes and development when e-commerce entries the market (Adam Robinson, 2014).
2.3.2. e-Commerce Logistics

The growth of e-commerce affects traditional supply chains. Consumers are no longer restricted by the physically available range of goods anymore. They can order virtually any product they require, in every quantity and at any time. This changes the supply chain from a “push” (to the store) to a “pull” process (by the final consumer). The physical spot where this change is implemented is the distribution center. Previously structured to arrange large shipments (fully loaded trucks) at fixed times to fixed delivery address, the key factor now becomes the direct delivery to consumers (B2C) and, as such, the fulfillment of consumer requirements (CBRE, 2013).

Before e-commerce, consumers need to be convened in store to make their purchase, but now they are able to separately place their orders which have to be processed directly by the companies. Due to this change, the number of orders increases substantially. Then, each order tends to only have a few products (order lines), usually between one and five, and the number of units per order line is limited to one or two pieces. This process change is the driver of new demand for logistics space (CBRE, 2013).

In e-commerce, the distribution process is no longer just an efficient logistics operation, but it means to live up to the expectations of the customer. If the service of a web shop is not reliable, such as the distribution process takes long time and the shop can deliver the product quickly, consumers can switch to the competition ‘by just one click’. This is why reliable logistics services are more important than ever. Errors in the logistics process will have a direct impact on the consumer and hence on any (follow-up) purchase.

Looking from supply chain perspective, the logistic of e-commerce companies are cutting steps of traditional companies (shown in Figure 2.4). If previously a company needs to move the products several time from one point to another, now company can directly send the product from e-fulfillment center to customer. e-Fulfillment center is the place where e-commerce products stored, processed and dispatched to be delivered to customer.
One of the main components of e-commerce logistic is the delivery itself. It transports goods directly from e-fulfillment center to consumer (end-user). Delivery is one of the crucial factors that determine customer satisfaction towards the online shop. Delivery in e-commerce has two basic characteristics, speed and reliability (Mohanty and Deshmukh 2006). Delivery speed is the elapsed time from the receipt of an order to final delivery. A firm with superior delivery speed can “deliver more quickly than its competitors or meet a required delivery date when only some or even none of the competition can do so”. Typical strategies for improving delivery speed include streamlining the order entry process, holding inventory at key points in the supply chain (in stores or regional warehouses), maintain excess capacity with which to meet ‘rush orders’, and using faster transportation.

Delivery reliability refers to the ability to deliver products or services on time. A firm can have long lead times yet still maintain a high degree of delivery reliability. Typical measures of delivery reliability include the percentage of orders that is delivered by the promised time and the average tardiness of late orders. Delivery reliability is especially important to companies that are linked together in a supply chain (Mohanty and Deshmukh 2006).
A similar concept, on time order fill, was used by Christopher (1994), describing it as a combination of delivery reliability and order completeness. Various factors that can influence delivery speed include vehicle speed, driver reliability, frequency of delivery, and location of depots (Novich, 1990).

2.3.3. What e-Commerce Logistic Needs

e-Commerce poses the unique challenge of inventory. Most of the time, fulfillment center receives products in bulk, but requires storing and picking those SKUs (Stock Keeping Unit) as individual products. Therefore, ecommerce players have to find a way to standardize and synchronize business processes to have real-time access and insight to inventory movement. Often, with dozens of suppliers, multiple warehouses, and an extensive number of sales channels, the chances of a misplaced order are much higher.

e-Commerce products are suggested to no longer be stored on pallets, but they better to be kept in crates or boxes, or on shelves. The products must be readily accessible for order picking, so a floor location is preferred above storage in racks. The result is a strong reduction in the stock density (the amount of products per square meter), compared to traditional storage (CBRE, 2013). e-Commerce fulfillment center requires a different physical solution and lay-out of the warehouse. The changing nature of the storage and distribution function is drivers of the specific requirements regarding location and building specifications.

Figure below visualizes the differences of traditional warehouse and e-commerce fulfillment center. From the product storage, offline warehouse tends to store the products in bulk while online warehouse (fulfillment center), the products are stored per SKU in shelf to easier workers pick and process the products. Then, for the distribution vehicles, offline warehouse focuses on big vehicles like trucks since they tend to send bulk of products, but fulfillment center focuses on smaller vehicles as small shipments that need to be transported directly to customers all over the region is increasing (Jim Berge, 2015).
e-Commerce logistic needs technology. For example is to integrate the front-end and back-end of online retail by having software or real-time fulfillment data to collaborate back-end process. Therefore, e-Commerce players will be able to maintain effective system where online orders can be processed and statuses updated. The alignment of important touch-points in the supply chain can reduce inefficiencies and help identify redundant processes (Adam Robinson, 2014).

In term of delivery, for example; electronic receipts and an intensive integration of logistics processes into internet-solutions, such as tracking & tracing, enable customers to plan and trace deliveries. Logistics service providers need to use this transparency to build up customer confidence, because the faith in a punctual delivery can convince the customer to order via internet (C W Mahlke, 2001: 271-279).

Advance technology can reduce the operation cost too. Starting from very simple thing like if the company can do online documentation and invoice, it would reduce paper cost, printing cost or even postal cost. Then, as e-commerce will do hundreds even thousands of delivery within 24 hours, Jim Berge (2015) stated
that consolidating as many shipments as possible can reduce shipping costs (sorting by postal code and ship individually).

An example of technology innovation used by B2C e-commerce to support their logistic effectiveness is robotic utilization. Amazon.com was a pioneer in using robots in fulfillment centers. In 2011 Amazon started using 1,300 robots from Kiva Systems, a Boston-based robotics start-up. There are now 15,000 Kiva robots spread across 10 of Amazon’s warehouses. The utilization of robot has reduce fulfillment costs by $450 million to $900 million in North America (Janney Capital Markets, 2015). Also, Amazon has estimated that the average amount of time it takes to pull an item from a shelf and put it in a box is now 15 minutes per order, down from an hour and a half (Marcia Kaplan, 2015).

Then, another innovation to enable B2C delivers customer order quickly, they built delivery locker that located in strategic city spots. Instead of delivering the package to customer home or business address, the B2C, such as Amazon.com will deliver it to the locker. Customer will be notified by email consist a unique pickup code that includes the address and opening times for the selected Locker location. The customers then need to pick the package within agreed period.

Simplify, e-commerce logistic needs warehouse layout specialized for online orders fulfillment; delivery shipping mode that can deliver small individual shipment (not in a bulk shipment); integrated order fulfillment system, and technology advancement to meet the growing needs of B2C e-commerce’s logistic.

2.4. Previous Research

1. Yingli Li and Ruoxi Fan, 2014, in their research entitled “The coordination of e-Commerce and Logistics”, explained that the relationship between logistics and e-commerce is very close. Logistics is very significant part in developing e-commerce, the impact of e-commerce on logistics must be enormous. Logistics costs accounted for 30% to 50% of the total value of goods,
accounted for 20% to 80% of the funds. So logistics is called the enterprises’ gold mine. Logistics part of economic growth is the “dark continent”, is “the final frontier to reduce costs”, is “the third profit source” after reduce resource consumption and increase labor productivity. In addition, some European and American scholars believe, the role of logistics activities does not lie in cost saving for the plan, but to increase the enterprise level of service to users, thus improving the competitiveness of enterprises.

2. Wei Gong and Xuan Kan, 2013, in their research entitled “Logistic Service Development of e-Commerce”, explained that logistical problems faced in e-commerce are very different compared with those tackled in offline channels. e-Commerce shipments require a whole new distribution frame in order to handle the online businesses. In this situation, third-party logistics (3PL) service providers are often being selected to take charge of the logistics design, delivery, storage and transportation by utilizing their professional and complete value-added services.

3. Zhang and Li, 2004, in their research entitled “Self-built Logistic”, explained that in many companies, the logistics is a combination of self-built logistic and third-party-logistics. The strengths of self-logistics are:
   - Assisting marketing activities, increase the viscosity of the customers and resulting in the second purchase. The e-commerce companies and customers can contact face to face, and allowing customers to understand e-commerce companies.
   - When the dispatchers deliver the goods that the goods from their own business, it would be more care than using other companies. So the loss and damage of goods will decrease by a significant margin.
   - The distribution area that the self-logistics can to delivery, the speed of delivery be greatly increased. While with the support of COD (cash on delivery), improve the customer shopping experience.
   - Self-logistic can improve the corporate image.
CHAPTER III

METHODOLOGY

3.1. Research Method

Qualitative research seeks out the term of ‘why’ and ‘how’ of its topic through the analysis of unstructured information (Yin, 2010) – such as interview transcripts and recordings, emails, notes, feedback forms, photos and videos. Qualitative research does not only rely on statistics or numbers, the domain of quantitative researchers. Yin (2010) also depicts that the qualitative method is used to gain insight into attitudes, behavior, motivation culture or lifestyles. Focus groups, in-depth interviews, content analysis and semiotics are among the many formal approaches that are used.

The purpose of qualitative research is to delineate some of the essential qualities of complex social phenomena. Many concepts in organizational theory, such as learning, replicating routines, power, authority, dynamic capabilities, or chaos, involve intricate webs of causes, effects, processes, and dynamics, they are about qualities. Qualitative research is based on the principle that social life is inherently complex, which means that organizational issues are inextricably bound up in ongoing social action among people in the situation (Geertz, 2006).

The strength of qualitative research is its ability to provide complex textual descriptions of how people experience a given research issue. It provides information about the “human” side of an issue that is, the often contradictory behaviors, beliefs, opinions, emotions, and relationships of individuals.

In qualitative research there are seven primary ways to gather the qualitative data such as interviewing, focus groups, ethnography, sociometry, unobtrusive measures, historiography, and case studies. Qualitative methods are also effective in identifying intangible factors, such as social norms, socioeconomic status, gender roles, ethnicity, and religion, whose role in the research.
3.1.1. Comparative Study

Comparative study or analysis is a broad term that can be quantitative and qualitative comparison of social entities. Social entities may be based on many lines, such as geographical or political ones in the form of cross-national or regional comparisons. There is a large body of cross-national comparative research, including the cross-national variation in public support for cuts in unemployment benefits (Fraile and Ferrer, 2005), the analysis of changing health care systems in OECD countries (Castilla, 2004), or the crossnational comparison of employment careers (Blossfeld et al., 2006). Comparisons are also common across categories or social groups, such as in the study of stratification by social class (Erikson and Goldthorpe, 1992) or core emic categories in ethnographic studies in the study of ethnic classification (e.g. Gravlee, 2005).

The underlying goal of comparative analysis is to search for similarity and variance. Those searching for similarity (i.e. the regression equation) often apply a more general theory and search for universals or underlying general processes across different contexts. The ontology of social patterns is often assumed as universal and independent from time and space. However, it remains difficult to determine these universal patterns in social research. For this reason, comparative research is used to separate patterns that are more general and isolate regularities from the context laden environment. Comparative sociology, the search for variance places more emphasis on context and difference in order to understand specificities. Comparisons not only uncover differences between social entities, but reveal unique aspects of a particular entity that would be virtually impossible to detect otherwise.

3.1.2. Triangulation

Qualitative research use triangulation among the data sources to progress research accuracy. According to Erina Audrey (2013), triangulation crosschecks information to produce reliable and valid results for certainty in data collection. It strengthens the data from different individuals (e.g. lecturer and student) and
types (e.g. field observation, interview) in qualitative research (O’Donoghue and Punch, 2003).

In this research, the researcher experiments every single information, facts, and finding to support the data analysis. It is guarantee that the conducted study is exact because the information comes from different sources, individual, or process. In this study, the researcher pressed on to develop a valid and reliable research. According to Berg (2009) by combining several lines of sight, the researcher obtain a better, more substantive picture of reality; a richer, more complete array of symbols and theoretical concepts; and a means of verifying many of these elements. Simply, triangulation is the method that researcher used to present valid and reliable research.

### 3.2. Research Framework

![Research Framework Diagram]

- Data Collection (Primary Data, Secondary Data, Field Work)
- Logistic Service in PT. Acommerce Solusi Lestari
- Kraljic Matrix
- Analyzing Theories
- Interpretation of Data Analysis
- Research Conclusion and Recommendations

**Figure 3.1 Research Framework**

**Source:** Researcher’s Development
3.3. Data Analysis

In analyzing the data, researcher adopted Miles and Huberman (2013) model where they stated that data analysis in qualitative is being done interactively and will continue until the result of analysis is saturated. The analysis activity in Miles and Huberman (2013) model could be divided into three, which are data reduction, data display, and data conclusion drawing/verification.

3.3.1. Data Reduction

Miles and Huberman (2013) describe the first of their three elements of qualitative data analysis as data reduction. Data reduction refers to the process of selecting, focusing, simplifying, abstracting, and transforming the data that appear in written up field notes or transcriptions. Not only do the data need to be condensed for the sake of manageability, they also have to be transformed so they can be made intelligible in terms of the issues being addressed. With data reduction, it will create a clearer picture about the answer of research questions and make it easy for researcher to collect the next data if needed.

There are several way to transform pages of textual data into something that more manageable such as make a summary, coding, classification, grouping, separation, writing memo, etc. Since we know that we have to make the research clear so we need to use data reduction. Qualitative data can be condensed in many ways such as smooth selection, summary, and also paraphrasing. The data reduction process is constantly happen until final report is finished. Another function of data reduction is forms of data analysis aiming in choose, focus, and construct the data so the final conclusion can be described well.

3.3.2. Model Data (Data Display)

Data display is the second element in Miles and Huberman (2013) model of qualitative data analysis. Data display goes a step beyond data reduction to
provide an organized, compressed assembly of information that permits conclusion drawing. There are several strategies of data display which depends on the research questions and preference. A display can be an extended piece of text or a diagram, chart, or matrix that provides a new way of arranging and thinking about the more textually embedded data. It also can be output of electronic displays, or hardcopy printouts, or other auxiliary displays and signaling devices including voice output, which may alert users to unusual conditions.

In data display, the whole thing is planned to create information in a good arrangement which can be accessed straight, in practical way; whether in word or diagrammatic form, to allow the analyst to extrapolate from the data enough to begin to discern systematic patterns and interrelationships. It is particularly critical in monitoring and control tasks, to enable researcher see what is happening and move to the next stage of analysis.

3.3.3. Data Conclusion Drawing/Verification

The third step of analysis data activity called data conclusion drawing/verification (Miles and Huberman, 2013). Here the researcher learns that the analysis should allow beginning and developing conclusions regarding the study. These initial conclusions can then be verified, that is their validity examined through reference to your existing field notes or further data collection. The final conclusion may not be found until the data collection finish, it depends on the capacity of coding, field data, researcher experience, but once again conclusion regularly describe at the beginning, when a researcher fixed that he/she already do the process inductively. Therefore, researcher must follow the steps to finally be able to make a conclusion.

Conclusion is important because it leaves an impression. Since the conclusion is the last thing that audience reads, it may leave the most lasting impression. The kind of conclusion will vary fit with the overall picture and purpose of the research, but all effective conclusions should give significant influence or positive benefit for readers who read the research.
Here is the figure of those three stages:

![Figure 3.2](image_url)  

**Figure 3.2 Miles and Huberman’s Qualitative Data Analysis**  
*Source:* Qualitative Data Analysis Book (Miles and Huberman, 2013)

In the figure above, the three analysis activities and data collection activity are outlining an interactive cycle process. The researcher moves between these activities steps. From data collection process until researcher is able to make conclusion and verification for the rest of the study.

3.3.4. **The Kraljic Matrix**

The Kraljic matrix (shown in Figure 3.3) is an influential strategic tool to guide managers to recognize the weakness of their organization and formulate strategies to guard them against supplies disruption (Lysons and Farrington, 2006).

![Figure 3.3](image_url)  

**Figure 3.3 Kraljic Matrix**  
*Source:* Toolshero, 2014
The matrix was developed by Peter Kraljic; and it was first introduced in the seminal Harvard Business Review article published in 1983. Today the matrix is one of the dominant strategic tools to guide company in implementing various supplying activities and choosing which one is fit the organizations the most (Gelderman and van Weele, 2002). In this research, researcher used this matrix to analyze the bottleneck in e-commerce logistics and to develop the recommendation for particular party.

3.4. Research Instrument

Another thing to be considered in designing a qualitative research is the research instrument. Qualitative approaches to data collection usually involve research instruments that have direct interaction with individuals on a one to one basis or in a group setting. The benefits of using these approaches include richness of data and deeper insight into the phenomena under study.

Research instrument itself is the tool that used to answer the research questions that stated in the first chapter. Instrument is the generic term that researchers use for a measurement device (survey, test, questionnaire, etc.). The researcher intention is to gather the information from various sources as much as researcher can. Data can be obtained from primary and secondary data. Primary data refers to information obtained first-hand by the researcher on the variables of interest for specific purpose of the study; while the secondary data refers to information gathered from sources that already exist (Sekaran, Bougie, 2010).

3.5. Data Collection Technique

To collect data for this research, researcher uses interview and field work as the primary data, while for secondary data, researcher uses articles, books, journal, and literature study. Both data collection methods are purposed to support each other in building the research content and to help researcher gains better understanding on the research problems or phenomenon.
Those data collection methods are explained in figure below:

![Data Collection Diagram]

**Figure 3.4 Research Instrument**

*Source:* Researcher’s Development

3.5.1. **Primary Data**

The researcher uses interview and field work as a primary source of data.

1. **Interview**

The reason why does the researcher choose interview as one of the primary sources is because comparing to other research qualitative instruments, interview seemed the most efficient and effective way to gather information as deep as possible to answer the research questions (Creswell, 2013). Just like in daily life, one of the most productive ways to learn about a person, place, or set of activities is to actually ask questions of people who have knowledge about that topic. Besides, Creswell (2013) also suggested using interview as the instrument of data.
collection for phenomenology research. Another source stated that interviews are relatively economical in terms of time and resources (Sliverman, 2007).

Saunders, Lewis and Thornhill (2007), present the definitions of three types of interview as:

1. Structured interview: Data collection technique in which an interviewer physically meets the respondent, reads them the same set of questions in a predetermined order, and records his or her response to each.
2. Semi-structured interview: Wide-ranging category of interview in which the interviewer commences with a set of interview themes but is prepared to vary the order in which questions are asked and to ask new questions in the context of the research situation.
3. Unstructured interview: Loosely structured and informally conducted interview that may commence with one or more themes to explore with participants but without a predetermined list of questions to work through.

Types of interview that is being use in this research is semi-structured interview (sometimes referred to as focused interviews) which involve a series of open ended questions based on the topic areas the researcher wants to cover (Warren, 2005). The open ended nature of the question defines the topic under investigation but provides opportunities for both interviewer and interviewee to discuss some topics in more detail. If the interviewee has difficulty answering a question or provides only a brief response, the interviewer can use cues or prompts to encourage the interviewee to consider the question further.

Researcher decided to use this type of interview because it is the most suitable technique where researcher could dig detail information to answer the research question while in the other hand, it keeps the interview on track with topic decided and make sure that there is no detail left during the interview.
<table>
<thead>
<tr>
<th>No</th>
<th>Name</th>
<th>Position</th>
<th>Date of Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Andry Sugiarto</td>
<td>Channel Management Marketplace Staff at aCommerce</td>
<td>October 6, 2015</td>
</tr>
<tr>
<td>2</td>
<td>Seti Tampubolon</td>
<td>Business Development Manager at aCommerce</td>
<td>October 7, 2015</td>
</tr>
<tr>
<td>3</td>
<td>Desty Rama Rumondang</td>
<td>Operation Project Manager at aCommerce</td>
<td>October 7, 2015</td>
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<tr>
<td>4</td>
<td>Sellyza Novira</td>
<td>Social Media Specialist at aCommerce</td>
<td>October 7, 2015</td>
</tr>
<tr>
<td>5</td>
<td>Ramdisa Agasi</td>
<td>Junior Product Manager at aCommerce</td>
<td>October 7, 2015</td>
</tr>
<tr>
<td>6</td>
<td>Raditya Danu</td>
<td>Head of Distribution at aCommerce</td>
<td>October 12, 2015</td>
</tr>
<tr>
<td>7</td>
<td>Hadi Kuncoro</td>
<td>COO at aCommerce, Vice Chairperson at ALI (Asosiasi Logistik Indonesia)</td>
<td>October 26, 2015</td>
</tr>
</tbody>
</table>

**Table 3.1 Interview Details**

*Source: Researcher’s Development*

2. **Field Work**

Then, the reason of why does researcher use field work as another primary source is because field work can help researcher to figure out the real situation happened, therefore researcher studies the existing work in the field with insight (Warren, 2005)

The researcher did the field work during her internship at PT. Acommerce Solusi Lestari (aCommerce) on March until October 2015. Researcher had ever involved in logistic project of aCommerce, and worked both in head office (dealing with managerial) and in aCommerce’s fulfillment center which located in Cililitan, East Jakarta (dealing with operational). By having internship at aCommerce,
being involved in logistic projects and worked in both head office and fulfillment center, researcher was able to gain better understanding of B2C e-commerce logistic problems in Jakarta and other phenomenon related to this research.

3.5.2. Secondary Data

Secondary data acts as supporting data and will be use both in research analysis and theoretical triangulation as the comparison to the findings of the research (Yin, 2010). The secondary data that will be used in this research are going to be got from books, journal, articles on the internet, literature study which includes previous researches.
CHAPTER IV

ANALYSIS OF DATA

4.1. Company Profile

4.1.1. History of PT. Acommerce Solusi Lestari

In early 2013, a group of entrepreneurs and investors at Ardent Capital (an operating venture capital firm with headquarter in Bangkok, Thailand) were tired of the infrastructure bottleneck that their startups were facing when delivering e-commerce to Southeast Asia. They want to bring their brands online but lacked the expertise to get it right, especially in the context of the emerging markets’ infrastructure.

Challenged by those conditions, Ardent Group decided to form a new business model where the gaping holes that Southeast Asian market presented can be plugged. They built aCommerce, a one-stop shop service to answer that need. By the support of professionals with extensive backgrounds in marketing, technology, operations and finance, Ardent Group is now able to have a fully integrated Order Management System (OMS) and Warehouse Management System (WMS). They chose 4 Southeast Asia countries to be focused on, which are Thailand, Singapore, Indonesia and Philippines.

aCommerce Indonesia is officially born on November 2013, aimed to be end-to-end e-commerce enabler in Indonesia under the name of PT. Acommerce Solusi Lestari. It began testing and fulfilling e-commerce services for companies who want to go online. Started with very few clients, such as Mitra Adi Perkasa and Groupon, now aCommerce Indonesia has more than 90 clients vary from SME (Small Medium Company) as well as big companies, local, regional, international brands from various industries (fashion, food and beverage, electronics, lifestyle,
services and so on); they are Hewlett Pakcard, Kapal Api, Mataharimall.com, Unilever, Kalbe, Cimory, L’occitane, Kartika Sari, Loreal, Blibli and more.

4.1.2. Vision and Mission

The long term vision of aCommerce until year 2030 is “To make e-commerce easy in Southeast Asia.”

While the current mission of aCommerce is to “Build e-commerce technologies and services that help companies build brand value, acquire customers, drive sales, scale their business and connect all parts of the e-commerce value chain.”

4.1.3. Organizational Structure

Here is the organization structure of aCommerce Indonesia (PT. Acommerce Solusi Lestari):

Figure 4-1 Organizational Structure of PT. Acommerce Solusi Lestari

Source: aCommerce, 2015

4.1.4. aCommerce’s Core Services

There are three core activities of aCommerce Indonesia. The first is Technology Services. aCommerce is not a technology company but they offer services by
using technology to scale everything they do such as by using the best e-commerce software to allow them to be flexible with integrations required by clients. The primary goal of this technology services is to automate solutions and make it easy for aCommerce’s clients to process and fulfill orders to their customers.

The second core activity is Marketing Service. For sure, e-commerce marketing has different approach with offline marketing. aCommerce aware of this difference so they are carefully balancing clients’ brand position with usability, conversions, and SEO (Search Engine Optimization) to ensure the campaign is precise, and more importantly, drives revenue.

aCommerce offers e-commerce start-ups some of the best B2B marketing and PR (Public Relation) in the region, created with an emphasis on quality content targeted towards an investor, tech audience and strong media relations to generate demand and drive conversion with aCommerce marketing.

The third core activity of aCommerce is Operation Service. aCommerce aware that e-commerce operation needs special treatment as its operation is different compared to offline business. aCommerce has built their own fulfillment center which tailored to quickly ship thousands of small orders daily, both by drop ship and in-house storage system. Currently, they have 3 fulfillment center located in Intirub Business Park (East Jakarta), Bina Sinar Amity Warehouse (East Jakarta) and Metro Feed (West Java). These fulfillment centers power client’s e-commerce operation from the storage, product packaging until product delivery.

aCommerce has service packages and offers independent service preference. For example, Website Development consists of website design, website content and custom development, but if the customer only wants to use website design service, it’s okay. Customer also can decide the service period after discussing it with the related aCommerce’s person in charge.

Overall, aCommerce provides end-to-end solutions for brand and retailers to go online. Figure below shows the services of aCommerce:
Currently, one of the big clients is Mataharimall.com. aCommerce provides assistance for warehouse operation and also digital marketing.

**4.1.5. Logistics Service in aCommerce**

aCommerce’s logistics service is equipped by three fulfillment centers across Jakarta. aCommerce’s logisticians are technological friendly, and they manage their own riders with advanced Transportation Management System (TMS) optimized for customer experience and Value Added Services (e.g. COD and D/CCOD).

aCommerce uses their own riders to deliver customer orders in Jakarta area. Figure below frames the delivery process in aCommerce, supposing customers buys 3 products from 3 different merchants on one multi-brand site:
All couriers of aCommerce are equipped with smartphones that have been installed an application to allow them to send real-time status of success or failed delivery. The same application allows couriers to get digital signature of recipient and photo proof(s) of success or failed delivery. Couriers can also utilize this application to search for direction of delivery area, and courier manager can monitor rider performance and provide support if necessary. Technology roadmap implemented by aCommerce includes allow user to get access to where the courier is and estimated of time of delivery based on live location (Picture 4.1).

**Picture 4.1 Real-time Tracking in aCommerce**

*Source: aCommerce, 2015*

aCommerce can provide COD and D/CCOD service in Jakarta area with maximum value per transaction of IDR 2 million. Riders carry two mobile EDC (Electronic Data Capture) machines from Top 2 banks with largest market shares in Indonesia (Mandiri Bank and BCA). Both of these mobile EDC machines can accept all credit cards (from any bank), and each of these EDC can accept debit cards only from Mandiri Bank and BCA (shown in Picture 4.2).

**Picture 4.2 aCommerce’s riders performs CCOD with ECC machines**

*Source: aCommerce, 2015*
4.2. **Data Analysis**

In this section, researcher analyzes the findings to answer statements of problems that were stated on the first chapter of this research. The findings are got from data collection (primary and secondary data), research on PT. Acommerce Solusi Lestari’s logistics service, studying Kraljic Matrix and other related theories. The Kraljic Matrix helps researcher to know the impact of bottleneck of e-commerce logistics, which are giving high supply risk and low profit impact to both e-commerce provider and B2C itself. Triangulation helps researcher to get reliable and valid data.

Researcher divides the findings into two main parts, which are Pre-2013 and Post-2013, purposed to give more relevant analysis based on timeline, and show the changes of related phenomenon that being researched.

**4.2.1. Pre – 2013**

e-Commerce entered Indonesia in 1996, pioneered by Sanur Online Book Store. There was also Bhinneka.com who joined the industry on 1999. The milestone of Indonesia e-commerce industry was on 2005 when Tokobagus.com (now is OLX.co.id) came into the market. It increased Indonesians awareness of online shopping and many Indonesians began to shop online.

e-Commerce in Indonesia, especially in Jakarta, was kept growing, supported by the increment of internet penetration and the presence of Rocket Internet in the market since 2012. Despite of this e-commerce rapid growth, B2C in Jakarta was facing bottleneck on the logistics side. Frankly, logistics had not ready yet to support the growing needs of B2C e-commerce in Jakarta.


First, researcher researched the major problems that made logistics unable to support B2C e-commerce rapid growth. Based on the data collected, researcher classified the problems into four main points:
1. Poor Infrastructures

Infrastructure in Indonesia was in poor condition. Compared to Asia-Pacific nations by The World Economic Forum in 2012, Indonesia was ranked 50th out of 144 nations in term of infrastructure competitiveness. The poor infrastructure condition was not only happened in rural areas but also in urban area, included Jakarta as the capital city. In B2C e-commerce perspective, Jakarta’s infrastructure condition had been becoming problems for their business, especially in term of delivery.

a. Unstructured Address

Addresses in Jakarta were not named and numbered systematically. There were a lot of unnamed and double named streets and passageways. House’s numbers and zip codes were also not being sorted accurately. Actually since 1980s POS Indonesia has made zip codes (derived from four levels which are province, city/regency, sub-district and village) to easier delivery couriers send package, but the zip codes didn’t work effectively. In Jakarta, there were quite lots of irrelevant zip codes, even delivery couriers found double zip codes for some areas because the zip codes had been outdated and POS Indonesia tended to refuse to generate new zip codes. These conditions made delivery couriers often found difficulty in sending customer order.

This issue brought huge disadvantage for B2C e-commerce as it became resistor for them to deliver customer orders quickly. Based on interview conducted by researchers to related informants, they stated that lots of wrong shipments happened because of the poor addresses name. It wasn’t just caused wrong shipment (order delivered to wrong addressee) but also often made delivery couriers couldn’t find the address at all, which is a dead end, and the courier would need to bring back the ordered products to the company’s warehouse.
b. Not Ideal Roads Causing Traffic Jam

Head of Jakarta Public Works Department Roads Division, Juaini Yusuf, said that Jakarta’s road ratio was 6.20 percent in 2012, quite left behind from urban city’s ideal ratio which is 12 percent. Road ratio is comparing the total roads over the total area of a city. Larger ratio means larger capacity of movement in the city.

Yusuf was also concerned on the high growth of private vehicles usage in Jakarta. It was recorded that approximately 300 new cars and 1,000 new motorcycles roam on the streets every day. So, it was not a surprise if traffic jam in Jakarta was really severe due to low road ratio and huge penetration of private vehicles.

From B2C e-commerce perspective, the severe traffic jam made delivery time became unreliable. In pre-2013, the length of product delivery to Jakarta area was 3-7 days. Moreover, if unexpected things occurred during delivery process, e.g. flood, the length of delivery could be longer than 1 week. This issue concerned B2C since length of delivery had been become a very crucial point where customer decided to shop online or not.

c. Logistics Provider Operated Traditionally

e-Commerce needs different logistics treatment compared to offline company. In pre-2013, frankly to say, all of logistics providers were still using the concept of offline company logistic. Firstly, there were not many variants of delivery service available in Jakarta, most of logistics providers only offered standard service like 3-7 days of delivery. Secondly, their warehouses were used layout for offline company warehouses (products were being stored in bulk) instead of e-fulfillment layout. There were no preparation for appropriate packaging and the delivery fleets were big trucks or vans. Then, there were limited counter/branch to drop customer orders which in the end created homework for B2C as B2C must traveled to certain drop point to send customer orders. Thirdly, the logistics providers also had not yet reliable Jakarta mapping area that could cause delay on delivery. By having these ways of operation, logistics providers were not fully supported the growing needs of B2C e-commerce in Jakarta.
2. Low Technology Implementation

The second main problem was the low implementation of technology in logistic sector. This issue was also had become one of the factors that caused poor infrastructure condition in Jakarta.

In pre-2013, logistics providers had not yet had real-time tracking system. So both provider and customer could not get the latest update of delivery courier’s location and could not predict when the order would arrive in customer house. By the absence of tracking system, customers were tend to feel insecure of online shopping as they could not trace their shipment and they would be dissatisfied as the logistic providers could not give the updated information of their package location.

Then, logistic providers did most of their works manually in paperwork. It consumed quite much time to fulfill e-commerce orders. Moreover, there were still no integration between logistic and the overall B2C e-commerce processes, such as payment and sales order. That’s why it took almost 1 week just to deliver the product to end customer in Jakarta and of course there were high risk of human error.

3. Immature Human Resources

Human resources here is defined as logisticians who manage and operate logistics, include the delivery couriers. Based on interviews with related informant, 83 percent of them stated that courier’s service to end users had been being a problem since many couriers were not perform satisfy service to customers. Firstly, those delivery couriers were not as friendly as customers’ expectation. Secondly, couriers didn’t have any target for daily shipment and didn’t care for any development of their company/industry. Thirdly, the honesty of couriers while delivering such valuable items to customer. There had been incidents where couriers stole customer products. Fourthly, most of logisticians didn’t have broad knowledge of e-commerce system, so they had not yet fully
understood the needs of B2C e-commerce. Simplify, Indonesian logisticians had not yet acted and developed as expected.

4. High Logistic Cost

Logistic providers used to send items in bulk using big vehicles for offline company needs. When e-commerce came in, logistic providers were demanded to deliver individual packages which contain small sized products with fewer quantity. This change forced them to have more small vehicles, e.g. motorcycle, to be able to deliver the product quickly (avoid traffic jam) and easier couriers to go into end user addresses (e.g. small streets or passageways that are impossible to be entered by big vehicles). By adding small vehicles, they would also recruit more drivers. Meaning, logistic providers would have higher overhead cost.

The delivery cost also increased. For offline company needs, logistic providers could use big vehicles to send hundreds or even thousands items at once, but for e-commerce, logistic providers must deliver it one by one using small vehicles. Hadi Kuncoro illustrated that for offline companies, they could deliver 2,000 bottles of beverage at once by rented one big truck costing IDR 700,000. Therefore delivery cost per item was only IDR 350. While for e-commerce, B2C only delivered one bottle of beverage to each end user. The fuel cost and driver salary were definitely more expensive than IDR 350. Hadi Kuncoro is current COO (Chief Operating Officer) of aCommerce, member of idEA (Indonesia E-commerce Association) and vice chairperson of ALI (Asosiasi Logistik Indonesia) that was interviewed by researcher.

High logistic cost eventually harms end user as they are the one who pay the delivery cost. The problem for B2C, they must be able to make customer as end user do not focused on the high delivery cost but consider the benefit of online shopping such as time efficient/convenience (customers don’t need to shop from one place to another place, but they can just sit in their home and buy various products).

By analyzing and classifying the major problems, researcher was basically researching too the parameter of relevant requirements needed by logistic players to meet the growing needs of B2C e-commerce in Jakarta. Here are 3 main points that elaborate those relevant requirements.

1. Adjustment

In pre-2013, as frankly none of logistic provider in Jakarta had been ready to welcome e-commerce rapid growth, the very first fundamental requirement was to do adjustment almost in their overall system. Through data collection, researcher found that many logistic providers were still operated traditionally, even the big players such as POS Indonesia, JNE and TIKI, they had not implemented e-commerce logistic system for their operation.

The adjustment should be started from the infrastructure, for example the warehouse layout. Logistic providers need to change shelf of bulk items with shelf for individual items, and put number in the shelves to easier picking team when they need to pick the items to be packed and shipped to customers. The shelf’s numbers also must be recorded systematically and computerized.

Another adjustment is delivery fleets. As previously mentioned, logistic providers were needed to add more small vehicles to support them in delivering e-commerce individual packages.

We know that for Jakarta’s severe traffic jam, small vehicle like motorcycle would move quicker rather than cars, trucks or vans. Also, motorcycle can enter small street and passageway. It helps B2C to reach end user places. Besides, motorcycle were appropriate to deliver customer order because most online shoppers ordered small sized item in small quantity in every transaction. The example of common product ordered is fashion apparel like clothes which was being the best-selling item in pre-2013 as shown in Figure 4.4.
2. **Build Systematical Delivery Process with Technology Integration**

In Jakarta pre-2013, logistic providers were chaos in handling the delivery for e-commerce as the volume of shipment was increasing day by day and they should deliver it quickly beyond their capability. Therefore, adjustment that should be done is not just a physical adjustment that can be seen by eyes, but also logistic providers need to adjust their system to support quick delivery service with less human error.

The systematical adjustment could be started by making Standard Operating Procedure (SOP) that suitable and appropriate for their warehousing and delivery operation, starting from the inbound to outbound process. Logistic providers should define the parameter for their inbound and outbound process to help them decide which circumstance that could be tolerated and which one could not. For example, in inbound they would not accept products that did not attach PO (purchase order) form; and for outbound, they would use FIFO (First In First Out) method, meaning the first item arrived in outbound area would be the first item to be delivered to customer.

After the SOP created, logistic providers need to implement technology in their management and operation, such as by building integrated Order Management...
System (OMS) and Warehouse Management System (WMS) to easier them execute the agreed SOP. OMS and WMS help logistic providers to be included in the sales order and purchase order process, and if they’re implementing FIFO, the OMS would guide them to know which order need to be prioritized, included the payment status of the orders. The WMS would also enable logistic provider to have real time data of the order and products location inside the warehouse.

Then for the delivery itself, logistic providers must have Transportation Management System (TMS) which enables both provider and customer to track and have real time data of the shipment. Logistic providers also should make mapping area, meaning they must have the breakdown of areas in Jakarta and decided who would be the couriers that being specified to deliver the customer orders to that area, for sure TMS can be the tool to help logistic providers developing their mapping area. By OMS, WMS, TMS, logistic provider could even integrate payment with delivery such as Cash on Delivery (COD) which firstly introduced to Jakarta by Zalora in 2012.

3. Educate Human Resources

Logistic providers were needed to introduce e-commerce system to their logisticians, and how e-commerce changes logistic pattern. The purpose is to help them adapt it quickly and learn which part of their operation and management that need to be change or develop. Include the delivery courier, logistic providers were strongly suggested to pay attention to their delivery couriers. Delivery courier is one of the direct representatives of logistic providers. They are the one who meet end users. Brand image and service performance of logistic provider can be affected by the actions of delivery couriers. That’s why, it’s important to teach them regularly about basic e-commerce knowledge, e-commerce logistic, customer relationship management; and evaluate their performance. Hopefully, by regularly monitoring delivery couriers, those delivery couriers would not just work as robot who do whatever it’s being told, but also they could truly understand their job, their role and get motivation to set target/goal and have better integrity.
4.2.1.3. Pre – 2013: The Relevant e-Commerce Provider to Solve B2C e-Commerce Logistics Problems in Jakarta

e-Commerce providers are parties who offer products or services to facilitate e-commerce transaction. They can be an end-to-end provider (starting from the time customer puts order on website, complete payment, until the product delivery to customer/end user) or just a provider of specific area, such as technology, marketing, etc.

As this research is focused on logistic problems faced by B2C e-commerce in Jakarta, there were parties who were most relevant to participate in solving B2C e-commerce problems in Jakarta.

1. Logistic Providers

First, of course the relevant party is logistic providers themselves because they are the one who working in logistic industry. They are also relevant to solve logistic problems because it can be their competition strategy to survive and win the market.

Through their real experiences in the industry, logistic providers could understand market needs. Also, through years of operation, logistic providers would gain knowledge and wide distribution network across Jakarta. For those providers who aware of e-commerce boom, they would utilized their knowledge, experience and network to develop idea to answer the growing needs of B2C e-commerce, such as by innovating delivery services.

2. B2C e-Commerce Players

The second relevant party is B2C e-commerce players. They are relevant because they are the main player of e-commerce in Jakarta. They know what they want and what customer needs.

B2C can work together with logistic providers to solve their logistic problems. However, B2C also can plan and execute actions to overcome the problems by
themselves, as a form of their responsibility to perform best service to customer and strengthen their brand image.

4.2.1.4. Pre – 2013: The Actions Taken by e-Commerce Provider to Solve B2C e-Commerce Problems in Jakarta

Here are the actions that have been executed by e-commerce providers to solve B2C e-commerce’s logistic problems in Jakarta:

1. Logistic Providers
   a. Adjustment

   Based on researcher interview with related informants, top logistic players in Jakarta had do continuous adjustment to their infrastructure and system in order to balance how e-commerce operates. The example is JNE who began to adjust their infrastructure and system in 2012; and until now, 2015, JNE had ever done three times experiment to create computerized master data where every branch office could access the same data as the head office. The data experimented were mapping area data, customer data, delivery couriers data, and so on.

   b. Delivery Service Innovation

   To fulfill the growing needs of B2C e-commerce, logistic players innovated their delivery service. Majorly, there are two types of innovation. The first was freight services innovation that offered services based on lead-time, and the second type was value-added innovation that offered broader features of delivery service.

   The examples of freight service innovation were Same Day Delivery (package arrived in end user’s place on the same day of shipment), Next Day Delivery (package arrived in end user’s place on D+1 of shipment), and Second Day Delivery (package arrived in end user’s place on D+2 of shipment). While the examples of value-added innovation were return services, redelivery attempt services, cash on delivery and pick up services.
c. Cooperated with B2C e-Commerce

When e-commerce came in, none of logistic providers in Jakarta had cooperation with B2C. It took time for them to realize the market potential. After they understood it, logistic providers were started to make cooperation agreement with B2C and work together with them to solve the emerged logistic problems. For example, with terms and condition applied, logistic providers were agreed to give special price to B2C for delivery cost and pick up the orders in B2C’s fulfillment center.

2. B2C e-Commerce Players
   a. In-house Delivery

B2C e-commerce players understood that they couldn’t rely 100 percent on logistic providers, so they built in-house delivery. They combined logistic provider services with their in-house delivery to maximize their delivery demands. The examples were Lazada who build LEX (Lazada Express Delivery); Zalora built ZEDEX (Zalora Delivery Express) and Bilna who built Bilna Express Delivery.

b. Change Customers Perspective

For high logistic cost problem, B2C worked to make customers were not focused on the high delivery cost, but consumers would focus on other benefits of online shopping. The action was B2C gave lots of promotion. They used their marketing budget to attract customer to shop online, such as by giving more than 20 percent discount. For example, branded clothes that normally cost IDR 250,000 in offline store would only cost IDR 200,000 for online shoppers, so even though customers must paid IDR 7,000 for delivery cost, they would still be benefited.

4.2.1.5. Pre – 2013: The Effectiveness of Actions Taken by e-Commerce Provider to Solve B2C e-Commerce Problems in Jakarta

Through actions taken by e-commerce providers, here are the results:
1. Logistic Providers
   a. Through adjustment and cooperation with B2C e-commerce, now logistic provider operation in fulfilling B2C orders started to be done more systematically and not chaos anymore. They both started to understand each other needs.
   b. Through delivery service innovation, length of delivery in Jakarta drop from 3-7 days to 1-3 days.

2. B2C e-Commerce Players
   a. Through in-house delivery, more orders could be deliver quicker to customer and customer satisfaction was kept increasing.
   b. Through changing customers perspective, more customers were attracted to shop online and gaining trust on product delivery.

4.2.2. Post–2013

In post-2013, e-commerce grows more rapidly. There are more players entering the market and more product variants are sold online. The examples are Carmudi that trades car, and Lamudi that sells property.

The growth of e-commerce industry in Indonesia even attracts foreign researchers. Taylor Nelson Sofres (TNS) from London, UK, and McKinsey from New York City, USA, predicted that 46% of Indonesians would begin to shop online within 1 year; and Indonesia’s e-commerce industry would growth 10 times bigger in the next 5 years with 2013 as the base year. B2C itself is expected to grow 71 percent in Indonesia starting from 2013 (eMarketer, 2013).

Despite this enormous growth, B2C in Jakarta is still facing logistic problems. Looking at problems that were stated in Pre-2013, nowadays in Post-2013 some of those problems were had been overcame, but there are still problems that remain and there is new logistic problem too in Post-2013. There are also quite many new entrants coming in as relevant party to solve B2C logistic problems.
This trend makes logistics become more challenging, especially for old players who need to survive and win the competition.

4.2.2.1. Post–2013: Major Logistics Problems of B2C e-Commerce in Jakarta

1. Poor Infrastructure

In pre-2013, there were 3 main points of poor infrastructure in Jakarta which affected B2C operation. The first was unstructured address where addresses in Jakarta were not named and numbered systematically. There were a lot of unnamed and double named streets and passageways. This issue brought huge disadvantage for B2C e-commerce as it became resistor for them to deliver customer orders quickly. It wasn’t just caused wrong shipment (order delivered to wrong addressee) but also often made delivery couriers couldn’t find the address at all, which is a dead end, and the courier would need to bring back the ordered products to the company’s warehouse. In Post-2013, this problem is still happening, however as logistic providers had started to build their own mapping area, qualitatively the percentage of wrong shipment and dead-end shipment are decreased. Now the problem is how logistic providers can broader their mapping area landscape to keep reducing those shipment problems.

The second point was the road that wasn’t ideal causing traffic jam. Head of Jakarta Public Works Department Roads Division, Juaini Yusuf, said that Jakarta’s road ratio was 6.20 percent in 2012. In post-2013, precisely in 2014, the ratio increased into 7.15 percent, however this increment is still left behind from urban city’s ideal ratio which is 12 percent. Qualitatively, there is huge penetration of private vehicles usage in Jakarta. Those factors led severe traffic jams in Jakarta. For B2C e-commerce, the severe traffic jam makes delivery time became unreliable. In pre-2013, the length of product delivery to Jakarta area was 3-7 days. Fortunately with delivery service innovation, now the length of product delivery in Jakarta is only 1–3 days. The current problem is how to make delivery length shorten during peak season or disaster happens (e.g. flood). Based on field research to more than 10 logistic providers in Jakarta on last Idul Fitri’s month,
one of peak season in Jakarta, researcher found that some of providers couldn’t perform quick delivery because the order volume was increase enormously. Therefore quite many orders were delayed to deliver to customer.

The third point was logistic providers operated traditionally. Some logistic providers who aware of this discrepancy had started to adjust their warehouse layout, management system and operation infrastructure. In post-2013, there have been providers that build special service for B2C to support their rapid growth; however they’re still need to develop the service to fully benefit B2C, customers and they themselves. For example, the return service that is complicated to do for customers.

Another important point is that currently, Indonesia’s logistic and supply chain infrastructures are still 10 years left behind other countries, e.g. Singapore (Hadi Kuncoro, 2015). Therefore, logistic players and other relevant parties are still challenged to upgrade Indonesia’s logistic and supply chain infrastructure to better support B2C.

2. Low Technology Implementation

In pre-2013, logistic providers in Jakarta were not implement technology deeply for their operation. For example, they had not yet had real-time tracking system. By the absence of tracking system, customers were tend to feel insecure of online shopping as they could not trace their shipment and they would be dissatisfy as the logistic providers could not give the updated information of their package location. Also, logistic providers did most of their works manually in paperwork. It consumed quite much time to fulfill e-commerce orders and causing high risk of human error. Moreover, there were still no integration between logistic and the overall B2C e-commerce processes, such as payment and sales order.

In post-2013, there are already some logistic providers who build tracking system. However, the problem is that not all their tracking was done in real-time. Field research done by researcher indicates that some logistic provider put the shipment status completeness event before the shipment done.
Logistic providers have started to computerized their operation, but there’re still works done manually in paperwork, such as when they’re about to write the Air Way Bill (AWB). In B2C perspective, it makes delivery process become impractical.

3. Immature Human Resources

In post-2013, delivery courier’s performance is still being a problem for several logistic providers. They don’t perform service as expected by customers. In term of honestly, there are still incidents where delivery couriers stole customer’s product or COD money.

Besides delivery couriers, there are still management and operation logisticians that don’t really try to understand the overall process of e-commerce. Moreover in term of technology implementation, human resources in Indonesia’s logistic are not yet technological friendly, they are left 5 years behind other countries (Hadi Kuncoro, 2015).

4. High Logistic Cost

In post-2013, logistic cost in Jakarta is still being the most expensive one compared to other countries, e.g. ASEAN (Hadi Kuncoro, 2015). Some B2C who built in-house delivery in Pre-2013 have managed to reduce their logistic cost, however in Jakarta there are only few B2C that have in-house delivery such as Lazada and Zalora. Therefore for major B2C, logistic cost is still being a problem for them as they need to keep adding value to their company to attract customers shop online despite the high delivery cost that customers should pay.

5. Cash on Delivery (COD)

One of biggest challenges for B2C e-commerce in Indonesia, includes Jakarta, is to convince customers that their online store is trustworthy. Compared to other ASEAN nations, Indonesia has the highest risk of fraud for online shopping. There are 34.6 percent of customers cited that they didn’t shop online due to fear of fraud (Nielsen, 2013). For example, 600 fake e-commerce sites were found
(DNS Nawala, 2013), so after customer completed the payment, they don’t receive the ordered product.

Then, based on Google study, there were 42 percents of non-online shoppers in Indonesia that worried about their financial security if they put their financial detail on online shop (Southeast Asia Online Shopper Study Insight Report, 2014). Customers’ lack of trust in credit card security was the top reason for not purchasing online.

Realizing this problem, B2C were offered bank transfer as one of the payment method. Then, in 2012, Cash on Delivery (COD) was introduced to Indonesia market, include Jakarta. The initiator of COD is Hadi Kuncoro who that time was being Vice President of Rocket Internet and Operating Director of Zalora Indonesia.

COD is one of e-commerce payment methods which enable customer to pay the ordered products once it arrives in end user places (shown in Figure 4.5). For customer, COD reduces fraud risk where they don’t receive the products even after completed the payment. Some B2C are not only enable customer to pay in cash, but also they work together with banks to provide EDC (Electronic Data Capture) machine to be bought by delivery couriers to enable customer pay with debit card. However, based on interview with related informants, most customers
prefer to pay in cash as they are afraid that the machine will record their debit card PIN (Personal Identification Number) and harm their bank account.

For customer, COD is quite valuable solution to reduce e-commerce fraud. However, for B2C and logistic providers, COD is a new problem that arises in Post-2015. First is because the challenge of handling cash money. The main salary of delivery couriers in Jakarta is IDR 2 million averagely. If they received more than IDR 2 million from COD’s customer, there could be temptation to steal it. Illustrated by Hadi Kuncoro, if a delivery courier get IDR 20 million from COD’s customers and steal it, it equals to 10 months of holiday for them. Handling cash money also a challenge for provider itself to honestly use it as agreed with B2C without corrupt it.

Therefore the second challenge is people and system management. Logistic providers must be able to train and motivate their logisticians to collect the cash money accurately and submit it to finance department on time, uncorrupted. Both logistic providers and B2C also need to make reconciliation system that brings mutual benefit for both parties, such as by considering and make agreement on the length of reconciliation time, transaction limit, and maximum arrears.

According to interviews done by researcher to related informants, B2C and logistic providers in Jakarta are not yet able to tackle those two challenges. In Post-2013, some logistic providers even have to close their COD service in several locations due to their inability to manage COD. Not only that, B2Cs are also experiences millions even billion Rupiah of loss, and logistic providers ruins their company image.

4.2.2.2. Post–2013: Requirements Needed by Logistics Providers to Meet B2C e-Commerce’s Growing Needs in Jakarta

Through analyzing the problems stated above, researcher classified three main requirements that needed by logistic providers to meet B2C growing needs in Jakarta.
1. Keep Being Aware of Current Challenges and Competition

As e-commerce growth more rapidly and there are more players entered the market, logistic providers must update their knowledge on the on-going situation of the industry.

First, they need to keep evaluating and improving the system and integration that they have made in Pre-2013. For example, if they were wrote Air Way Bill (AWB) in paperwork, now it’s the time to utilize technology to do it automatically by computer system. Through evaluating and improving their service, logistic providers are expected to wider its service to the untouched area yet. For example, not all providers have branch offices in every Jakarta area (limited counter to drop/take package). Customer often found it difficult to do return service as they must searching first the location of the related provider. Therefore, logistic provider must be able to think what action that can easier customer in doing return service.

Second, logistic manpower are still need to learn and understand how e-commerce logistic works, including the delivery courier. 29 percent of the interviewees stated that customers are complaining because when they asked about basic B2C operation, the delivery courier couldn’t answer it, even those couriers weren’t aware of social media which is currently being one of the main promotion tools used by B2C to be promote their products.

Third, in term of technology implementation, researcher found that one of the issues of why do logisticians can’t be technological friendly is because the technology built is not match with their needs. Therefore, logisticians need to work together with technicians to make technological system or application that matches logistic needs. In parallel, logistic providers also must regularly train their logisticians to be technological friendly and encourage them to adapt with new technology system. So basically they need to be software-user-friendly.

Fourth, logistic providers and other relevant parties in Post-2013 are need to educate customer to not being spoil and captious, but take participation in improving delivery performance. For example by asking them to write their
address accurately and clearly, even asking them to give more clues if their place is located in small streets/passageways; because researcher found that the factor causing dead-end shipment is not just the poor infrastructure but also customer habit of not writing their address precisely.

2. Uberization

The second requirement is uberization. Uberization is term used in logistic industry that picture the ability of provider to connect with supply and demand anywhere, so they are not only being centralized to one of them, but they are able to balance the supply and demand.

Eventually the point of uberization is how logistic providers can aggregate technology into internal logistic operation to enable them connect both supply and demand. Technology and technological friendly manpower will be very crucial factors of logistic to B2C e-commerce.

3. Quality Control

Logistic providers and other relevant parties are required to be able to protect customer privacy. Researcher found cases where customers were being contacted irresponsibly by parties who got the customer’s personal information from the logistic provider data. Some of customers even got sexual harassment through phone call and short message service (SMS) sent by delivery couriers. Therefore, logistic providers should not only focus on developing system and innovate services, but also they must questioning whether their services have perform quality that fit customer’s expectation or they just innovate services to follow the trend. Logistic providers should not let their service quality harms customers as it does define their actual capability and brand image.
4.2.2.3. Post–2013: The Relevant e-Commerce Provider to Solve B2C e-Commerce Logistic Problems in Jakarta

In post-2013, there are new entrants who become relevant parties to solve B2C e-commerce logistic problems in Jakarta.

1. Logistic Providers

First, of course logistic providers are still being the relevant party. They’re the one who master diving logistic industry. In post-2013, there are more logistic providers that aware of e-commerce boom and starts to prepare their company to support B2C rapid growth. More challenges and competition between providers also arise in post-2013, forcing logistic providers, especially the old player, to move quicker to be able to survive and win the competition with new players.

2. B2C e-Commerce Players

The second relevant party is B2C e-commerce players as they are still being the main player of e-commerce in Jakarta. For the past few years, B2C players were analyzing the industry growth, customer behavior, the competition in the market and so on. They have the updated knowledge, so they are relevant to solve logistic problems as it relates directly to their business.

3. Tech Start-Up Companies

In Post-2013, there are several start-up companies that offering services to help solving B2C logistic problems in Jakarta. With various kinds of service, they have one common thing which is technology utilization. They use technology as the foundation of their operation. Some of them are actually had been existed since Pre-2013, but they were still in preparation staging and have just actively operated in Post-2013. The examples are aCommerce, Go-jek, Grabbike, and Pop Box. Even though they have just started operating in few years, they have done actions that brought positive impacts to B2C e-commerce delivery performance. These tech start-up companies are relevant to solve B2C logistic problems
especially because of their expertise in technology field which is being the current requirement to solve logistic problems in Post-2013.

4. Indonesian Government and Logistic Association

The growth of e-commerce has awoken government to participate in solving B2C logistic problems. The logistic associations (such as Asosiasi Logistik Indonesia (ALI), Asosiasi Perusahaan Jasa Pengiriman Ekspres Indonesia (ASPERINDO), etc) also have been more active in mediating government, logistic players and B2C e-commerce players to discuss the logistic problems and future taken actions.

Based on interview with related informants, government wasn’t really participated on the last 2-3 years, but now government and logistic association in Indonesia have already had mutual and in-lined vision. The thing is just the fact that government was still unable to catch up quickly with e-commerce rapid growth.

4.2.1.4. Post–2013: The Actions Taken by e-Commerce Provider to Solve B2C e-Commerce Problems in Jakarta

In post-2013, there are two main blocks that participating in solving B2C e-commerce logistic problems in Jakarta.

1. Old Players

Researcher defines old players as those B2C and logistic providers who have been participating in logistic and e-commerce industry since Pre-2013. The examples of old B2C players are Zalora and Lazada; while the old logistic players are JNE, TIKI and POS Indonesia. The actions taken by them in Post-2013 are mainly continuing what they had built in Pre-2013.
a. B2C

B2C e-commerce, especially the big ones, keeps investing in their in-house delivery as it easier B2C to control the length of delivery. Those B2C who have not yet had their own in-house delivery are being more selective in cooperating with logistic providers. In post-2013, B2C are more concern on the logistic provider’s track record and capability to meet B2C growing needs rather than the age of the provider itself. Researcher found that nowadays B2C e-commerce are signing contract with trustworthy new logistic providers instead of extending their contract with old logistic players. B2C believes that the age or years of operation of logistic providers doesn’t guarantee that those providers will be the right partner for them.

b. Logistic Providers

Researcher found that in Post-2013, most old logistic players are continuing what they have done in Pre-2013. The example is JNE who continues to make computerized master data systematically in Post-2013 after firstly started this project on Pre-2013 (precisely on 2012). Up to this year, 2015, JNE has conducted three times experiments to get more accurate synchronization of its master data. The project is about to make its counter offices, especially in all Jakarta area, are able to access the same data as the head office does.

There is innovation done by ATRI Xpress which help solving B2C logistic problems in term of limited counter location. ATRI Xpress are starting to cooperate with Alfamart and Alfamidi in 2015. We know that Alfamart is quite well distributed in all Jakarta area. People who want to send package can simply go to Alfamart and drop their package there. Alfamart officer will help them finish the administration and later on, the courier of ATRI Xpress will pick and deliver the package to the recipient.

Another action done is stated by Hadi Kuncoro during his interview with researcher, logistic providers are now adjusting the line-haul and last-mile operation based on the shipment volume. For example, in aCommerce, one of the
fulfillment centers is located in Cililitan, East Jakarta. The delivery courier will send package directly from Cililitan to end user house, e.g. in Mampang area. If the shipment volume to Mampang is big and keep increasing, aCommerce will build a line-haul station in Mampang. So aCommerce will use big van to deliver package from Cililitan to Mampang. Then, from Mampang’s line-haul station, aCommerce will use motorcycled riders to deliver the package to end user (last-mile delivery). It’s purposed to cut delivery length and cost.

Then, for old logistic providers who have just realized e-commerce phenomenon, they are currently in preparation staging to compete in this industry. The example is POS Indonesia who has just started to join e-commerce boom this year (POS Indonesia, 2015). POS Indonesia is in process of preparing their system and infrastructure to be able to meet the needs of B2C rapid growth, such as by building real-time tracking system for their shipment.

2. New Players

Researcher defines new players as logistic providers and tech start-up companies that have just actively operated in Post-2013. The common thing between them is the utilization of technology to help solving B2C logistic problems.

a. NEX Logistics

One of the new logistic providers in Post-2013 who prioritize technology utilization is NEX Logistics. NEX Logistics was established on April 30, 2015 under PT. Nusa Prima Express with headquarter in Mampang, South Jakarta and operational office in Cilandak, Cipayung, East Jakarta.

Within one year of operation, NEX Logistics has been appointed to be logistic provider who is fully responsible to package and document service for Blue Bird Group (biggest transportation service provider in Indonesia) and Modern International (license holder of FUJI FILM, 7-Eleven, RICOH, etc). Another achievement, NEX Logistic has also being the logistic provider for several big B2C e-commerce in Indonesia, such as Mataharimall.com, Lazada, and Blibli.
NEX Logistics commits to keep delivery time accuracy and has kept doing innovation for its IT infrastructure which named Domino (Domestic Innovation). They also supported by human resources who are logistic expertise and have experienced in working in logistic industry domestically and internationally.

Researcher summarized three actions that NEX Logistic has done to solve B2C logistic problems in Jakarta. The first is enhancing its technology to give real-time tracking system which enables its customer to know the most updated location of their packages. Technology enhancement is done by NEX Logistics to prove its commitment to keep delivery time accuracy to customers.

The second action is opening more counters in public places by cooperating with 7-Eleven, one of convenience store in Jakarta. Now in several 7-Eleven outlets in Jakarta, we can also find NEX Logistics counter, such as in 7-Eleven Thamrin, Gandaria City, Pinang Ranti, Pasar Minggu, etc. It’s purposed to easier customers who want to send or return packages.

The third action is making NEX-KITA (Kirim Titip Ambil) which is a locker functioned to store the ordered/returned products. NEX-KITA was established firstly on July 11, 2015. It’s a project between NEX Logistics, 7-Eleven and Blibli, shown in Picture 4.3.

![Picture 4.3 NEX-KITA](source: Blibli, 2015)
Now, instead of delivering package to end user places, customer of NEX Logistics and Blibli can request delivery courier to send the package to NEX-KITA. If they want to return the packages, they also can utilize this locker. This locker is made because NEX Logistics and its partners are aware of high mobility of Jakarta citizens. Customers of NEX Logistic and Blibli can use this locker with terms and conditions applied.

b. aCommerce

aCommerce is established in Indonesia on November 2013. It’s not a tech company but aCommerce utilizes technology as foundation to build the company, so we also may call it tech start-up company. The head office is located in Central Jakarta and it has three fulfillment centers, two of them are located in East Jakarta and one of them is located in West Java. The company headquarter itself is located in Bangkok, Thailand.

Currently, aCommerce is the only end-to-end e-commerce provider in Indonesia which has three core services which are technology, marketing and operation service. Frankly, aCommerce can provide all things that offline companies need to go online. Within 2 years of operation, aCommerce already got more than 90 clients vary from SME (Small Medium Company) as well as big companies, local, regional, international brands from various industries (fashion, food and beverage, electronics, lifestyle, services and so on) such as Groupon, Mitra Adi Perkasa (MAP), Unilever, L’oreal, Lippo Group, Rinso, Kapal Api, Cimory, etc.

There are several actions that aCommerce took to solve B2C logistic problems. First, aCommerce was the first provider who made real-time tracking system. aCommerce built tracking software and place it on every delivery courier’s smartphone (aCommerce equipped their delivery couriers with smartphone). Every movement of delivery team is being recorded, and once the courier done the shipment, they can report it directly through their smartphone and it will automatically update the package status.
Second, aCommerce built and recently released a mobile application named aDelivery which purposed to help logistic providers to manage courier’s job assignment, delivery and pick up. This application can also do real-time tracking, send proof of delivery and count automatically the nominal of COD (Cash on Delivery) that accepted by delivery couriers.

The third action is paying attention to delivery courier development. The development here is not talking about the quantity of delivery couriers but their quality. For aCommerce, every time they hire new delivery courier, this courier will join induction program first to let him familiar with e-commerce system and logistic for e-commerce. Then, aCommerce regularly gives briefing to all their delivery couriers. In the briefing, the agenda are reviewing major delivery problem, discussing the actions to overcome the problems, evaluate the effectiveness of taken actions and the performance of couriers.

One of the major problems faced by delivery courier is the captious customers who do not want to cooperate with them. For example, aCommerce requires delivery courier to take photo of the package’s recipient. There were customers who didn’t want to be captured, so the couriers asked permission to take picture of the recipient house’s front appearance to be the proof of delivery, but the customers refused and accused the couriers want to rob their houses. The action taken by the courier to deal with this kind of customer was introduced aCommerce and educated the customers about the delivery procedures. As time goes on, the frequency of this problem is decreasing. Eventually this problem has made customer become more aware of aCommerce due to delivery couriers explanation to them.

aCommerce also actively introduces technology implementation to their courier. Step by step continuously, they teach and help delivery couriers to learn and adapt the technology used in the delivery process. Even though all the couriers are not highly educated persons but they’re managed to be technological friendly because of the regular training they received (Raditya Danu, 2015).
c. Go-jek and GrabBike

Another tech start-up is Go-jek, shown in Picture 4.4. It’s an Indonesian start-up founded by Nadime Makarim. Go-Jek utilizes technology to create mobile application that enables ojek (public transportation with motorcycle mode) riders to find and transport customer. The biggest competitor of Go-Jek is GrabBike. GrabBike is managed by GrabTaxi, a Malaysian start-up founded by Anthony Tan. These two start-up companies are currently doing the uberization where they connect supply (ojek riders) with demand (customers).

While Grabbike is focused only on transportation services, Go-jek has broader range of service. Go-jek can also deliver package and documents. It’s really simple, customers just need to download the application and do order through the app. Go-jek will connect customer to the possible courier, then the courier will contact customer and pick up the package in customer place (sender). Approximately within 60-90 minutes, the package will arrive in the recipient place. So far, this is the quickest delivery length compared to other logistic providers. Researcher found that in some urgent case, B2C players would use Go-jek service. Customers of B2C also can use Go-Jek to do return service.

![Picture 4.4 Go-Jek](source: Pricebook, 2015)
d. PopBox Asia

The third start-up is PopBox Asia. PopBox Asia is also an Indonesian tech start-up that founded on January 2015 by Adrian Lim and Greta Bunawan. PopBox makes automated parcel locker that allows people to do self-service pick up and return packages. The PopBox itself looks like a vending machine covered in pop art. To use PopBox, online shopper must select PopBox as the pickup option during they shop in B2C site (therefore, PopBox will already need to be a partner of the site). Once confirmed, a code will be sent to customer phone which then can be scanned at the PopBox terminal. After customer scan it, the locker will “pop” open and they can collect the package.

The lockers (shown in Picture 4.5) are located in popular public places such as big convenience store, shopping mall, train station, etc. The examples are Baywalk Mall, Grand Slipi Tower, Kalibata City Square and so on. According to Adrian Lim, by placing PopBox lockers at popular locations throughout Jakarta, customers get to pick up their delivery faster and at lower cost compared to having it delivered to their home, when they may not be around to receive it (Tech in Asia, 2015). PopBox is working 24 hours, so customer can even pick up package on weekend. The cost of PopBox is depending on the volume transacted, Adrian Lim says his firm charges around IDR 5,000 per use.

![Picture 4.5 PopBox](image)

**Picture 4.5 PopBox**

*Source: Tech in Asia, 2015*
4.2.1.5. Post–2013: The Effectiveness of Actions Taken by e-Commerce Provider to Solve B2C e-Commerce Problems in Jakarta

To know the effectiveness of the taken actions, researcher looked on the problem itself to analyze the result of the taken actions.

1. Poor Infrastructure

One of the problems is the limited counter of logistic providers in Jakarta area. This problem has been arisen since Pre-2013. The limited counter brings difficulty to customers who want to pick up and return package. In Post-2013, logistic providers who aware of this situation are cooperating with several parties to make more counters. The examples are ATRI Xpress who cooperate with Alfamart, and NEX Logistics who cooperates with 7-Eleven. There is also NEX-KITa and PopBox, a self-service locker that enables people to pick up and return package. Qualitatively, these actions have reduced the difficulty of customers who want to send, pick up and return packages.

2. Low Technology Implementation

Now, e-commerce providers have begun to realize the importance of technology implementation in e-commerce logistics. Looking at the severe tracking condition back then, nowadays tech start-up like aCommerce has managed to build real-time tracking software to enable both provider and customer to track the current location of their package. Qualitatively, it’s proven to have increase customer satisfaction as it makes customers feel more secure.

aDelivery also help reducing paperwork in logistic process. Instead of writing manually on paper (e.g. filling Air Way Bill form, Proof of Delivery, etc), logisticians can now do it automatically using mobile app. It reduce time consumption and human error.

3. Immature Human Resources

Through regular briefing done by logistic providers to their delivery couriers, step by step, those delivery couriers are become technological friendly. They also
understand how e-commerce operates and how e-commerce logistic different with offline logistic. The key is, the educated logisticians must be determined to help those delivery couriers to learn and adapt with current situation. Of course it’s not easy to teach technology to people who are not used to it, however researcher found that through never ending guidance give to delivery couriers, they are managed to catch up to use the technology that is currently used by the company.

4. High Logistic Cost

For high logistic cost, the adjustment of line-haul and last-mile delivery can reduce cost consumption in delivering packages to end user place. Why? Logistic provider can manage to send more items using big van before finally they separate the shipment in motorcycled riders. Providers can reduce variable and overhead cost. Then, the existence of locker (NEX-KITA, PopBox) also reduced the risk of wrong shipment or dead-end shipment that force providers to do redelivery attempt (meaning more cost consumed). Those actions are qualitatively have been effective in solving high logistic cost problem in Jakarta.

5. Cash on Delivery (COD)

For COD challenges, aDelivery (aDel) who record payment transaction automatically has been one of the solutions that easier logistic providers in collecting and reporting the cash money. Using aDel, logistic provider will know how much exactly the amount that delivery couriers received from customers. It helps finance to collect the right amount from couriers.

The in-house system also helps logistic providers to control people and system management for the COD because they will be the one who directly manages and evaluate the COD procedures and operation.
4.3. Interpretation of Result

Through this research, researcher understands the requirements needed by logistic players to meet the growing needs of B2C e-commerce in Jakarta. The requirements are depending on the situation faced by logistic players in particular time. That’s why the requirements in Pre-2013 are different with the requirements in Post-2013. Simply, logistic providers are need to first being aware of their surrounding before take any actions to solve the logistic problems. Technological friendly also has been being crucial factor in determining the capability of logistic provider in solving B2C e-commerce’s logistic problems.

Then, researcher got knowledge of who are the e-commerce providers that relevant to solve B2C e-commerce’s logistic problems in Jakarta. In pre-2013, there were fewer relevant parties who need to participate in solving the logistic problems, but in post-2013, there are new player joining the industry. Most of them are tech start-up companies who utilize technology as the foundation of their services. These start-ups have managed to do uberization to answer the current challenges in e-commerce logistic.

With this, researcher knows the effectiveness of the actions taken by e-commerce provider in solving B2C e-commerce’s logistic problems in Jakarta. Researcher compares the problem before and after the actions performed. Researcher analyzes the impact of the actions toward the problems and sees the effectiveness qualitatively.
CHAPTER V

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

e-Commerce is growth rapidly in Indonesia for the past few years. Entering Indonesia on 1996, e-commerce has successfully attracted the attention of domestic industries players, causing broader range of products are now available to be shop online. Not only Indonesians who aware of this boom, but also foreign researchers, investors and e-commerce players are competing to join Indonesia e-commerce industry. Currently, B2C is dominating the market, and Jakarta is being the prima donna.

Despite of e-commerce rapid growth, logistic providers in Jakarta are not ready yet to welcome and support it. It’s indicated by several phenomenon, such as e-commerce package can’t be deliver quickly to end user place, inability to track the current location of the package, etc. These phenomenon make people hesitate to shop online.

Through more detail analysis in pre and post 2013, researcher has found major logistic problems that bring difficulty for logistic providers to answer B2C e-commerce growing needs. The problems are becoming the parameter for researcher to formulate the requirements needed by logistic providers to solve B2C e-commerce logistic problems.

In pre-2013, the requirements are adjustment, systematical delivery process with technology integration, and educating human resources. These requirements are relevant to solve B2C logistics problems because based on problems found in pre-2013, logistic providers need to fulfill these requirements since it is the fundamental things to work in e-commerce industry. By the time they fulfill these requirements, they’re basically taking actions to solve the problem. The
effectiveness are resulting less chaotic delivery, length of delivery in Jakarta dropped from 3-7 days to 1-3 days, more orders could be deliver quicker to customer and more customers were attracted to shop online and gaining trust on product delivery.

In post-2013, the requirements to solve B2C logistics problems are keep being aware of current challenges and competition, uberization, and quality control. These requirements are relevant to solve B2C logistics problems because based on problems found in post-2013, logistic providers need to fulfill these requirements as it is the fundamental requirements to compete in e-commerce industry post-2013. By the time they fulfill these requirements, they’re basically taking actions to solve the problems. The effectiveness are resulting in a qualitative deduction on the difficulty of sending, picking up and returning packages. Technology implemented reduces time consumption, cost and human error. Logisticians are started to being tech-friendly. In-house logistics helps manage and control Cash On Delivery.

In the end, researcher concludes that e-commerce providers have done huge role in solving B2C e-commerce’s logistic problems. Again, e-commerce providers are parties who provide service to enable e-commerce transaction, and in this research it’s being focused to those who provide logistic products or services to B2C e-commerce and customers. Without e-commerce provider’s efforts, logistics will still be the most severe bottleneck for B2C operation.

5.2. Recommendation

5.2.1. PT. Acommerce Solusi Lestari

Researcher recommends PT. Acommerce Solusi Lestari to make calculation to forecast the shipment volume of peak seasons and how much resources are needed. Using the Kraljix matrix, researcher found that peak season is still being a problem until now. During peak seasons, such as Ied Fitri, Christmas and New
Year days, the delivery will be delayed in quite long time (it can delay up to 1 week for Jakarta). It bring high supply risk and low profit impact. Researcher believes that if aCommerce is able to forecast the required resources (man power, fleets, tools, etc) to handle shipment in peak season, there will be no delay anymore or at least the length of delay can be reduced; therefore the supply risk will be lower and the profit impact will be higher.

5.2.2. Future Researcher

Researcher recommends future researcher who wants to continue this research to first analyze how software-user-friendly is the logisticians, how much their development in mastering technology, etc; because it’s one of the current requirements to solve B2C e-commerce logistic problems in post-2013. Researcher also suggests future researcher to focus on problem that hasn’t been solved such as the delay of delivery in peak season; and take a look on C2C growth as C2C has growing potential in Jakarta, even in Indonesia.
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APPENDICES

Transcript Interview

Interview I: Marketplace Staff at PT. Acommerce Solusi Lestari, Jakarta

Researcher: Good morning, Sir. I’m Kezia Revina, student of President University, majoring in Management. First of all, I would like to say thank you for sparing your time for this interview. I’m currently writing my thesis, entitled The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta. I would like to ask few questions related to customer of online shop, B2C players, logistic providers, e-commerce providers in Pre and Post-2013. Before we start our interview, could you please introduce yourself in a brief?

Interviewee: Good morning, Kezia. I’m Andry Sugiarto, Channel Management Marketplace staff at aCommerce. I’m handling marketplace operation. Basically, I’m dealing with B2C, marketplace sites, ordering process and also the customer itself. I was an Online Campaign Analyst at aCommerce on 2014, and I have ever worked in Zalora Group as Senior Customer Service.

Researcher: My first question, in term of logistics, what is the factor that influence customer the most in shopping online?

Interviewee: The speed of delivery. It’s a very important factor not only for customer, but also for B2C itself as the speed of delivery can influence customer perception towards the online sites. Customer also concerns on the track record of the logistic providers.
Researcher: In pre and post-2013, do B2Cs have ever had problems in performing quickly delivery to end user places in Jakarta?

Interviewee: Yes. In pre-2013, customer waited around 1 week for shipment. In post-2013, it’s been better, but during peak seasons, customers are still need to wait for quite long time to get their ordered products.

Researcher: What factors that made B2C and logistics providers can’t perform quick delivery service in pre and post-2013?

Interviewee: First, the poor infrastructure in Jakarta. It’s hard to find the right place of end user. Then, logistic providers haven’t implemented much technology and build system to support them in tackling the poor infrastructure. Some couriers also don’t do redelivery attempt.

Researcher: What should be done by e-commerce provider to solve this problem?

Interviewee: Actually, e-commerce provider especially the logistics provider, have developed their delivery service variants and perform faster delivery. Quite many of them have aware of e-commerce logistics. Now, I think the requirements is to be able to give cheaper price because I find some B2C and logistics provider have quite high delivery fee. Delivery couriers should be trained so they can truly understand how logistics works in e-commerce.

Researcher: What do you think about aCommerce’s logistic service?

Interviewee: aCommerce has done good delivery performance. Couriers deliver the orders quickly. The logisticians here also have utilized technology to support the operation, such as real-time tracking.

Researcher: Well, thank you Mr. Andry for your time and help. I do appreciate it.

Interviewee: Yes, my pleasure. Good luck.
Interview II: Business Development Manager at PT. Acommerce Solusi Lestari, Jakarta

Researcher: Good morning, Mam. I’m Kezia Revina, student of President University, majoring in Management. First of all, I would like to say thank you for sparing your time for this interview. I’m currently writing my thesis, entitled The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta. I would like to ask few questions related to B2C players, logistic providers, e-commerce providers in Pre and Post-2013. Before we start our interview, could you please introduce yourself in a brief?

Interviewee: Good morning, Kezia. I’m Ranseti Tampubolon, Business Development Manager at aCommerce. I’ve ever worked at MNC Media ad Head of Sales on 2013-2014, and was the Senior Account Executive at PT. Kompas Cyber Media on 2012.

Researcher: My first question, in term of logistics, what is the factor that influence customer the most in shopping online?

Interviewee: The speed of delivery. Customers will happy if the length of delivery match with the promised SLA (Service Level Agreement).

Researcher: In pre and post-2013, do B2Cs have ever had problems in fulfilling the SLA in Jakarta?

Interviewee: Yes, majorly are causing by the bad address. Couriers are unable to find the right location of end user. In post-2013, usually during peak season, the length of delivery will be longer than the normal SLA.

Researcher: Besides SLA fulfillment, what are the other top logistics problems of B2C in Jakarta?

Interviewee: The delivery courier service to end user and the high delivery cost. I found many cases where customers are unhappy with service performed by delivery couriers. For example, delivery couriers don’t
use appropriate language, they are not friendly, they don’t know about e-commerce at all, and so on.

Researcher: What should be done by e-commerce provider to solve this problem?

Interviewee: First, they must make system to support them fulfilling the SLA, and utilize more technology to cut logistic cost. Second, they need to give proper training to delivery couriers before the couriers meet end user. In pre-2013, e-commerce provider, especially the logistics ones, were really chaotic, but now they have developed many things to catch up with e-commerce rapid growth. In post-2013, they are still need to work hard to meet the growing needs of B2C in Jakarta, because e-commerce growth really fast.

Researcher: For aCommerce itself, what do you think about its logistic service?

Interviewee: aCommerce fulfill more than 95% of its SLA for Jakarta area. Our technicians support the logistic operation. We have application to do real-time tracking. Recently, we build aDelivery to optimize and paperless delivery and COD (Cash On Delivery). We offer reasonable price for delivery fee. Our couriers also trained well.

Researcher: Well, thank you Ms. Seti for your time and help. I do appreciate it.

Interviewee: Yes, my pleasure. Good luck.

Interview III: Operation Project Manager at PT. Acommerce Solusi Lestari, Jakarta

Researcher: Good morning, Mam. I’m Kezia Revina, student of President University, majoring in Management. First of all, I would like to say thank you for sparing your time for this interview. I’m currently writing my thesis, entitled The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta. I would
like to ask few questions related to B2C players, logistic providers, e-commerce providers in Pre and Post-2013. Before we start our interview, could you please introduce yourself in a brief?

Interviewee: Good morning, Kezia. I’m Desty Rama Rumondang, Operation Project Manager at aCommerce. Previously I was a Client Service Manager here.

Researcher: Ms. Desty, as you work in operational of an e-commerce provider, what are the top logistic problems for B2C in pre and post-2013?

Interviewee: Infrastructure, technology, and human resources. Although Jakarta is a capital city, the infrastructure is poor. The road ratio in Jakarta is not ideal, causing severe traffic jam. The address also named unsystematically. Then, logistics players haven’t optimized technology yet for their operation. In pre-2013, more players operated traditionally compared to post-2013. Lastly, the logisticians, especially the couriers, haven’t had strong mental and devotion to achieve delivery target.

Researcher: What are the requirements needed by logistic providers to solve those problems?

Interviewee: First, they must know market needs. Pre-2013 and post-2013 have different needs as e-commerce has growth rapidly; such as in post-2013, there is uberization, e.g. Gojek, which connect supply and demand quickly. It’s important to build system that match with market needs. Second, logistic providers must aware of current competition. In Post-2013, there are many new comers. Old players need to dare to innovate and learn from competitor to keep delivering updated service to customers; and don’t forget to pay attention to delivery couriers. They must be trained as they’re the one who will meet end user. It’ll affect company image.
Researcher: What aCommerce has done to solve B2C logistic problems in Jakarta?

Interviewee: aCommerce utilized technology for its logistic service, such as pioneering real-time tracking in Jakarta. We have aDelivery to optimized delivery, and easier COD with automatic data record as COD has become another top problem in Pre-2013. aCommerce also trained delivery courier regularly to help couriers understand how e-commerce logistics works and how to communicate with customers.

Researcher: Well, thank you Ms. Desty for your time and help. I do appreciate it.

Interviewee: Yes, my pleasure. Good luck.

Interview IV: Social Media Specialist at PT. Acommerce Solusi Lestari, Jakarta

Researcher: Good afternoon, Mam. I’m Kezia Revina, student of President University, majoring in Management. First of all, I would like to say thank you for sparing your time for this interview. I’m currently writing my thesis, entitled The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta. I would like to ask few questions related to B2C players, logistic providers, e-commerce providers in Pre and Post-2013. Before we start our interview, could you please introduce yourself in a brief?

Interviewee: Good afternoon, Kezia. I’m Sellyza Novira, Social Media Specialist at aCommerce. Previously, I worked in PT. Zalora Indonesia on 2012-2014 as QA (Quality Assurance) Analyst.

Researcher: Ms. Selly, in term of logistics, what is the factor that influence customer the most in shopping online?
Interviewee: The speed of delivery. It’s crucial factor for e-commerce industry. In pre-2013, the length of delivery in Jakarta was 4-7 days. The big B2C eventually decided to build their own in-house delivery to faster the delivery, such as Zalora which built ZADEX, Zalora Delivery Express. In post-2013, the delivery length in Jakarta has shorten into 1-3 days. However, during peak season, the length of delivery will be longer than 3 days; it can reach 1 week length.

Researcher: Besides the delivery time that was quite long, what are the other logistic problems faced by B2C in pre and post-2013?

Interviewee: In pre-2013, logistics providers have not had supporting services yet for e-commerce, such as packaging service, return service, variant of delivery service; counters were not fully spread into all Jakarta area; the couriers also had not yet had clear understanding of e-commerce logistics. In post-2013, COD management has become more challenging. B2C and e-commerce providers need to pay attention to this.

Researcher: What are the requirements needed by logistics providers to solve those problems?

Interviewee: For pre-2013, the requirement was more about adjustment of system, infrastructure and people; while for post-2013, logistics providers must have quality assurance. For example, people now are willing to pay higher delivery fee as long as the providers have good track record. It’s now about trust issue, including how provider can perform capacity control during peak season.

Researcher: aCommerce has logistics services. In what ways do you think its actions are effective in solving B2C logistics’ problems in Jakarta?

Interviewee: By having real-time tracking, aCommerce has ensured the live location of the ordered item to B2C, customer, and also our logistic operators. It builds trust and brand image to customer. Then, I know
that aCommerce trains and regularly briefs their couriers. It’s really effective to help couriers communicate appropriately with end users, and perform satisfying service to them.

Researcher: Well, thank you Ms. Selly for your time and help. I do appreciate it.

Interviewee: Yes, my pleasure. Good luck.

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**Interview V: Junior Product Manager at PT. Acommerce Solusi Lestari, Jakarta**

Researcher: Good afternoon, Sir. I’m Kezia Revina, student of President University, majoring in Management. First of all, I would like to say thank you for sparing your time for this interview. I’m currently writing my thesis, entitled The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta. I would like to ask few questions related to B2C players, logistic providers, e-commerce providers in Pre and Post-2013. Before we start our interview, could you please introduce yourself in a brief?

Interviewee: Good afternoon, Kezia. I’m Ramdisa Agasi, Junior Product Manager at aCommerce. Last year, I was an Engineering Intern at Garuda Indonesia. Nice to meet you, hope I can give information you need.

Researcher: Mr. Ram, I heard that you have ever lived in several countries. Looking at Indonesia now, especially Jakarta, what are the top logistic problems for B2C e-commerce?

Interviewee: Yes, I previously lived in London, America and UAE. I think the first top problem is infrastructure which actually has been a concern for logistic industry since pre-2013. There are many bad addresses and unstructured passageways in Jakarta that bring difficulty to deliver customer orders. Logistics in Jakarta also hasn’t yet utilized
much technology compared to other urban area abroad. Then, the logistic cost in Jakarta is quite expensive.

Researcher: What are the requirements needed by logistic providers to solve it?

Interviewee: They need to be innovative. In post-2013, logistics also growth so much, for example, at first there’s only Gojek, right? But now, there have been GrabBike, BlueJek, LadyJek, and so on. They are the new entrants that do utilize technology to connect supply and demand in e-commerce logistics. The old players must adjust their selves. For your information, I still find some logistics players who don’t have real-time tracking and operate in manual paperwork. I hope they can start using more technology to less paperwork and make everything integrated and automated.

Researcher: I heard that you in charge for aDelivery. What is the benefit of aDelivery for e-commerce logistics?

Interviewee: aDelivery is an application to manage job assignment, delivery and pickups by sending assignments straight to rider’s mobile, enable live tracking, real-time delivery proof, and automatic payment counting. It makes delivery faster, paperless, and COD become manageable and controlled.

Researcher: Okay, thank you so much Mr Ram. I really appreciate your help.

Interviewee: Yes, my pleasure. Good luck.

Interview VI: Head of Distribution at PT. Acommerce Solusi Lestari, Jakarta

Researcher: Good afternoon, Sir. I’m Kezia Revina, student of President University, majoring in Management. First of all, I would like to say thank you for sparing your time for this interview. I’m currently
writing my thesis, entitled The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta. I would like to ask few questions related to B2C players, logistic providers, e-commerce providers in Pre and Post-2013. Before we start our interview, could you please introduce yourself in a brief?

Interviewee: Good afternoon, Kezia. I’m Raditya Danu, Head of Distribution at aCommerce. Previously I worked in PT. Tokobagus as Online Marketer, Google Adwords & Search Engine Specialist on 2013-2014; and I was Online Marketer & Business Analyst at Rocket Internet Indonesia on 2012.

Researcher: Mr. Danu, I’ve conducted several interviews before, and I also conducted researches on top logistics problems in Jakarta for B2C e-commerce. I found that infrastructure, technology, human resources, and logistic cost, have become top 4 problems. Based on your work experiences in e-commerce industry, which is the most severe one?

Interviewee: Yes, I really agree with those problems. The most severe is the infrastructure. Infrastructure is talking about two things. First is how the logistic providers build system and their agents; the second is the mapping area. Bad/unstructured address often becomes a dead end for shipment. The zip codes in Jakarta are outdated. For human resources, actually I don’t think it’s a problem because as long as we keep learning and motivated our riders, they can cooperate well. In post-2013, another thing that you should concern is COD. Many logistic providers closed their branches agents because they can’t manage COD.

Researcher: What are the requirements needed by logistic providers to solve it?

Interviewee: First, build integrated system and prepare the untouched sides, such as developing our own mapping area to easier delivery process. Adjust capacity and procedures as needed to fulfill SLA. The
example is JNE who has tried to make staging system where they can have centralized data. They have tried 3 times to develop it since 2012. For COD, logistic providers must strongly prepare the system because if they failed to manage it, their company would severely affected.

Researcher: What action has aCommerce done to help solving B2C logistics problems in Jakarta?

Interviewee: The real-time tracking helps securing shipment and brings assurance to customers who wait their ordered products. aDelivery helps counting automatic for COD. aCommerce also pay attention to riders. We conduct weekly briefing to share courier’s problems in field, together we think the solution, and evaluate courier’s performance. Now, many of end users said that they like our courier service better than other 3PL because our couriers understand about e-commerce, logistics and communicate appropriately with them.

Researcher: Okay, thank you so much Mr Danu. I really appreciate your help.

Interviewee: Yes, my pleasure. Good luck.

Interview VII: COO (Chief Operating Officer) at PT. Acommerce Solusi Lestari, Jakarta & Vice Chairperson of ALI (Asosiasi Logistik Indonesia)

Researcher: Good evening, Sir. I’m Kezia Revina, student of President University, majoring in Management. First of all, I would like to say thank you for sparing your time for this interview. I’m currently writing my thesis, entitled The Role of e-Commerce Provider in Solving B2C e-Commerce’s Logistics Problems in Jakarta. I would like to ask few questions related to B2C players, logistic providers,
e-commerce providers in Pre and Post-2013. Before we start our interview, could you please introduce yourself in a brief?

Interviewee: Good evening, Kezia. I’m Hadi Kuncoro, COO at aCommerce. I’m also Vice Chairperson at ALI. Previously, I was Vice President and Operation Director at Rocket Internet GmbH and Zalora Indonesia on 2012-2014. I’m also lecturing supply chain and international logistics in Trisakti, ITB, UMN, and so on.

Researcher: Mr. Hadi, I’ve done several interviews before, and conducted research on e-commerce logistics. One of the top problems is the high logistic cost. Why logistics cost for e-commerce is higher than offline business?

Interviewee: First is because the shipment is done in individual package, not in a bulk/consolidated package. Let me illustrate, you can rent 1 truck cost IDR 700,000 to deliver 2,000 bottles of beverage, so each bottle only cost you IDR 350 for delivery fee. In e-commerce, you need to deliver 1 bottle of beverage to 1 end user place. You need motorcycle to pass through passageways or small stress to reach end user place. You need fuel (note: Jakarta has severe traffic jam that influences fuel consumption), pay courier’s salary and also maintenance cost. That’s why e-commerce logistic cost is higher than offline.

Researcher: How to overcome this problem?

Interviewee: One of the ways is by adjusting the hub. For example, aCommerce’s fulfillment center is in Cililitan. We deliver order straight away from Cililitan to end user place. If the shipment volume to certain area is high, we will open station in that area. So, we deliver the products at once from Cililitan using big van to that area’s station, then from the station, our courier will start deliver to end user place using motorcycle to reduce cost and time consumption.
Researcher: Another top problem that I got based on my research is COD. What makes COD become problem to logistic provider, and how to overcome it?

Interviewee: For your information, I was the one who initiate COD in Indonesia, including Jakarta. It was on 2012 when I worked in Zalora. For Jakarta, there are 2 factors that make COD hard to control. The first, COD deals with cash money. The second is people and system management. There should be proper system to control COD. Whoever can tackle those 2 factors can be a very strong logistic providers.

Researcher: Mr. Hadi, as you are actively participated in ALI, what do you think of Indonesia Government in facing e-commerce growth? Do they have in-lined vision with Indonesian logistics association?

Interviewee: Indonesia Government has supported e-commerce growth. They’re also aware of e-commerce logistic problems. They are currently in process of developing law for e-commerce, including logistics. Government has in-line vision with logistics association. The matter is just about how fast they adapt with the current situation as now they’re still being jet lagged with the e-commerce rapid growth.

Researcher: Okay, thank you so much Mr Hadi. I really appreciate your help.

Interviewee: Yes, my pleasure. Good luck.
Field Work Pictures

Interview with Ms. Seti Tampubolon at PT. Acommerce Solusi Lestari, Jakarta

Interview with Ms. Desty Rama Rumondang at PT. Acommerce Solusi Lestari, Jakarta
Interview with Ms. Sellyza Novira at PT. Acommerce Solusi Lestari, Jakarta

Interview with Mr. Ramdisa Agasi at PT. Acommerce Solusi Lestari, Jakarta
Interview with Mr. Raditya Danu at PT. Acommerce Solusi Lestari, Jakarta

Interview with Mr. Hadi Kuncoro at PT. Acommerce Solusi Lestari, Jakarta