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Thesis

Impact of Information and Communication Technology on Improving
Small and Medium Enterprises Performance in an Urban Kampung:
Case Study of Kampoeng Cyber RT 36 Neighbourhood of Patehan,
Yogyakarta

Name : **Pahala Hamonangan Lumban Gaol**

Supervisor : Jan Fransen, MA

Ir. Leksono Probo Subanu, MURP, Ph.D
(Universitas Gadjah Mada, Yogyakarta, Indonesia)

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UMD 7

Summary

ICT has become an interesting phenomenon, specifically in the business world. It has contributed significant changes in many parts of the world where new SMEs emerged and challenged the domination of established corporations. However, although many SMEs have been able to seize its benefit, others are not so successful. Therefore, it draws curiosity as to how exactly ICT can give impact on the performance of the SMEs. This is the main concern of this research. To engage with it, the research formulates several research questions, which consists of one main question and several sub questions. The main research question is: How can SMEs utilize ICT to improve their business performance? The research also wants to know about: To what extent has ICT been implemented by SMES? How is the performance of SMEs before and after ICT implementation? How is the capacity of SMEs to absorb ICT?

The research pursued the answers to these questions through devising a descriptive-case study. The data were collected through in-depth interviews, secondary data collection and field observation. The interviews were conducted with eleven respondents in a neighbourhood in Yogyakarta City, called RT 36 of Patehan. Ten respondents are SME owners, while one is the neighbourhood leader.

The research found that despite internet illiteracy and low financial capital, the residents of RT 36 are able to build a computer-internet network providing a 24-hour-a-day internet connection. They call the network “Kampoeng Cyber” network. Most of the SMEs in the kampung have integrated ICT into their business. As the result, most of them are able to increase their business performance. Several SMEs even succeed to achieve exceptional improvement. However, some discrepancies are also recognized in which the respondents with more extensive ICT intervention have less performance improvement than other respondents with less extensive ICT. It indicates that the performance of the SMEs doesn't automatically improve after having ICT interventions. Further enquiries showed that the performance improvement relates to the Absorptive Capacity of the SMEs. Absorptive Capacity has four dimensions, namely Acquisition, Assimilation, Transformation and Exploitation. Of the four dimensions, significant distinction among the respondents can be spotted in terms of Transformation. The SMEs that manage to significantly improve their performance are able to combine the new innovation with their old knowledge. It enables them to put ICT into the context of their existing work system and properly merge the new innovation into their work mechanism. The research also found out that Absorptive Capacity has a strong relationship with entrepreneurship, social capital and networking of the SMEs. These aspects help the SMEs to break the barriers toward ICT absorption.

The research finally concluded that SMEs can properly utilize ICT to improve their business performance by having adequate and proportional dimensions of Absorptive Capacity. Although all dimensions should be present, Transformation holds a significant role since it relates to placing ICT into the specific context of the SME. SMEs should also possess entrepreneurial capital, adequate networking and appropriate purpose of ICT intervention. Mere investment on ICT without full understanding of its own condition may make it difficult for an SME to integrate ICT into its work system and hamper its optimum utilization for performance improvement. This finding is relevant for policy makers. Giving out revolving funds without proper assistance to the SMEs might not be sufficient to push their performance. Relentless campaigns and trainings to improve their Absorptive Capacity are essential, so that the SMEs can maximize their resources and potentials to capture the opportunities in the market.

Keywords: ICT; SME performance; absorptive capacity; entrepreneurial capital; networking.

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*“.....Commit your way to the Lord, trust also in Him, and He shall bring it to pass.....”
(Psalms 37:5)*

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Pahala Hamonangan Lumban Gaol

Abbreviations

BPS	: Biro Pusat Statistik – Bureau of Statistics Central
Disperindagkoptan	: Dinas Perindustrian, Perdagangan, Koperasi dan Pertanian - Agency of Industry, Trade, Cooperative and Agriculture
€	: Euro
EDI	: Electronic Data Interchange
HTML	: Hypertext Mark-up Language
ICT	: Information and Communication Technology
ICT4D	: Information and Communication Technology for Development
ITU	: International Telecommunication Union
JFC	: Jogja Fishing Community
Kampung	: Informal organization of the people living in a certain area, usually smaller than RT
KKN	: Kuliah Kerja Nyata – Community Field Work, university students' obligatory social field work.
LAN	: Local Area Network
MDG	: Millenium Development Goals
OECD	: Organisation for Economic Co-operation and Development
PC	: Personal Computer
PEW	: Program Pemberdayaan Ekonomi Berbasis Kewilayahan (PEW) – Regional Based Economic Empowerment Program
R&D	: Research and Development
Rp.	: Rupiah – Indonesian currency
RSS	: RDF (Resource Description Framework) Site Summary
RT	: Rukun Tetangga – Neighbourhood Group, smallest citizen organization that is formally acknowledged by the government supervised by RW
RW	: Rukun Warga – Community Group, citizen organization comprising several RTs, supervised by Kelurahan (urban village)
SME	: Small and Medium Enterprise
UNDP	: United Nation Development Programme
www	: world wide web

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Chapter 1: Introduction

1.1. Background

The last decade of the twentieth century has witnessed a boom of Information and Communication Technology (ICT). The boom can especially be seen in the wide use of internet in the mid 1990s. The internet “explosion” swept through the whole world, also in Indonesia. It is supported by the emergence of many internet-related hardware and software. The internet explosion is then followed by the exponential increase of mobile phone utilization. The technology has become cheaper and cheaper, enabling the people from middle and lower level of economy to use such technology as well (Smith & Elder 2010).

ICT has brought considerable impact to many countries socially and economically. The western countries, as the first nation to be influenced by ICT boom, have benefited a high economic growth. ICT has opened new businesses opportunities, created new job fields, increased efficiency and productivity. ICT also has brought great change in many social values. The internet has made it possible for anyone to virtually meet many people from many parts of the world.

On the other hand, there is still a wide disparity within the developing countries in terms of ICT mastery. Fong (2009) stated that there was still a gap between rich and poor communities, particularly in internet utilization. The gap is known as information gap or “digital divide”. The reach of internet is somewhat limited to rich communities. Nevertheless, there is a constant increase of internet influence toward poor areas. The people of those areas are becoming more aware of the benefit of ICT. The case is observable in Indonesia.

Many international organizations, such as UNDP, World Bank, ITU, etc., believe that developing countries should be endorsed to promote ICT in their countries. ICT is judged to bring positive impacts for strengthening the economic capabilities of developing countries, particularly in Small and Medium Enterprises (SME) sector. This sector has been viewed as an important part of the economy of developing countries due to its significance in economic structure, especially in terms of workforce. SME can provide many job opportunities and survive economic crises. However, many SMEs find it difficult to compete with more established firms. In order to overcome this, many people believe that ICT can provide the answer. Luchetti & Sterlacchini (2004) quoted Commissions of the European Communities (2001b) by saying that ICT served as the gateway to global market as it might decrease the barriers of entry to market. Shiels, McIvor & O’Reilly (2003) stated that SMEs often found difficulties due to geographical constraints. In such case, ICT may provide a way to link them with the market for various opportunities, advertising, marketing and even direct distribution of certain goods and services (Hsieh & Lin 1998). Wolf (2001) also agreed that cheap and fast communication and information flow provided by ICT would help SMEs to deal with problems of isolation.

In spite of the positive impacts, several experts noted a not-so-positive attitude towards ICT implementation in developing countries. Wolf (2001) stated that SMEs in developing countries, particularly those that are located in densely poor areas, would find it very difficult to catch up large firms because they had already been introduced to ICT far earlier than small firms. In another study, Matambalya & Wolf (2001) even showed that ICT investment didn’t have a significant correlation with SMEs productivity, especially when compared to investments on other issues. Therefore, this fact may lead to an implication that ICT is not as important as other aspects of SMEs and it is wiser to invest on other investment. Matambalya & Wolf (2001) pointed to the fact that ICT, especially in many African countries, required

high cost, in both installation and operation. SMEs also face problems of low human capital due to low education level. Many of them are even computer-illiterate which may get in their way toward ICT mastery. Thus, it will take an even longer term for ICT to give a significant benefit, which may be too long for SMEs to survive the competition with large corporations.

Nevertheless, some scholars have indicated that there are SMEs able to successfully incorporate ICT in their business activities. Shiels, McIvor & O'Reilly (2003) conducted a study in Northern Island and were able to map the sophistication level of ICT among SMEs. They discovered that some SMEs did manage to integrate ICT in their production process. It indicates that it is not impossible for an SME to utilize ICT to improve its performance. With a certain capability, an SME can absorb ICT and use it properly for its behalf.

Consequently, understanding the capacity with which an SME can grasp ICT and employ it to gain its optimum benefit is an important issue. It is also necessary to recognize the factors that determine the level of that capacity. By doing so, hopefully the process through which ICT improves SME performance can be understood and the knowledge about the relationship between ICT and SME can be further developed. This knowledge may help SME to invest better, particularly in ICT.

1.2. Problem Statement

Based on the description stated above, it can be understood that ICT benefits SME performance. It will result in more efficient communication and a massive flow of information. This creates opportunities to increase productivity. Therefore, it will positively influence SME.

The technology also faces several barriers to give its optimum impact. In a short term, it is an investment with a negative return which may discourage SMEs in their competition against more established firms. Therefore, it is required to know whether ICT can really benefit SMEs and improve their performance.

As a result, there are several issues to be considered, namely the extent of ICT implementation by the SMEs, SME performance and the link between ICT and performance. The extent of ICT implementation is about the degree of ICT utilization which the SMEs can master. It may cover aspects of quantity and/or quality.

The next issue is assessing business performance of an SME. It is required to really understand whether or not ICT can really improve SME performance. The knowledge about which factors constitute business performance is vital to objectively assess the performance of an SME after having certain ICT interventions.

By assessing the business performance a relationship between SME and ICT can be identified. This identification should be able to understand how ICT can influence the existing production process. It should also be able to understand how SME can grasp ICT and absorb it into its system. Only through it can the impact of ICT on SME performance be recognized.

1.3. Research Goal and Objectives

In accordance with solving the problem formulated above, the goal of this research is to understand the process by which SMEs can gain the benefit of ICT for improvement of their performance.

The objective of this research, in relation to the goal of the research is as follows.

1. Assessing the extent of ICT implementation by SMEs.
2. Assessing the performance of SMEs as the result of ICT implementation.

3. Identifying the relationship between ICT implementation and performance improvement.

1.4. Research Questions

The research questions can be divided into one main question and several sub questions. The main research question is: How can SMEs utilize ICT to improve their business performance?

To help answer the main question, several sub questions can be formulated.

1. To what extent has ICT been implemented by SMES?
2. How is the performance of SMEs before and after ICT implementation?
3. How is the capacity of SMEs to absorb ICT?

1.5. Significance of the Study

This study attempts to understand the implementation of ICT4D (Information and Communication Technology for Development). ICT4D is believed to be a useful tool in poverty alleviation and acknowledged by United Nations as an important part of the effort to achieve MDGs (Fong 2009). This research will present a considerable benefit by building the knowledge in harnessing ICT for better SME productivity which may strengthen the economy of developing countries. A good knowledge will give the most benefit and decrease the barrier for optimum utilization.

1.6. Theoretical Scope and Limitations

Due to several limitations, the research only covers the implementation of specific types of ICT, namely computer/internet technology. In this thesis, the term ICT is interchangeably used with computer or internet. It will also study ICT implementation of SMEs in a specific place, namely an urban kampung in Yogyakarta, Indonesia. A kampung is an informal organization of people living in a small area. In Indonesian urban areas, a kampung usually refers to areas that are relatively poorer than other areas in the city. It usually faces social-economic problems, such as lack of financial capabilities due to few job opportunities, low education level, high density and poor access to public service facilities. The situation makes SME become an alternative solution for income source. However, the social-economic condition of the kampung makes it difficult for SMEs to thrive, let alone to compete with large firms. ICT may provide a way out of this problem.

This study will then measure the SMEs performance after ICT implementation. SME performance itself is a broad concept. Hudson, Smart & Bourne (2001) presented several SME performance variables. This study will use their elaboration of SME performance variables to measure the influence of intensified ICT access in an urban kampung. Further explanation about the variables will be presented in the next chapter.

There are several limitations in conducting the thesis. The researcher's time and fund are two of the basic limitations. The respondent's time, availability and willingness to share information also serve as additional obstacles in the research. Nevertheless, hopefully the study will provide valuable insights concerning the importance of ICT toward SME empowerment.

1.7. Brief Description of the Field Work Location

The research is executed in a neighbourhood of the urban village of Patehan, Yogyakarta. The neighbourhood is named RT 36 neighbourhood. It is densely populated by relatively low income people. Most of the neighbourhood inhabitants make their income from small firms,

almost all of which are home based. The firms produce various commodities such as batik paintings, batik clothes, souvenirs, Javanese traditional puppets and a variety of handicrafts.

Like most SMEs everywhere, the small firms in the area also face the common challenge of marketing their products. The location of RT 36 deprives them from a suitable place for selling their commodities. It forces them to work as other bigger firms' outsource. The situation drove some of the residents to find solution for this problem. Eventually, they found the idea to build computer and internet network within the neighbourhood.

The people in RT 36 neighbourhood constructed themselves a computer-internet network that serves many houses in the neighbourhood through a collective and self-financed action. They call the network "Kampoeng Cyber". It enables the RT 36 inhabitants to have 24-hour-a-day of unlimited internet access, within a certain speed. The main purpose of the activity, at the beginning of its conception, was to advertise RT 36 neighbourhood, as well as the activities within. It was also expected to bring abundant information to the people there, valuable for their business as well as daily life.

This research took "Kampoeng Cyber" as the case study of the assessment of ICT impact on SMEs. It is aimed to understand the effect of intensified access of ICT toward the improvement of SMEs performance. The research studied whether the small firms in RT 36 had adopted ICT on their business activities and how. Hopefully, the case study may provide a deeper understanding of how SMEs incorporate new innovations for improvement of their performance.

Chapter 2: Literature review

The literature review presents existing theories about SMEs, ICT and the links between them. SMEs hold a strong role in developing countries. Outside agricultural sector, SME is the most substantial economic activity. The literature review will give explanations about the importance of SMEs and the challenges they are facing. It will then be followed by explanations of how ICT may affect SME performance. Problems related to ICT implementation will also be presented to understand the issues around the utilization of ICT by SMEs, particularly in an urban kampung. It will be followed by theories about Absorptive Capacity which serves as the means to embrace ICT for performance improvement. Finally, the chapter ends by presenting a conceptual framework as a compilation of the theories related to this study.

2.1. Small and Medium Enterprises (SMEs)

There are several points of view to define the scale of enterprises. The most widely used is from the number of employees. The standard to define SMEs itself varies in many countries. In Indonesia, SMEs refer to the firms with less than 100 employees (OECD 2004). Comparison between several countries concerning SME definition is presented in Table 1.

Table 1: SME definition in several countries

No.	Country	SME definition
1.	Chinese Taipei	<100 employees
2.	China	<100 employees
3.	Korea	<300 employees
4.	Vietnam	<200 employees
5.	India	<Rs 30 M investment in plant & machinery
6.	Singapore	<100 employees
7.	Malaysia	<75 employees
8.	Indonesia	<100 employees
9.	Thailand	<100 employees
10.	Mauritius	<50 employees
11.	Tanzania	<50 employees
12.	Malawi	<50 employees
13.	Denmark	<500 employees
14.	France	<500 employees
15.	Sweden	<200 employees
16.	Finland	<500 employees
17.	Japan	<300 employees
18.	USA	<500 employees

Source : OECD (2004)

Outside of agricultural sector, SMEs account for more than 90% of economic activities (in terms of workforce) in many developing countries (OECD 2004). The fact implies that SMEs contribute greatly to employment. This is emphasized by Forth, Bewley & Bryson (2006) who stated that SMEs held an important role in providing job opportunities and might also give considerable contributions to income generation and export revenues.

Poor communities have a strong relationship with SMEs. SMEs provide goods and services to the community that are appropriate and within the reach of the community, while poor communities provide the resources that are affordable to SMEs (OECD 2004). Poor communities, for example in urban kampung, may find it difficult to obtain goods and services due to lack of access. This may happen because of poor performance of service provision by the municipality or simply because of the high population density, which makes it difficult for the local government to provide an equitable service (Yustisianto 2009). SMEs become an affordable alternative. SMEs can also provide many job opportunities for poor communities that are usually marginalized by labour market due to issues of gender, segregation, age, education level and so on (Forth, Bewley & Bryson 2006). SMEs themselves can survive despite the poor resources available in poor communities. It is possible due to the small size and flexibility of SMEs that enable them to survive although the natural resources are scarce and the human resources are poor. SMEs have also proven themselves to survive in major economic crises.

The fact was supported by several scholars. Sáinz (1998) showed a fast increase of SMEs in Latin America since the 1970s that continued throughout the 1980s, especially because of the crises at the time. The crises resulted in a steep decline of formal sector that forced many firms to sack their employees. Sáinz (1998) also highlighted the decrease of public employment due to structural adjustment programs in Latin America. Eventually, unemployment from both of these sectors viewed SMEs as the way out of their problems. Many employees of large firms also chose to forfeit their jobs to start small businesses, mostly informal. Maloney (2004) pointed another fact that most SME practitioners felt the satisfaction of being self-employed. It also gained significance among female practitioners who have to share attention on doing household chores. Running a small firm may offer a better balance between doing those chores and making money for daily needs. Maloney (2004) stated that they claimed to make more fortune from running a small business than just being employed by a certain corporation. Although the claim is debatable, it presents a valuable opportunity offered by SMEs for livelihood improvement.

However, SMEs experience many challenges that block the opportunities for growth. Organization for Economic Co-operation and Development (OECD) stated that SMEs suffer several hindrances to grow, namely non-competitive real exchange rates, limited access to finance, cumbersome bureaucratic procedures, poor state of infrastructure and lack of effective institutional structures. It is because of the small capability of SMEs. They have insufficient bargaining power to compete with more established firms (OECD 2004).

Competition with larger corporations is one of the biggest challenges faced by SMEs. Both neoclassical and evolutionary economists think that SMEs stand in the less fortunate position. Neoclassical economists believe that there is equilibrium and that “no firm can improve its position given what other firms are doing” (Nelson & Winter 1974, p. 887). This implies that SMEs will never be better because larger firms will always outdo them, due to possession of stronger factors of production, mastery of technology and market control. Evolutionary economists, although denying the concept of equilibrium, also put forward the case of “cumulative” advance of technology, which means that present efforts to improve technology relies on what has been achieved in the past (Nelson & Winter 2002). This is another advantage of established firms which have Research and Development (R&D) department and can invest considerable amount of fund for research. Evolutionary economy thinks of competitiveness the same way as evolutionary biology thinks of fitness (Dosi & Nelson 1994). This implies that evolutionary economists view the economy as survival of the most competitive, similar to survival of the fittest in evolutionary biology. Having R&D

department which is fuelled with large fund will increase the probability of big firms to stay in the condition of being more competitive. Consequently, small firms may not survive.

SMEs, especially in developing countries, also suffer from economic environment that is not so conducive for growth. Matambalya & Wolf (2001) stated that developing countries were usually lacking in the quality of infrastructure, education system, legal system, law enforcement and macroeconomic condition. Combined with low human capital of SME practitioners, this nature of business environment makes it difficult for a small firm to grow. Nelson & Winter (2002) also emphasized bounded rationality in which firms tend to make irrational decisions and are more likely to learn from trial-and-error situation. This is very often the case in many SMEs due to poor knowledge and lack of information.

Nelson & Winter (2002), however, still presented optimism by saying that more fundamental change might come from external factor. Significant innovative change, such as introduction of cheap and appropriate technology, may provide a way for SMEs to strengthen their stance in challenging “incumbents” provided they can access the technology. Schumpeterian theory also looks at SMEs as the real drivers of the system, implying the ability of SMEs to thrive due to the innovating entrepreneurial spirit (Nelson & Winter 1974).

Nevertheless, it is important to note that SMEs are not necessarily similar with the term entrepreneurs. Although it is difficult to have an exact definition, an entrepreneur can be said to have a characteristic of taking risks with full understanding of the profit to gain (Brockhaus, Sr. 1980). Boyett (1996, p. 37) further quoted Schumpeter that characterized an entrepreneur as someone who is “constantly modifying and developing new markets, maximizing the benefits of technological advance and adjusting organizational structures to enhance their production management” by continuously combining their resources through innovative processes. In reality, many SMEs run their business without a clear insight on their mind about what to do. They do it merely to escape unemployment. Consequently, it is imperative to build a healthy entrepreneurship within an SME in order to improve its performance.

Another way to improve SMEs condition is through networking. Kearney and Abdul-Nour (2004) stated that SMEs could gain significant benefit by networking. Networking might present opportunities to improve their productivity. It only takes their willingness to build trust with their clients, especially in maintaining and improve the quality of their products. Networking with business partners also gives further advantage. It is observable in clusters. Porter (1998, p. 80) stated that a cluster, which is a type of networking, might provide benefit to businesses “as if it had greater scale or as if it had joined with others formally – without requiring it to sacrifice its flexibility”. It implies that small firms can overcome their problems of competitiveness by networking among similar businesses. In another study, Porter et al. (2009) highlighted Hamburg aviation cluster enabling cooperation among its members that promoted technology transfer. Zeng, Xie, & Tam (2010), who conducted a study on Chinese manufacturing SMEs, also acknowledged the importance of networking. Quoting Bullinger et al. (2004), they agreed that SMEs needed to link amongst themselves to gain the common benefit of sharing knowledge and complementary competencies (Zeng, Xie, & Tam 2010). This might help SMEs to keep up with the rapid innovation in globalized world. Again, a good will of technology transfer is fundamental.

In the spirit of building networking, improvement of access to exogenous development may provide a way for SMEs to enhance their productivity (Nelson & Winter 2002). It can be done through improvement of information and communication flow to SMEs. This may strengthen and open opportunities for networking. Eventually, it may reduce the barrier for SMEs to

grow. The emergence of Information and Communication Technology presents a good opportunity for this.

2.2. Information and Communication Technology

Labelle (2005) stated that Information Technology (IT) refers to all equipment, processes, procedures and systems used to provide and support information systems within an organization and those reaching out to customers and suppliers. The term information and communications technology (ICT) was used to indicate the constant tendency toward digital processing and telecommunications.

Information and Communication Technologies (ICTs) refer to hardware, processes, and system used for storing, managing, communicating and sharing information (Labelle 2005). These tools can be either manual or computerized. This definition of ICTs extends from non-digital devices such as analogue radio and television, to earlier technologies, such as computers, wireless devices, telecommunications towers, etc. ICTs also include computer software and associated systems such as management methods and practices, or the so-called application layer. Mobile devices such as cellular or mobile phones are also an especially important class of ICTs. The form of ICT that has the farthest reaching impact is probably the internet due to its ability to construct a worldwide network of computers connected through a robust digital technology. It enables transmission and management of bits and bytes of data between computers all over the world (Labelle 2005).

ICT gained its prominence in the mid 1990s when internet boom swept through the world. The phenomenon is then followed by exponential increase of mobile technology. The trend still continues with an even greater speed. The technology is getting better and faster, with less cost in setting up, operation and maintenance.

However, many developing countries still experience disparity in ICT mastery. The disparity is called information gap or “digital divide”. ICT is somewhat limited in rich communities and hardly reaches poor areas. It happens due to the poor level of education and awareness of ICT. Cultural barriers also present a problem in ICT penetration to poor areas. The people in those areas still need to grow “e-attitude” in order for ICT to penetrate deeper into poor areas (Fong 2009). The situation encouraged many international organizations to propose ICT4D.

The term ICT4D or Information and Communication Technology for Development is used by international organizations in the implementation of ICT to reach development goals, especially in developing countries. UNDP and World Bank have promoted many projects, mainly in Africa, to build ICT infrastructure and facilities in order to encourage the penetration of ICT. This is done based on a belief that ICT will boost economic growth and human development. Fong (2009) stated that UNDP and World Bank viewed ICT as a significant instrument to improve public services and create economic opportunities for marginal people. In summary, international aid agencies believe that ICT is vital in poverty alleviation (Fong 2009).

Foster & Spence (2008) stated that there were two major impacts of ICT, namely enhanced access of information and power to connect people one another. ICT opens the channel of abundant information flow from many parts of the world bringing the possibilities to learn a variety of new knowledge. ICT may also connect people anywhere enabling communication regardless of any spatial barrier. If these impacts can be harnessed properly, it will result in many benefits, such as economic sustainability and welfare gains (Fong 2009). Connection and information flow may help to find considerable resources required for any cause. ICT will enhance the capability of a person or a community through abundant knowledge and social networking which is made possible by the connection.

2.3. ICT and SMEs

ICT also offers SMEs enhanced access of information and power to connect. With these tools, ICT may solve several problems faced by SME to grow. Matambalya & Wolf (2001) stated that imbalance in access to information, which is one of the factors of market failure, served as one of the causes of high transaction cost. Improving the access, which is synchronized with communication improvement, will consequently make business activities more efficient. This may lead to a rapid growth and open opportunity for economic diversification.

ICT may open a way to link SMEs with the market and provide various opportunities, such as advertising, marketing and even direct distribution of certain goods and services (Hsieh & Lin 1998). This may decrease transaction cost. In order to discover potential customers, a firm doesn't have to go to a specific area and place an advertisement. The popularity of social networking web sites also gives a lot of help for SMEs to market their products. Facilities, such as Facebook, Twitter, and Friendster, have helped SMEs to build networking among their friends, relatives and acquaintances. Eventually, networking will open greater chance for marketing their products (Gilmore, Carson & Grant 2001). Payment can also be done through electronic banking which may save considerable amount of time. With up-to-date information daily provided by ICT, a firm can also significantly enhance its access to local markets, national markets, even global markets (Matambalya & Wolf 2001). This enables a firm to find out the most profitable market and current price of a certain commodity. It may increase its income and make the distribution process of the commodity become more efficient.

ICT may also provide possibilities for a firm to connect with many financial sources. ICT can make it possible for a small firm to find financial support from community empowerment agencies or organizations from all around the world through internet (Bongo 2005). A firm can also build its own web-site to promote itself. This may attract financial aids from many people.

Furthermore, ICT may also provide many ideas for innovation that will present SMEs a good vehicle for growth. A firm may catch the trend or fashion currently dominating the market. This will give the firm a stronger bargaining power in order to compete with established firms in the market. Several studies have showed how SMEs managed to improve their performance through ICT. Shiels, McIvor & O'Reilly (2003) cited Bharadwaj (2000) who stated that SMEs with better ICT capability performed better than those who did not. They further quoted Matlay (1999) who also stated that ICT brought not only economic benefit, but also managerial knowledge that can be accessed through vast network of the internet (Shiels, McIvor & O'Reilly 2003).

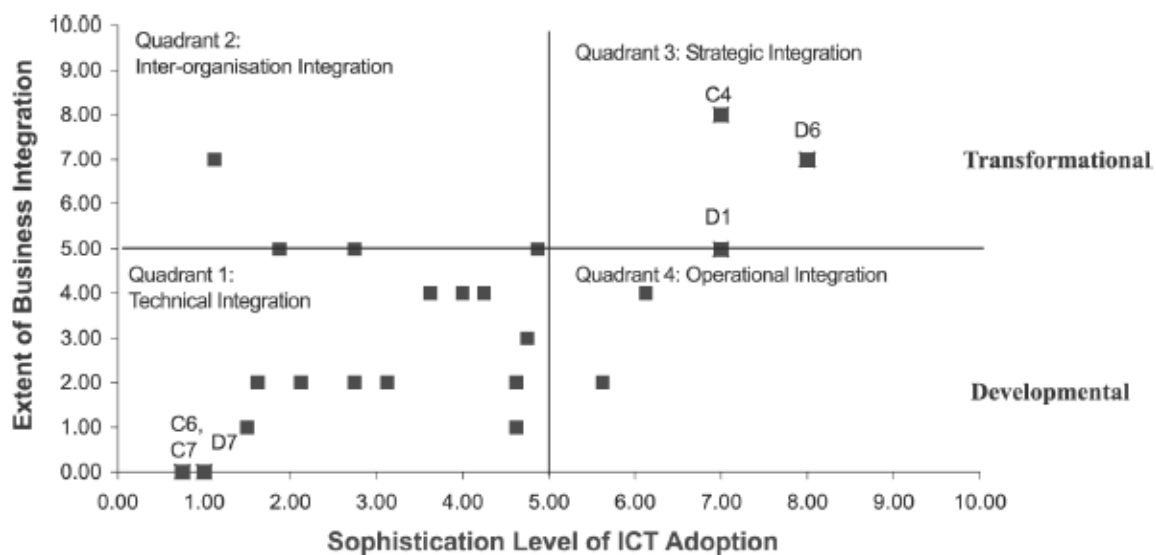
ICT provides benefit by building knowledge that is important for human capital building. A lot of information about almost all aspects of human life can now be found in the internet. Everyone can access many opinions from experts from all around the world in certain matters. ICT also enables share of knowledge and experience which are valuable sources of education. SMEs, in particular, may benefit from the extensive network of fellow entrepreneurs, which is made possible by ICT. The phenomenon of booming social networking web site has intensified informal contacts that are often more effective to spread knowledge among SMEs. This may feed SMEs with "best practices, general know-how and management capabilities" (Matambalya & Wolf 2001, p. 24).

The opportunities provided by ICT are not necessarily grasped by SMEs. Studies revealed that SMEs have different conditions regarding ICT. Shiels, McIvor & O'Reilly (2003) conducted a study to assess the sophistication level of ICT adoption among SMEs in Northern Ireland. From 24 SMEs as respondents, they discovered that the firms had different types of

ICT exploitation in business activities. They constructed a business integration model to map their respondents and made a classification of ICT implementation into 4 groups, namely Technical integration, Operational integration, Inter-organizational integration and Strategic integration. The groups form quadrants that can be classified by sophistication level of ICT adoption and level of extent of business integration. This can be seen in Figure 1. The figure implies that SMEs have different levels of capacity in integrating ICT into their business context.

Another study by Luchetti & Sterlacchini (2004) also indicated differences in types of ICT intervention among SMEs. They classified three types of ICT intervention, namely General-use ICT, Production-integrating ICT, and Market-oriented ICT. General-use ICT includes e-mail and Internet access. This type of ICT intervention is merely utilizing e-mail and surfing through Internet sites. In the context of an SME, it may also refer to using ICT for non business activities. Production-integrating ICT includes LAN, EDI and Intranet. This type of ICT intervention incorporates ICT into the firm's production process. Therefore, it relates to the whole sequence of making the firm's products. In some firms, it relates to the ability to build internal computer network among divisions of a firm although it is not really the case for home based enterprises. Market-oriented ICT is identified by the ability to use ICT as the firm's main marketing tool. One of the most widely used is corporate web site. However, advances in ICT have provided many alternatives to web site.

Figure 1: ICT exploitation and business integration model



Source : Shiels, McIvor & O'Reilly (2003)

Many new features and facilities of the internet have rapidly emerged since the 1990s. They make the experience of utilizing ICT more effective and fun. Godwin-Jones (2003) stated that these tools were useful for creating an enabling environment for on-line collaboration. The tools can be basically grouped into two generations (Godwin-Jones 2003). The first generation consists of e-mail, discussion forum, chat room and the World Wide Web (www). These tools still exist now. However, utilization of these tools sometimes requires certain skill or knowledge, for example creating a web site. The second generation consists of web log (blog), RSS, wiki and the second generation of www (www2). The emergence of the second generation has made it far easier to be more inclusive in ICT. Blogs, for example, doesn't require any knowledge of HTML (Hypertext Mark-up Language) which is a must in building a web site (Godwin-Jones 2003). It enables new beginners to have an easier starting point to master ICT. An SME owner, for example, can now start putting advertisement of his firms on

the internet with much less required knowledge. A blog can display various contents, is able to facilitate two way communications and is gaining popularities among internet users (Nardi et al. 2004). This entire technology breakthrough can provide practicality for SMEs that are usually weak in knowledge. Therefore, it may enhance the possibility for ICT to improve the SMEs' performance. However, it is required to have some knowledge of measuring business performance to assess the impact of ICT on the SME's performance.

2.4. Measuring SME Performance

Performance is a broad concept that covers a lot of aspects. Undeniably, it is required to construct a reliable tool to measure the performance of a firm, particularly when trying to evaluate the impact of a certain action. Performance measurement has been implemented by large corporations, which possess extensive capacity for it. The measurement can be objectively executed due to the availability of explicit statement about company strategy and objective (Hudson, Smart & Bourne 2001).

Unfortunately, this is often not the case for SMEs. SMEs rarely formulate clear strategy and objectives of the firms. It makes it difficult to objectively measure whether a firm has achieved a good performance or not. However, Hudson, Smart & Bourne (2001) gave six variables that could be used as the dimensions of a firm performance. The variables are quality, time, flexibility, customer satisfaction, finance and human resource. The variables are presented in Table 2.

Table 2: Variables and Indicators of SMEs Performance

Variables	Indicators
Quality	~ Product performance ~ Innovation ~ Delivery reliability ~ Waste
Time	~ Process time ~ Delivery speed ~ Productivity ~ Labour efficiency
Flexibility	~ Product innovation ~ New product introduction ~ Volume flexibility
Finance	~ Cash flow ~ Cost reduction ~ Amount of sales ~ Efficiency
Customer Satisfaction	~ Integration with customers ~ Delivery reliability ~ Customer's Service
Human Resource	~ Workforce ~ Employee skills ~ Employee relationships ~ Labour efficiency ~ Quality of work life ~ Productivity

Source : Hudson, Smart & Bourne (2001)

Quality relates to the condition of the end product of the firm. It deals with the performance of the product, delivery reliability, amount of waste produced as the by product of production process and innovation embedded on the product. Time relates to the duration of the whole process from production to delivery to clients. Thus, it is about process time and delivery speed. It also relates to the labour productivity and time efficiency. Flexibility deals with the ability to adjust due to incidents of contingency. It includes volume flexibility and product innovation. Hudson, Smart & Bourne (2001) also stated that a firm should be aware of changes in trends and fashion. It should be able to identify the change in market situation and ready to make necessary innovation, even introduction of new product. Finance deals with financial condition of the firm. It includes cash flow, cost reduction, amount of sales and efficiency. Customer satisfaction deals with the level of satisfaction expressed by customer toward the firm. From the firm's perspective it can be measured through the level of integration with customers, delivery reliability, and types of customer's service that the firm can offer. Human resource relates to the condition of the employees of the firm. This might not be very significant in the case of an SME due to few employees. This variable includes the number of workforce employed, employee skills, employee relationships, labour efficiency, quality of work life, and the labour's productivity.

2.5. Problems Related to ICT Implementation

One of the biggest challenges for a good ICT implementation is poor infrastructure. Wolf (2001) stated that there are inequalities of ICT infrastructure in developing countries. Not just in rural areas, some parts of urban areas also suffer from lack of information and communication infrastructure. Consequently, the situation gives bad impact for SMEs, since they are located mostly in these areas. This is partly caused by the monopoly by the government in telecommunication sector. ICT infrastructure development may cost dearly. Therefore, privatization of telecommunication should be considered to build a competition in ICT that may decrease the cost of its development.

Matamblya & Wolf (2001) further added that it would take more than infrastructure development to make ICT more effective. They highlighted the survey of Duncombe & Heeks (2001) that showed 90% of the SMEs lack finance and skills in adopting ICT (Matamblya & Wolf 2001). They cannot afford to buy the equipment required for ICT and even if they can, they are unable to optimally utilize it. Matamblya & Wolf (2001) also said that SMEs might even more burdened by the high cost of ICT operation which is often the case in many developing countries. Again, issue of privatization in ICT development appears.

These facts result in many arguments against ICT stating that ICT will be wasting valuable fund that is supposed to be used for basic needs (Rogers 2006). The deficiency of these basic needs is still more urgent. ICT can wait after the basic needs have been fulfilled. This is due to the large amount of fund required for ICT to give a significant impact. Matamblya & Wolf (2001) also showed that ICT investment might give a positive impact in a long term. In SMEs case, this term might be too long for them to survive. They may have been kicked out of business before their investment on ICT really works out.

The large amount of fund invested on ICT may even give no significant effect due to already large digital divide in developing countries (Fong 2009). The projects in several African countries have proven this. World Bank sponsored the building of telecenters in rural areas. However, due to fundamental problems such as electric power crisis, lack of road access and ICT illiteracy, the telecentres failed to give their maximum service (Fong 2009). They became a waste of money. Shiels, McIvor & O'Reilly (2003) quoted Julien and Raymond (1994) who stated that SMEs were traditionally limited in human capital, financial capital and

technological resources which might hamper them to fully utilize ICT. Luchetti & Sterlacchini (2004) stated that the linkages with other firms, the utilization of information technologies in production, and the education level were the factors that determine the type of ICT intervention in SME context. Therefore, it can be implied that lack of these factors, which is often the case many SMEs, may become the problem for optimum utilization of ICT by SMEs.

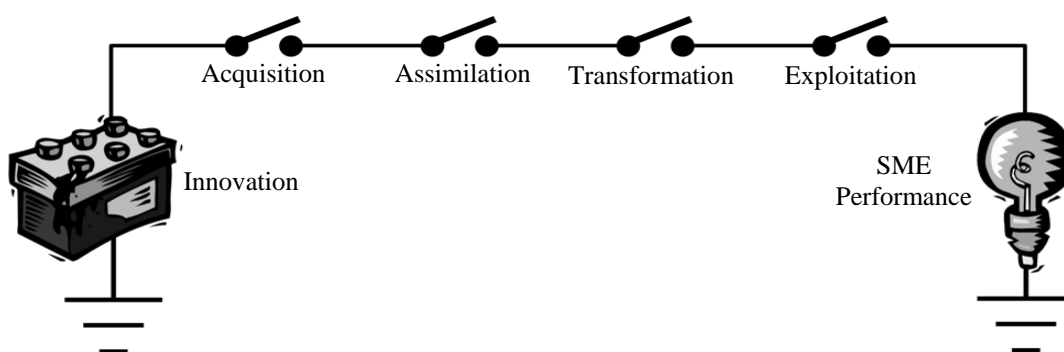
This situation implies that an SME needs a certain capacity in order to really harness ICT for its benefit. This capacity extends beyond simple identification and recognition, but also includes the ability to understand the relevance of ICT to the firm's context and finally implement it optimally. This capacity is actually not only applicable on ICT, but also relevant on any other types of innovation. By having this capacity, a firm can really identify the virtues that any innovation brings. The next section will present a brief explanation about this capacity.

2.6. Absorptive Capacity

Several studies have introduced a capacity that gives significant influence on the ability of SMEs to optimally utilize a certain innovation in their business. It is called Absorptive Capacity. Flatten et al. (2010) defined Absorptive Capacity as a firm's ability to recognize, learn, understand and apply new knowledge in its working process. The final end of the entire chain of activities is aimed toward commercial purposes. Absorptive Capacity is a means of a certain firm to capture an external innovation and adopt it in accordance with the context of the firm. Thus, Absorptive Capacity is not just about "purchasing" a particular innovation, but also the ability to adapt and/or change the form of innovation.

There are several dimensions of Absorptive Capacity. Flatten et al. (2010) mentioned four dimensions of Absorptive Capacity, namely Acquisition, Assimilation, Transformation and Exploitation. These four dimensions are important factors for a firm to capture new innovations happening in the world and apply them in its context. Each of them works like a switch in a serial electric circuit, as illustrated in Figure 2. If one of the dimensions doesn't exist, the firm won't be able to properly utilize the innovation for its benefit.

Figure 2: Relationship among Dimensions of Absorptive Capacity



Acquisition is a firm's ability to identify and capture new innovations. These innovations can relate to various aspects, such as technology, management, finance and so on. The source of this innovation usually comes from outside of the firm. Acquisition relates to the ability to identify emerging trends that may be beneficial. It is also about the willingness to own certain innovation.

Assimilation refers to the process of learning and understanding an innovation. It is a process of adaptation of an innovation. One of its shapes is the search for information from anywhere possible, for example attending training or asking other people that have more knowledge

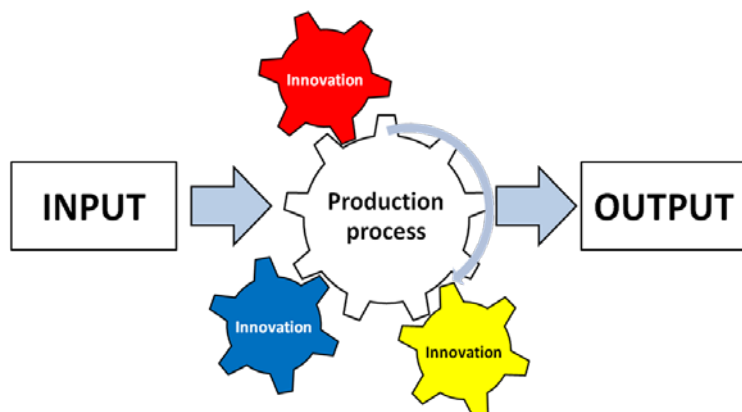
about the innovation. As an addition, assimilation also includes analysis, interpretation and recognition of the relevance of these innovations in the context of a firm. This aspect provides the back door for assimilation and the front door for transformation.

Transformation is more specifically related to the business context of a firm. It can be defined as the process of developing methods to combine “old knowledge” with “new innovation”. Old knowledge refers to the existing mechanism or current understanding about the work system of the firm. New innovation represents external factor that may change that old system. Transformation is about bringing the two into harmony so that the combination can benefit the firm. Therefore, Transformation can only take place if a firm is able to see the link between the two issues.

Exploitation is associated with a firm's ability to implement, develop and modify or revise the innovation that has been acquired, assimilated and transformed to provide benefits to the company. Thus, Exploitation is the realization of the entire process of adoption of innovations that are expected to provide a positive impact on the firm.

The process of Absorptive Capacity is illustrated in Figure 3. Innovation can be likened as additional gear to help turn “the gear of production process”. Acquisition can be illustrated as knowing and finding “the gear of innovation”. Assimilation is like learning how to turn the gear, while transformation can be associated to fixing the gear of innovation into the right place so it can fit into the existing gear of production process. This process may occur after the firm managed to identify the forms of innovation that suits its conditions. Not all aspects of innovation should be adopted, but only those that are relevant to the context of the firm. Exploitation is the process of actually turning the gears. It is therefore influenced by the situation of the previous dimensions. If Transformation is not adequate (i.e. the gears are not positioned properly) the gears will not optimally help turn the gear of Production process. Also, if the assimilation aspect is weak, the gears cannot be turn in its maximum capacity which may result in less effective innovation utilization.

Figure 3: Combining old knowledge and new innovation



In order to make this mechanism of absorbing knowledge run properly, there are three important aspects that should be taken into account, namely human and social capital of the SME owner, networking, and organizational systems and structures of the firm (Macpherson & Holt 2006). Each of these three aspects consists of some sub variables that a firm should possess. An explanation about each aspect will be presented below.

Macpherson & Holt (2006) referred the first aspect to the asset of the firm's owner in terms of his or her human and social capital. They further elaborated this aspect as entrepreneurial capital, behaviour toward knowledge, and social capital of the entrepreneur. Entrepreneurial capital itself is a rather broad term. Erikson (2002) divided this capital into two subdivision,

entrepreneurial competence and entrepreneurial commitment. Erikson (2002) further explained that entrepreneurial competence related to the ability of an entrepreneur to understand his/her own condition, ability to recognize advantageous opportunities, ability to start and manage and business, creativity, and self-efficacy. Entrepreneurial commitment, by definition, is about the commitment of an entrepreneur to reach the objective of the firm (Erikson 2002). Erikson (2002) viewed it as the amount of energy invested on a firm in terms of physical-financial investment, intellectual investment and emotional investment. It can be seen as a measure of willingness to grow. Therefore, in the context of knowledge absorption, entrepreneurial capital can be seen as the capability of identifying a useful knowledge, understanding own level of mastery of that knowledge, and the amount of effort to pursue a higher level of mastery. This capital relates very much to behaviour toward knowledge, which is about the attitude that an entrepreneur possesses in implementing a certain innovation (Macpherson & Holt 2006). Different people may have different level of enthusiasms in finding more knowledge that may give even more advanced innovation. Externally, the behaviour also covers the attitude of maintaining knowledge and information flow among firms, which relies on the nature of the entrepreneur social capital. Macpherson & Holt (2006) referred it to trust, familiarity and reciprocity among partners, which might reduce transaction cost of information flow if present in relationships. The relationships can be among peers, with customers, with professionals or with academic institutions. Social capital is especially useful in the context of SMEs who usually have poor human capital. It may enhance the opportunities to capture more advanced innovation. However, Macpherson & Holt (2006) also stated that it might also bring bad influence toward the firm's competitive advantage due to knowledge exposure. Thus, there is a trade off that should be taken into consideration.

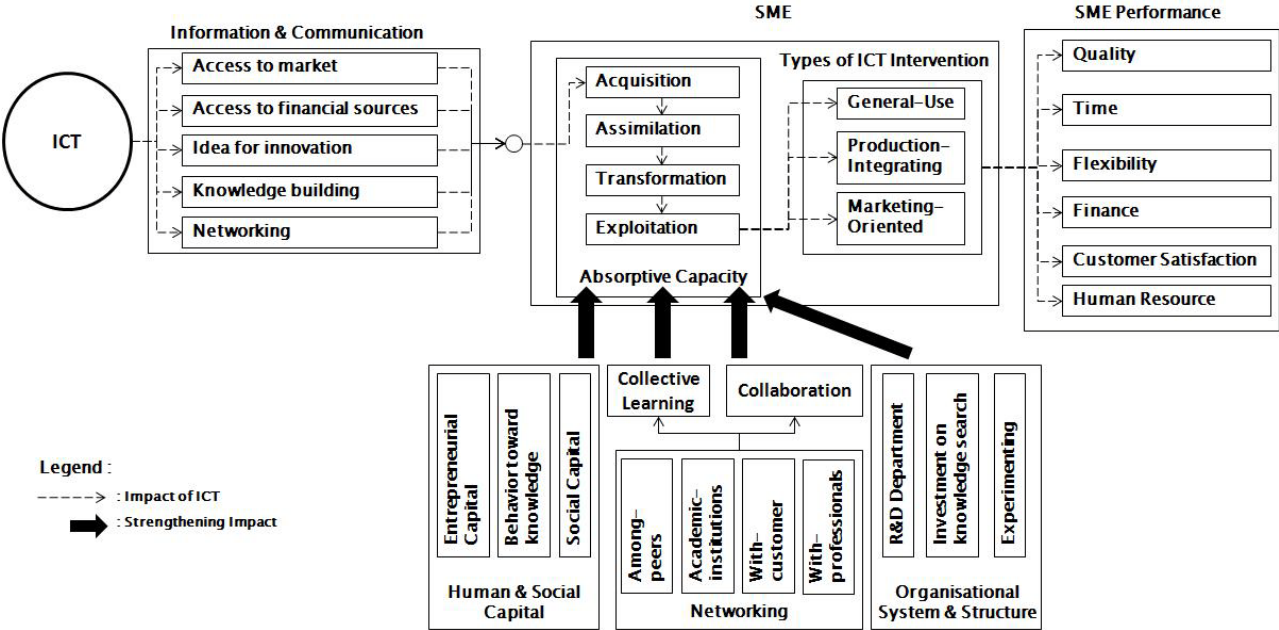
Networking is the next important aspect to consider. Macpherson & Holt (2006) explicitly stated that it was important for SMEs' growth. Similar to social capital relationships, networking can also be built among peers, with academic institutions, with customers or with professionals. Networking will enable collective learning among SMEs practitioners. Keeble et al. (1998) recognized the existence of a "competence gap" that prevents a company to better understand a trend of innovation or new knowledge. Bridging this gap requires the ability to correctly interpret the new knowledge and make it applicable for daily activities. Many SMEs lack this ability (Keeble et al. 1998). This problem may be solved through collective learning. Collective learning referred here can be viewed as a reciprocal knowledge sharing, mainly about procedures, "know-how" practice, daily experiences, and variety of skills, which may enrich the individual knowledge of a firm (Keeble et al. 1998). This brings to the notion of collaboration, which can be viewed as a joint work among partners in a cooperative nature (Cooke 2001). Cooke (2001) pointed out that collaboration, as opposite to competition, might bring a smoother process of knowledge absorption. Collaboration can happen in a horizontal or vertical relationship. Cumbers, Mackinnon, & Chapman (2003), however, stated that most SMEs experienced collaboration, which leads to innovation, through a vertical networking, which is mostly with key suppliers and customers. de Jong & Freel (2009) stated that growing SMEs were the ones that could recognize partners, build good relationships, and generate transfer of knowledge among innovation actors. If this is done properly, the perceived advantages will be optimum. However, if the transfer of knowledge is limited to only adopt an innovation without proper absorption process, innovation may not give significant impact and limit the return of the investment. The importance of good social capital re-emerges here. A good collective learning and collaborative networking can be created through a healthy relationship among partners, which relies on a good social capital. Keeble et al. (1998) suggested that such networking could only be fruitful if founded on trust and reciprocity.

Organizational systems and structures of the firm relate to the availability of enabling environment within a firm which will prosper the adoption of knowledge all the way to the cultural aspect of the firm (Macpherson & Holt 2006). A hospitable environment may open more doors to an abundance of innovation and knowledge. A concrete example for this is the availability of R&D department within a firm. Another example is the existence of considerable investment in the search and experimentation of various innovations. These factors reflect the amount of attention that a firm allocates within its structure to push absorption of innovation into the firm’s daily practice.

2.7. Conceptual Framework

As a general recapitulation of the theories is explained in this chapter, a conceptual framework is drawn to be used as the backbone of this research. It can be seen on Figure 4.

Figure 4: Conceptual framework of this thesis



Chapter 3: Research design and methods

Having compiled the literatures required in this thesis, an elaboration about how to conduct the research will be presented. It will start with revised research question, followed by operationalization of the concept into variables and indicators and the nature of data collection method.

3.1. Operationalization

Reflecting on the theories elaborated in Chapter 2, some details can be added to the research questions. As mentioned in Chapter 1, the main research question is “How can SMEs utilize ICT to improve their business performance?” The sub questions, however, need to be modified to go along with the conceptual framework presented in the previous chapter. The questions are as follows.

1. How is the ICT intervention in the fieldwork location?
2. How is the performance of SMEs as the result of ICT intervention?
3. How is the Absorptive Capacity of SMEs in absorbing ICT?
4. For what purpose(s) has ICT been implemented by SMEs?
5. How do human and social capital, networking, and organizational systems and structures influence the Absorptive Capacity of SMEs?

The research questions above are then detailed into measurable variables and indicators. They are needed to formulate understandable questions for interviews during the fieldwork. A full elaboration of the operationalization is presented in Annex 1.

3.2. Research Type

The type of this research is a descriptive-case study. Yin (2003) stated that a case study sought to examine a certain phenomenon within a real-time context of a bounded system or a case (or multiple cases). This is conducted through detailed, in-depth data collection involving multiple sources of information that are rich in context. Therefore, a case study research is conducted by taking a specific matter at a particular location that is expected to be a representation of the problems to be solved. Furthermore, Brilhante (2011, p. 6) stated that a descriptive-case study tried to “describe an intervention and the context in which it occurred”. This is appropriate with the context of this research, which seeks to understand the condition of ICT implementation within the circumstance of SMEs in an urban kampung.

3.3. Validity and Reliability

Yin (2003) stated that there were four criteria to fulfil for a case study to have good quality, namely construct validity, internal validity, external validity, and reliability. Internal validity, however, is for explanatory case study only. Construct validity is about building “correct operational measures for the concepts being studied” (Yin 2003, p. 34). External validity is about “establishing the domain to which a study’s findings can be generalized” (Yin 2003, p. 34). Reliability is about ensuring that “the operations of a study can be repeated, with the same results” (Yin 2003, p. 34).

To ensure construct validity, Yin (2003) proposed two steps. The first is choosing “the specific types of changes that are to be studied and relate them to the original objectives of the study” (Yin 2003, p. 35). In the case of this research, the type of changes to be studied is the performance of the SME as the result of ICT intervention. The second step is demonstrating that “the selected measures of these changes do indeed reflect the specific types of change that

have been selected” (Yin 2003, p. 35). In this research there are six variables that serve as the measures of changes in performance. The selection of these variables is backed up by theories of SME business performance found in literatures. These variables consist of indicators which give more detailed aspects of business performance. Yin (2003, p. 36) also gave three tactics to build construct validity, namely “using multiple sources of evidences and establish chain of evidence” during data collection, and “having key informants review draft case study report” during composition of the report.

To ensure external validity, Yin (2003) made a difference between single case studies and multiple case studies. For single case studies, Yin (2003) emphasized the importance of building a comprehensive conceptual framework that adopts various broader concepts or theories. This is important to obtain “analytical generalization” and make it possible for the results to be generalized in other contexts. This study fulfils the requirement by building a conceptual framework that is applicable in the broader context of innovation. The concept of Absorptive Capacity tries to explain the ability of a firm to recognize the usefulness of a certain kind of innovation and absorb it for its daily practice. If the firm manages to do it properly, it can utilize the innovation for its optimum benefit, for example performance improvement. This is relevant for any kind of innovation, which makes it possible for the conceptual framework of this research to provide analytical generalization. For multiple case studies, Yin (2003) emphasized the use of replication logic. It refers to applying the same protocol to all of the cases within the study to ensure comparable results from all cases. This is similar to the principles of experiment studies.

To ensure reliability, Yin (2003) proposed for detailed documentation of the procedures that were followed during the research. He also recommended the use of a case study protocol and case study database as tactics to ensure reliability.

3.4. Data Collection Method

As a descriptive case study, this research tries to understand how ICT influences SMEs by describing the mechanisms through which the SMEs in Kampoeng Cyber absorb ICT and implement it in their daily activities. The research also tries to describe how different factors shape their Absorptive Capacity. Therefore, the research requires in-depth interviews. This approach is appropriate to get a deeper understanding of the real situation of ICT intervention by the respondents. The interviews serve as the primary data source for this research.

The interviews were conducted in the so called “Kampoeng Cyber” in the RT 36 neighbourhood in Patehan village, Yogyakarta. The neighbourhood has 30 SMEs, almost all of which are home based. Not all of the SMEs were interviewed. The interviews started by interviewing RT 36 chief, the neighbourhood leader, to capture the general information about the situation in the neighbourhood. Then, the interviews continued by interviewing the SME owners. For time efficiency, interviews were conducted first with the ones that have utilized ICT more intensely than the others. Therefore, more relevant insights about absorption process of ICT can be gathered. In order to do it, the research adopted a snowball method. RT 36 chief gave some hints about the SMEs that have significantly made use of Kampoeng Cyber network or not. It is necessary to make sure that the interviews can capture both success and failure stories. As the result, ten SME owners were interviewed.

The names of the interviewees are kept anonymous to respect personal condition. This is required because the firms are compared among each other. Therefore, it is more convenient to be discreet in explicitly mentioning the names. This also applies in the interview transcripts. If the interviewees mention a name explicitly, especially referring to one of the

respondents, the name is rephrased into the corresponding number of respondent. The characteristics of the interviewees are as follows.

1. Respondent #1, male, RT 36 chief, employee of a university in Yogyakarta.
2. Respondent #2, male, mobile phone credit shop owner.
3. Respondent #3, male, owner of a small shop and handy craft industry producing fishing equipments.
4. Respondent #4, male, Kampoeng Cyber administrator and owner of a small firm producing graphic design products.
5. Respondent #5, male, owner of a small firm producing screen printing products.
6. Respondent #6, female, batik handicraft maker.
7. Respondent #7, male, batik painter.
8. Respondent #8, male, batik painter.
9. Respondent #9, male, batik tailor.
10. Respondent #10, female, cake and snack shop owner.
11. Respondent #11, male, used-good trader and sound system rental owner.

All of the SMEs taken as respondents are very small firms, most of which are self-employed. Only Respondent #3 has employees, which are two people. Most of them have a rather low education, i.e. high school or less. Only Respondent #4 has a bachelor degree.

It is important to note that the unit of research in this thesis is the firm, not the person. Chapter 4 will present some findings in which a respondent doesn't actively use ICT for business purposes, but informally employs another person. He may not utilize ICT as an individual, but the utilization is conducted for the firm's benefit. Therefore, the activity still lies within the firm's domain.

Secondary data are also used to capture the background of the area. The related data consist of information such as the socio-demographic data, spatial location of the area, etc. Direct observation of the SMEs daily activity also provides considerable benefit to give better understanding about how the SMEs actually utilize ICT. This may give additional information left behind in interviews.

3.5. Data Analysis

The data is analyzed qualitatively. This is appropriate with the in-depth interview method employed in this study. This method is adopted in order to get a deep understanding of the extent of ICT implementation by SMEs and how it can influence the performance of the SMEs.

Denscombe (2003) gave the following steps as the procedures to analyze qualitative data.

1. Gathering descriptive accounts of the situation.
It deals with compiling the whole "narrative" of the data, in this case the interviews. It involves the making of interview transcripts (Denscombe 2003).
2. Coding and categorizing the data.
In this step, the narratives are broken into units for analysis. These units serve as the ideas and events that need to be identified or captured from the transcripts. The units can be adopted from the variables and indicators elaborated in the operationalization of the concept. After identification, they are then categorized for further comparison. Denscombe (2003) named this process analytic coding.
3. Reflections on the early coding and categories

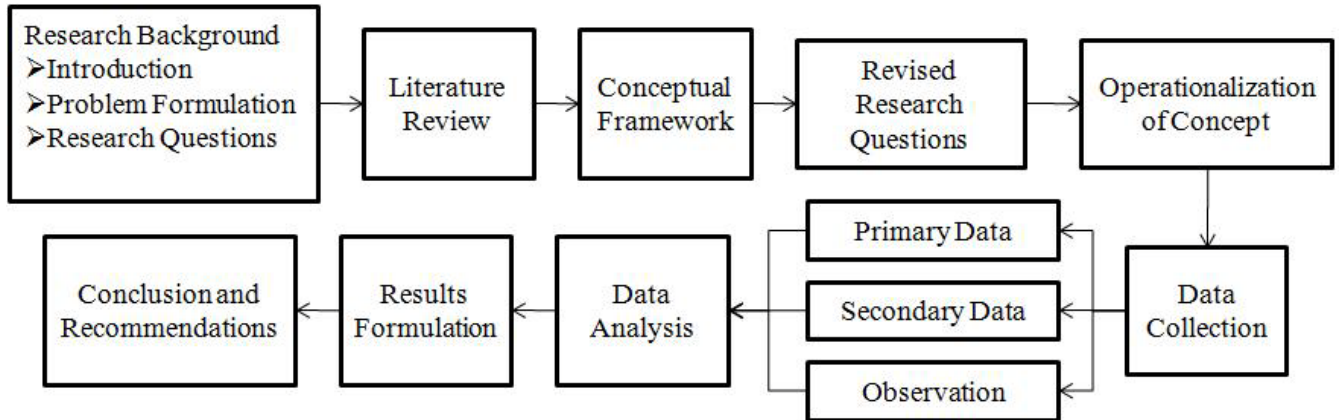
In this step, the researcher read back the transcripts and codified findings. During this process, “new insights” might emerge. When this happens, the researcher makes memos that may perform as additional comments to the raw data (Denscombe 2003).

4. Identification of themes and relationships
Denscombe (2003, p. 26), quoting Miles & Huberman (1994), referred this step to the effort to recognize “patterns and processes, commonalities and differences”. It goes along the reflection process, in which the research should be aware to indentify “themes or interconnections” among the codified findings. It may need to be repeated for several times to sharpen up the analysis (Denscombe 2003).
5. Return to the field to check out emerging explanations
Reconfirmation to the field may be required to verify the result of emerging insights due to reflection process. This may also build the construct validity as explained in the previous section (Yin 2003). However, in the case of this study, this stage is very difficult to do. The author merely contacted some of the respondents for some verification or clarification instead of returning to the field.
6. Develop a set of generalizations
Finally, after a process of analysis refinery, a set of generalizations can be constructed. This generalization should be able to elaborate the inter-relationships among variables and indicators through the reflections of codified findings.

3.6. Research Design

The research design adopted in this thesis is illustrated in Figure 5.

Figure 5: Research Design of this thesis



Chapter 4: Research results and analysis

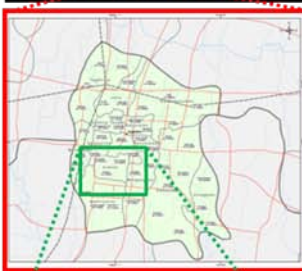
With the devised research design and methods, a fieldwork has been conducted to gather the data required for this thesis. The data will be presented in this chapter, followed by the analysis.

4.1. General Review of the Fieldwork Location

As mentioned in the previous chapters, the research took place in a neighbourhood in Yogyakarta. It lies within Kraton sub district, in Kelurahan (urban village) Patehan. Patehan consists of 10 Rukun Warga (RW) or community groups. The RWs are composed of 44 Rukun Tetangga (RT) or neighbourhood groups, one of which is RT 36 neighbourhood. Patehan encircles one of several historical-cultural sites in Yogyakarta, the Taman Sari Water Castle. It was a bathing place for the royal family of Yogyakarta Sultanate. Although no longer used, it still draws some tourists. The map of the fieldwork location is presented in Figure 6.

Figure 6: Map of the Fieldwork Location

Indonesia (<http://indonesia-peta.blogspot.com/>)

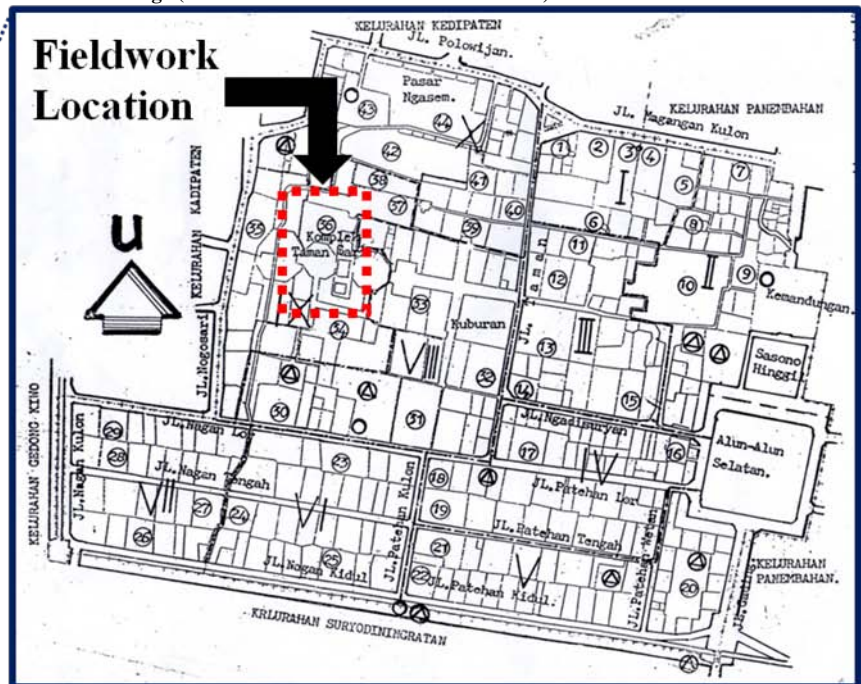


Yogyakarta Municipality
(<http://reliefweb.int/node/4719>)



Kraton Sub District
(Kecamatan Kraton Dalam Angka/
Kraton Sub District in Figures
2007/2008)

Patehan Village (Patehan Administration Office Archive)



The area, in which RT 36 lies, is quite a dense area. According to Yogyakarta Municipality Bureau of Statistics, the population of Kraton is 29,575 people living over an area of 1.40 km², which results in a density of 21,054 people/km² (BPS Kota Yogyakarta 2008). Patehan also has the same situation. There is no exact information found about the number of population in this village. However, according to Kecamatan Kraton Dalam Angka (Kraton Sub District in Figures) 2007/2008, the number of household in Patehan is 1,793 (BPS Kota

Yogyakarta 2008). Using the household size of Kraton, which is 4.27, it can be estimated that there are 7,656 people living in Patehan in an area not more than 0.4 km².

RT 36 neighbourhood has existed for many generations. In the past, the area was reserved for “Abdi Dalem”, the servants of Yogyakarta Sultanate, particularly for services in Taman Sari. Some of their descendants remained there, others moved out. The salary for an Abdi Dalem was not sufficient for daily life. Therefore, Abdi Dalem’s families should have other sources of income. Traditionally, they made batik related products. The skill was inherited for generations up until now. However, not all of them continue this tradition. Some choose other types of occupations or simply produce other commodities.

According to Respondent #1, the RT chief, the current population of the neighbourhood is 133 people, composing 43 households. The occupation varies from SME owner, civil servant, private employee, tourist guide, etc. Most of the people, however, have SME as their main source of income. Thirty households are SME owners. The SMEs are various. Some of them make batik related commodities, such as batik garments and batik paintings. Others make handicrafts such as shadow puppets, wooden statues, carvings, fishing equipment, snacks, cakes, screen printing products, graphic design products, etc. There are also numerous small shops. Averagely, the SMEs in the neighbourhood make around Rp.1 million to Rp.1.5 million (about €3 – €125) a month.

The SMEs suffer some difficulties to grow. According to Respondent #1, one of the difficulties is the fact that RT 36 is not located on a major road.

“...RT 36 lies inside a crowded area. The situation makes it difficult for them to sell their products, since few can even notice the existence of the SMEs. To market their products, most of them depend on bigger firms. Almost all SMEs worked as an out source of larger firms. This, of course, demanded the SMEs to make deals that are most of the time not so beneficial for them. Sometimes the SMEs make deals with tourist guides. Since this neighbourhood lies near Taman Sari Water Castle, tourists are potential buyer of their products. Therefore, the SMEs make deals with tourist guides, so that the guides will bring the tourists to their shops to buy their commodities. However, the guides ask a share of the purchase up to 50%, which is not a good deal for the SMEs...”

Another difficulty is lack of financial capital. According to Respondent #3, it was hard to market his commodities due to the location of his shop. The cost to have a shop in a strategic location is relatively high.

"I had difficulties to market my products, because the location of my shop is inside a crowded area. Having a shop on the roadside needs an investment of Rp 10 million a year for renting a store, and Rp.25-30 million to buy goods. So the total is Rp. 40 million to own a store. By the time my income was still low. My shop was still small. Only one window. That's why my business couldn't grow."

This finding represents a challenge to be faced by the SMEs in the neighbourhood to grow. Rp. 40 million (almost €3,400) investment to overcome the barriers of location is a big number. It is even bigger than the average initial investment of a small business in Yogyakarta. According to the Yogyakarta Statistics Bureau there are 6,244 small firms in the city, with the total investment value of Rp.160.3 billion or about €13.4 million (BPS Kota Yogyakarta 2009). That means averagely about €2,000 per firm. Not to mention the low income that the firms get monthly. It shows that the walls that they need to break are very high and thick.

Yogyakarta Municipality has actually acknowledged this barrier in its policy. According to Agency of Industry, Trade, Cooperative and Agriculture of Yogyakarta, the municipality is

targeting to increase the income of SMEs from Rp.112 billion to Rp.118 billion or about 5.4% (Disperindagkoptan 2011). The policy to achieve the target is endorsing entrepreneurship, promoting competitive advantage of SMEs and increasing the function of kampung as the main actor of development. The agency also gives financial aids to SMEs through Program Pemberdayaan Ekonomi Berbasis Kewilayahan (PEW) or Regional Based Economic Empowerment Program, by providing revolving funds to 5 SME groups in every village in Yogyakarta municipality, as many as Rp.10-50 million (or about €33-€4,166) per group. The program has been conducted since 2006 and 922 groups of SMEs have received the revolving funds. The amount of funds to be received is determined by the evaluation of the agency which will consider the amount of fund needed by the group and the capability of the group to manage the fund.

However, whether or not the program is able to reach all SMEs is another thing. According to Respondent #5, none of the SMEs in RT 36 has ever received any assistance from anybody.

"In the past this RT lagged behind other neighbourhoods. Other RT once had a family relationship with a former central bank governor. The people there often received financial help from him. There are many sorts of activities. It's different with RT 36. We have no sources of aid like others. We do everything on our own. Even from the government there is no help. The bureaucracy was very difficult."

According to Respondent #1, information about the existence of any financial aid is very scarce. None of the people in RT 36 even know that such aid exists. Therefore, access to such information can be one of the solutions for the problems of SMEs in RT 36. This is one of the main reasons that motivated him and fellow residents of RT 36 to incorporate ICT interventions in the neighbourhood by starting what they called "Kampoeng Cyber" program.

4.2. ICT Interventions in RT 36

From the interview findings, it can be identified that ICT interventions in RT 36 was started when one of its inhabitants decided to install computer-internet equipment in his house. Respondent #4 stated that he had known computer and the internet before the Kampoeng Cyber network was constructed.

"I have long been familiar with computers. I started to know computers and the internet during college. We certainly need to know computer, because many assignments required that knowledge. Mostly, I learnt by myself, but I also asked my friends quite frequently about computer. Then I decided to have an internet connection in my house. Before Kampoeng Cyber network, I already have my own internet connection."

Respondent #1 also confirmed the statement. He further added that he and Respondent #4 are the first persons in RT 36 to know computer and internet. It is probably because of his work in a computer laboratory of a university. He stated that he saw some opportunities to do something for his neighbourhood. He found that ICT could provide a way to advertise the kampung and bring new knowledge for the people there.

"At first Respondent #4 and I made a blog just for fun. We made it originally to raise fund for Indonesia's Independence Day celebration. It was about in mid 2008. Through the blog we sent proposals for donation to this kampung's former residents. There was no response, but then we became interested to build a more serious promotion of this village through internet. We began by improving the blog. Eventually we thought that if there's internet connection here, it will better advertise this kampung in many aspects. That's when we decided to construct computer networks here. We thought that by constructing a

computer and internet network, the people would be compelled to learn computer and gain a lot of knowledge.

The making of the blog marks the starting point of “Kampoeng Cyber”. It was the first time at which the people of RT 36 called their neighbourhood by that name. The name was meant to build a confidence within the people to make them believe that even they can embrace ICT. The blog was further aimed to introduce ICT to RT 36 inhabitants and arouse their interest towards it. It managed to bring some of the inhabitants to have an internet connection in their house. The connections were the embryo of Kampoeng Cyber network. However, Respondent #1 stated that only few joined in the beginning.

“We started constructing the computer network in 2009. Only 6 households were connected. Most of the people were not interested because they didn’t see the need for it. Some were interested, but couldn’t afford a PC and internet equipment. They said that they needed to save some money first to buy the equipment.”

The connection was built by using the PC of Respondent #4 as the server. The external internet connection cable is primarily plugged to his computer. It is then connected to the other computers through a Local Area Network (LAN). It was then followed by the utilization of internet facilities by the inhabitants. In 2009, some have owned e-mails and accounts of social networking web sites, such as Facebook. The RT chief saw this as an opportunity to further push the interest of his people. He decided to announce future communal activities on the Facebook account of RT 36. More people somehow found it exciting and became interested to be part of the network. It resulted in the increase of the number of connection.

The program was accompanied by series of training to build the people’s knowledge. The first training was held in late 2008 when many of the trainees had no computer. It ranged from computer-related trainings to English training, considering most internet facilities and applications are in English. The trainings were conducted in cooperation with several universities. The RT chief stated that it was meant to excite the people to know more about the internet.

“The trainings are pretty basic, mostly about basic introduction of using computer and the internet. It’s because most of the people here are computer illiterate. So, there are still a lot of efforts required to make them more interested on computer and internet. Some of the trainings are held in the campus where I’m working at....Some universities have conducted various activities in this village, for example, Gadjah Mada University, Yogyakarta State University and Atmajaya University. The activities such as Community Field Work, computer trainings, English training.”

The efforts somehow brought fruits. By mid 2010, almost all of the houses in RT 36 were connected to the network. Some started to engage ICT on their business activities and were able to identify some internet features that could give benefits to their business. Others, however, were not as incisive. They still need a lot of assistance to better absorb ICT for their businesses. It was one of the main drivers of RT 36 residents to build their own web site. Although a blog can perform almost all functions of a web site, it is still a sub-domain of the blog provider. Therefore, its performance highly depends on the performance of the blog provider. The RT chief also thought that having a stand-alone web site might further lift their existence as a self-educated kampung. It was not easy to do. They were unable to at least start doing it for years. They still lack the knowledge. Cost is another barrier, since having a web site might be costly due to some requirements. They tried to find someone to do it with a considerable price. Respondent #1 gave the following statement.

“....there are many aspects to deal with. First, the design. Then, web programming. Finally getting a domain and host. There are also other things to look after....Then I met a friend in the internet, who was a resident here, proposing to build a web site with the whole infrastructure. But, he proposed a large a cost. He said it would cost us US\$ 2,000. That is a lot of money for us. Then I met another acquaintance....He said he could help make a web site....It only costs Rp.500,000. Rp.120,000 for hosting and Rp.380,000 for the domain. He said he would handle the programming. We handled the design....So now, we have done it....Our official web site is <<http://www.rt36kampoengcyber.com/>>.”

The neighbourhood tried to further improve the ICT facilities by increasing the connection speed. Fortunately, the municipality was willing to assist them by facilitating a meeting with the internet provider. It was mentioned by Respondent #4.

“We have tried to increase the bandwidth. Some people didn't agree though, because increasing bandwidth means increasing the cost....Then, the municipality decided to facilitate a meeting between us and Telkom Speedy, the internet provider. It resulted in them agreeing to increase the bandwidth up to 2 MB without increasing the cost. It appears that the municipality has a program to provide not-so-expensive internet connections for schools in Yogyakarta but with considerably quick speed.”

From the interview findings, it can be known that all of the respondents already have internet connection in their house. Variation exists in modes of internet facilities that they have. It is displayed on Table 3. The ICT intervention varies further in extent of use. It can be seen on Table 4. Most of the respondents don't reach the level of modification. They merely use the existing facilities. From the interview findings, it can be known that some respondents have less internet facilities than the others. Respondent #9, for example, only has internet connection and doesn't own what other respondents have. He stated that he used internet merely to look for latest news and entertainment.

Table 3: Modes of ICT Interventions of the Respondents

ICT Interventions	Respondents									
	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11
Internet Connection	√	√	√	√	√	√	√	√	√	√
E-mail (for personal use)	√	√	√	√	√	√	-	-	√	√
E-mail (for business use only)	-	√	√	√	-	√	√	-	-	-
Facebook account	√	√	√	√	√	√	-	-	√	√
Yahoo Messenger account	√	-	√	-	-	-	-	-	√	-
Blog	-	√	√	√	-	√	√	-	-	-
Corporate web site	-	-	-	-	-	-	-	-	-	-
Joint web site	-	-	√	√	-	√	√	-	√	√
Legend :	√ : Available; - : Not available									

Furthermore, it is also observable from Table 4 that the respondents can be grouped into several groups. Group I is the SMEs with the most extensive ICT interventions, while Group II and Group III are the SMEs with medium and least extensive ones respectively. It is obvious from the table that some groups are able to master more internet facilities in terms of quantity and quality.

Table 4: Extent of ICT Interventions of the Respondents

ICT Interventions	Respondents									
	I			II				III		
	#4	#3	#8	#5	#7	#2	#10	#11	#6	#9
Internet Connection	■■■	■■	■■■	■■	■■	■■	■■	■	■	■
E-mail	■■	■■	■■	■■	■■	■■	■■	■	■	-
Facebook account	■■	■■	-	■■	■■	■■	■■	■	■	-
Yahoo Messenger account	■■	-	-	-	-	■■	■■	-	-	-
Blog	■■■	■■■	■■■	■■	■■	-	-	-	-	-
Corporate web site	-	-	-	-	-	-	-	-	-	-
Joint web site	■■■	■■	■■■	■■	■■	■■	■■	■■	-	-
Legend :	- : not available ■ : have ■■ : have and use for business activities ■■■ : have, use for business activities and add modifications									

The interviews show some interesting findings. Respondent #8 stated that he didn't know computer-internet at all. Although he does have a computer and internet connection in his house, he never uses the equipment.

"I am internet blind. Most of the time my son uses the internet. He helps me to market my products. I don't know anything about internet. It seems that I don't have the talent for it at all. That's why my son does all the internet things. If not because of him, probably I will never have a computer."

Through Respondent #4, who is his son, Respondent #8 can have his products reach the virtual world. He can reap the benefit of his son's ability. Therefore, it can be said that Respondent #8 also has the same ability to operate ICT as that of Respondent #4 because the firm is taken as the unit of research. This is due to the difficulties to separate family issues in home based enterprises. Although Respondent #4 is not really employed by Respondent #8 and receives no payment for his services, his actions to put his father's products on the internet lay within the domain of Respondent #8's firm.

The theories compiled in Chapter 2 stated that ICT interventions might give significant improvement in SMEs' performance. Thus, based on the information presented on Table 3 and Table 4, one would expect that most respondents should get significant improvement in their performance. Therefore, it is required to understand the condition of the respondents' performance to get a clear understanding about what really happens. This is important to comprehend the links between ICT intervention and SME performance, particularly in the context of the respondents.

4.3. Performance of the SMEs

As mentioned in Chapter 2, there are several variables of SME performance. The variables consist of several indicators. These variables and indicators are used to map the improvement of the performance of the respondents. The result is presented on Table 5. The table compiles the respondents' statements about the improvements that they perceive as the result of ICT interventions. It also shows some distinctions among the respondents. It might be tricky to make a difference between low/little improvement and high/significant improvement, especially for qualitative measures. However, some measurement is important to assess of the respondents' achievement and understand the real situation.

Table 5: Improvement of the SMEs Performance as the Result of ICT Interventions

SME Performance	Respondents									
	I			II				III		
	#4	#3	#8	#5	#7	#2	#10	#11	#6	#9
Quality										
~ Product performance										
~ Innovation										
~ Delivery reliability										
~ Waste										
Time										
~ Process time										
~ Delivery speed										
~ Productivity										
~ Labour efficiency										
Flexibility										
~ Product innovation										
~ New product introduction										
~ Volume flexibility										
Finance										
~ Cash flow										
~ Cost reduction										
~ Amount of sales										
~ Efficiency										
Customer Satisfaction										
~ Integration with customers										
~ Delivery reliability										
~ Customer's Service										
Human Resource										
~ Workforce										
~ Employee skills										
~ Employee relationships										
~ Labour efficiency										
~ Quality of work life										
~ Productivity										
Legend :										

Wolff & Pett (2006) gave a distinction about levels of performance. Low performance is defined as a state of stagnation (Wolff & Pett 2006). Thus, low improvement of performance

can be defined as a status quo condition in which nothing much has changed or improved. Conversely, a significant improvement can be defined as a condition in which a certain aspect of performance exists or intensifies after a particular intervention occurs. In quantitative aspects of performance, such as income, a significant improvement can be referred to an increase of 50%-100%. Furthermore, some SMEs may show noteworthy improvement. This should be taken into account since it may present important insight about the intervention. In terms of quantitative aspects, an improvement of more than 100% should be noted as a major improvement in which an SME is able to remarkably improve their performance. In the case of qualitative aspects, major improvement refers to the situation in which the SME is able to make a breakthrough in the production process or provide a permanent solution for the existing problems. Such distinction may be useful for deeper understanding of the impact of ICT intervention.

Table 5 shows that the pattern of performance improvement generally follows the patterns of ICT intervention as shown by Table 3 and Table 4. Therefore, Table 5 partly confirms the impact of ICT on the performance. However, there are differences in some variables in which the performance of the respondents with less extensive ICT intervention improves more than that of the respondents with more extensive ICT. It can be seen in the case of Respondent #8. Despite a more extensive ICT intervention than most of the other respondents, he got significant improvement only in finance. The performance of Respondent #5 and #7 improves better in other variables. Respondent also #3 lags behind Respondent #5 in terms of improvement in Time. However, he outperforms Respondent #4 in terms of integration with customers despite the fact that Respondent #4 is better in Delivery reliability. To get a more detailed understanding about Table 5, the next subsections will describe the performance improvement of the respondents based on each variable.

4.3.1. Quality

This variable is about the traits of the commodities produced by the SMEs. In this study there are four indicators related with Quality, namely product performance, delivery reliability, waste, and innovation. Product performance specifically relates to the extent of how acceptable the product is to the consumer. In the respondents' case, it can be measured in terms of material quality and product design. Respondent #3, #5, #7 and #10 claimed improvement in this manner. Respondent #7 gave the following statement.

"I think there has been some improvement. Since there was Kampoeng Cyber network, I can access many types of motifs. I also got a lot of knowledge about new techniques in batik. It increases my ability to make batik using high difficulty material, like silk....Usually I make natural motifs, such as the butterfly and landscapes motifs. Sometimes I search for abstract and contemporary motifs in the internet."

In Respondent #4's case, material quality is not improved. However, it is due to the nature of his work. He sells ideas for design. He claimed that the internet had helped inspire him in making designs.

"I make graphic designs, such as product design, T-shirts design, stickers, mugs, banners, brochures. I then sell the idea for the design publishers...I often get inspiration from a variety of graphic designs that I found on the internet."

None of the respondents, however, indicates an extraordinary improvement of product performance that might make their products outstanding among those produced by other SMEs. Some respondents may have claimed to be able to explore better materials or produce new design. However, none of them make a real breakthrough. Others have done it before. For example silk batik. Although Respondent #7 stated an ability to produce it at the moment,

silk batik has been produced by other batik painters. Therefore, it cannot be classified as major improvement.

Other respondents stated that nothing much has improved in terms of product performance. If any, it has nothing to do with ICT. Respondent #8, for example, stated that ideas for batik motifs came from his own instinct or discussions with fellow batik workers which were not done through ICT.

“Usually I just make batik spontaneously....Most ideas come spontaneously. Sometimes I get ideas after chatting with fellow batik workers....Sometimes I also see the work of others. Everything can be combined into new motifs.”

The findings about product performance also reflect the findings about innovation. The efforts of the respondents to enhance their product performance are also their attempts to innovate. They search for information about how to get better material quality or more attractive design. However, managerial innovation is still yet to exist. The SMEs still show little improvement in such aspect. Therefore, the improvement that the respondents have gained is still yet to reach major improvement.

In terms of delivery reliability, some claimed that ICT gave an impact on ensuring that their products reach their customers. Respondent #4's statement indicates the situation.

“....the Internet helps a lot. Before I had an internet connection, I sent my work by mail....Sometimes it didn't arrive at all. Once, a customer contacted me complaining why his order had not been completed. I said I had already sent it....Since the internet exists, I do it via e-mail. It arrives directly to my customers.”

Respondent #2 also expressed a similar situation.

“In the past if I wanted to send mobile credit, I sent them via mobile phone. Sometimes the credit couldn't be delivered because the telephone network was out of order. Through the internet, sending credits is easier since internet connection rarely drops. I can also check to my provider via the internet if the credits that I send have reached my customers. There is a log containing the record of credit sending. We can check it to know the status of the credit. We can therefore trace to make sure the credit is delivered.”

These findings show a breakthrough in the production process. Both respondents are able to permanently solve problems of delivery reliability. Therefore, their improvements can be classified into a major improvement.

Other respondents, however, share a different perspective on delivery reliability. Respondent #3, Respondent #7 and Respondent #8 use postal office or delivery service to deliver their products. Therefore, they claimed that internet had no impact on the delivery reliability. It depends more on the postal office performance. In other respondent's case, the delivery is done personally. Respondent #5 stated that his customers are still within Yogyakarta area. Respondent #8 and Respondent #6 only work with one or two batik galleries, while Respondent #11 only works with one specific market.

In terms of production waste, most respondents stated that there is no significant reduction. The amount of waste is still as before. Respondent #4, however, did mention something about this issue.

“...in the past....I used to work by drawing on papers. Sometimes, I can use many sheets of paper before I got a final design. Now, everything is done digitally. I think it is more environmentally friendly.”

ICT enables him to work without any paper. It helps him to eliminate the waste in his business. This can also be classified into a major improvement.

4.3.2. Time

This variable deals with the time consumed from the beginning of the production process until the clients receive the products. Thus, it consists of process time, delivery speed, productivity and labour efficiency. In terms of process time, Respondent #4, #5 and #7 expressed some improvement. This situation is somewhat assisted by the existence of ICT, one of which was stated by Respondent #5.

“I think there is also some increase in production time. In the past I could work on about 1,500 items per day. Now I am able to do 5,000 items....I do feel the influence of the Internet. In the past, to work on the order I made some design examples. Then I brought the examples to my customers. If some revisions were needed, I returned to my shop and improved the design again. Then I returned to my customers to confirm the revision. All of it could take days. Now I only need to send design alternatives via e-mail. Then my customers can give comments. After that I can start working it. So in maximum three days I can start working on the orders.”

These findings show only partial improvement in the time aspects. There is no major time improvement in the actual working of the product. Although some respondents make more products in the same time span, it is more because of customer demands rather than the ability to enhance the efficiency of the production process.

Other respondents don't share the same experience. Respondent #3 stated no significant change has occurred after the existence of Kampong Cyber network in terms of production time. Although some parts of the process mechanism have been improved, the process time still remains somewhat the same. Other respondents also expressed a status quo in production time. They say nothing much has changed in their production time.

In terms of delivery speed, as mentioned in the interview findings above, only Respondent #4 has gained major impact on this indicator. Respondent #3 and Respondent #7 still rely on postal office or delivery service, while Respondent #5 and other respondents deliver their products personally. Respondent #2 did mention some improvement in delivery process, but not so much on the speed. He gave the following statement.

“Sending mobile credits can be done right away, even in the past. You can send mobile credit via mobile phone in less than 10 seconds.”

From the above findings, signs of productivity improvement can be identified as the number of products increases in the same time span. Therefore, productivity improvement follows process time. In this case, Respondent #4, Respondent #5 and Respondent #7 show some improvement, while other respondents stated that not much improvement has occurred in terms of productivity. The situation is still very much the same.

None of the respondents stated any change in labour efficiency. One of the reasons is the fact that all of the SMEs have few employees. Many are only self-employed. Another reason is that the SMEs have no fixed work hour. They spend different hours a day to work. It depends on the amount of orders they receive. Respondent #5 stated that sometimes he works for eight hours a day. Sometimes he has to work until midnight.

4.3.3. Flexibility

Flexibility is about the ability to deal with events of change. The change can give impact on the production characteristics or volume. In this thesis the aspects taken into account are product innovation, new product introduction and volume flexibility.

Product innovation is about adjusting the features of the existing products due to alteration of the market. This may happen due to changes in trends and fashion. In this case, an entrepreneur is demanded to stay updated on the latest trends. This can be discovered from the interview with Respondent #3, #4, #5, #7 and #10. Respondent #5 stated that he searched for new trends to make sure that his products are up to date with the latest fashion.

“I often find new information on the design of screen printing from the internet. I need to know the latest trends in design screen printing, for example, design invitations, business cards, and plastic designs. This is necessary so that I could meet my customer's orders.”

An entrepreneur should also be ready to introduce new products that he or she doesn't regularly produce to comply with the request of the customers or the market. It can be discovered in Respondent #4's case.

“Recently, a friend told me that she wanted to start writing novels....and wanted me to design the cover.... I had never done it before....It is a bit difficult because it must be able to describe the entire novel in one view. Then I tried looking on the internet graphic designs that roughly correspond to the novel's story. I found some examples. I took it and develop the design into my own. I gave it to her and she liked it.”

Respondent #3 and Respondent #7 show something more. In their interviews, they claimed the ability to go beyond their initial way of doing business and try new things to fulfil the request of the customers. The interview findings show that they are not just able to sell commodities that are related or similar to their usual products. They can also give services that require skills beyond their existing ones. This can be identified in the interview with Respondent #3.

“I also hold some events in the community. Sometimes I hold fishing competitions. Anybody can join. The point is not to win the competition. It is just a way so that everybody can get to know each other and learn more about fishing. Sometimes I also hold courses and short trainings about fishing. I give invitation through my blog for anybody who wants to know more about fishing. Sometimes I do it for free. I love to do it because I really love fishing.”

Holding events and competitions requires skills to take care a lot of things and may need a lot of people. However, Respondent #3 showed that it might not be so difficult. He could somehow utilize the access of communication provided by ICT to coordinate so many members of his community and had the events organized. He also showed the ability to hold trainings and teach courses. Respondent #7 also stated a similar thing. He is occasionally invited to conduct training courses. Surely, teaching needs a skill so much different with making fishing equipment or batik paintings. Although it is not clearly stated that both respondents got their teaching skills from the internet, abundant information that they have discovered in the internet may have given additional insight.

Other respondents don't try to make new products out of satisfaction of the current condition. Respondent #6, for example, finds her condition is enough.

“I make purses made of Batik motive materials. I receive orders from Mirota Batik (a major Batik shop in Yogyakarta). Usually I get 500 orders of purse per month. I am paid

Rp.5.000 (around € 40 cents) per piece. But now I ask for my sister's help to work on it, because I need to look after for my children as well."

Her responsibilities to take care of her children limit her for taking more job orders, let alone to make new kinds of product.

In terms of volume flexibility, the trends of production volume of some respondents are increasing. They claimed that so far they were always able to comply with their customers' request. However, there is no experience of volume fluctuation. Therefore, the ability to deal with various levels of volume is still moderate. Respondent #6, #9, #10 and #11 expressed stagnancy in volume flexibility. Respondent #10 gave the following statement.

"I never accept too big job orders, because I still need to look after my children. I never take orders designed for more than 100 guests."

4.3.4. Finance

This variable deals with financial condition of the firm. There are several aspects taken into account, namely cash flow, cost reduction, sales, and efficiency. In terms of cash flow, this thesis tries to assess the amount of income of the SMEs as the result of ICT implementation. From the interview findings, it can be observed that Respondent #2, #3, #4, #5, #7 and #8 claimed an increase in monthly income. Among the respondents, Respondent #3 is the one who get the most considerable increase in terms of monthly income.

"By the time my income is still low. My shop was still small. Only one window....My monthly income at that time was roughly about Rp. 5 – 6 million (about €416 – €500). But since Kampoeng Cyber my income is quite large....Now I can reach about Rp.40.000.000 (about €3.300) per month."

From this finding, it can be seen that Respondent #3 has been able to multiply his income up to 8 times, which is quite a big figure for an SME. The networking that he has built among his customers through JFC has an important role in this. With about 2,000 members that have a continuous relationship through his blog, it is not a miracle that he may reach such amount of monthly income. Another example of major increase in monthly income is that of Respondent #7.

"In the past, I got maximum Rp.2 million a month. Now, in a month I can produce up to 40 sheets a month. One sheet of batik values around Rp.150,000 to 200,000. That excludes high quality batik, such as silk batik. That could reach Rp.2 million a piece. But I it can work on it in 3 days. It depends on my choice. Sometimes, I am invited to conduct training courses at various institutions. I get a salary of Rp.50,000 to 100,000 a day. When I asked them where they got the information, they said from the internet. Kampoeng Cyber is famous now."

From his explanation, it can be seen that he can get at least Rp. 6 million a month. If he can at least make one sheet of silk batik in a month, he can get extra Rp. 2 million, not to mention opportunities to teach courses.

Other respondents, namely Respondent #6, #9, #10 and #11 stated a somewhat stagnant monthly income. They said nothing much has occurred on their business. Everything is still business as usual.

From the findings above, it can be seen that increase of income relates very much to the amount of sales. The respondents were able to get higher income due to the increase in the number of the products they sold. Respondent # 4 claimed that he can get up to 15 job orders

a month from a previously 4-5 job orders. However, many of the orders are small ones which make the increase of income is not as much.

In terms of cost, no respondents claimed any reduction. Some even stated a cost increase because of inflation. Respondent #5 claimed a 5% increase in his cost due to the increase on the price of his raw material. Respondent #7 stated that the cost was somewhat stable. He did admit a slight increase due to increase in oil price. Some cost reduction can be identified from the interview with Respondent #4.

“In the past, I did use some papers and pencils. It was not so expensive. Probably, in terms of delivery cost, but it was not so costly as well. The main problem is the reliability. Perhaps, there is also some reduction in communication cost. In the past, I need to call them through phones. Now, I can just communicate with e-mail although sometimes we also need to clarify something through phones for better clarification.”

It can be said that efficiency follows the pattern of cash flow since cost is rather stable. Therefore, the efficiency of those that can increase income also increases because they can make more out of the same cost.

4.3.5. Customer Satisfaction

This variable is about the degree of approval of the customers towards the firm's service. It covers the aspects of integration with customers, delivery reliability and customer's service provided by the firm.

In terms of integration with customers, Respondent #2, #4, #5, #7 and #8 stated that they could communicate with their customers better. Respondent #5 gave the following statement.

“Through internet I can communicate more easily with my customers, usually through e-mail....I try to create a network by building relationship with my customers. Mostly by communicating. We can have a chat through facebook. By doing this, I get closer with my customers. Sometimes they recommend me to their friends. It helps me to get more customers.”

Respondent #3 shows some noteworthy improvement in this matter.

“I built a fishing community. The name is JFC (Jogja Fishing Community)...This community enables me to have a close relationship with my customers....I mostly use facebook and blogs. I find it the most effective to build networking....The blog helps to promote my business and now I have clients even more than ever before. I now have at least 2.000 loyal customers from all around Indonesia....If you see the Facebook account of Omah Pancing (Respondent #3's shop), you will see that it has more than 4,000 friends. Of course not all of them are fishing enthusiasts, but I won't be exaggerating if 50% of them are.”

Respondent #3 claimed to have up to 2,000 loyal customers joining the community that he has built. This is an outstanding number. Managing such number of members requires special attention. However, he is somehow able to keep the members together and gain large benefit from it.

Some respondents don't have networking with their customers. A reason for it is that they are only engaged with a few larger firms, such as batik galleries. It can be identified in Respondent #6's case.

“I supply my products to Mirota only. I don't sell my product in retail, so I don't have people coming here, for example to buy batik purses. Besides, I don't have a shop for it.”

Others just don't think they need it. Respondent #9 gave this statement.

"I think I don't need a network with my customers. It will require some organization and I don't think I'm up for it right now. I am old and retired. At least this business can get me busy doing something. This is alright for me now."

Respondent #8 is an exception. Although he personally doesn't use ICT, he still can have integration with his customers through his son. His son takes care all of the on-line interaction with his customers. Therefore, he still gets some improvement in this aspect.

Integration with customer requires some customer's services. For the customers, these services may create the feeling that they get some benefits to stay connected with the firms. Respondent #2, #4, #5, #7 and #8 stated that ICT enables them to receive on-line job orders which may help their customers to save some time. Respondent #5 gave some examples.

"If the jobs are about printing on materials provided by my customers themselves, I come and pick the materials. They don't have to deliver the materials here. I also take orders via email. If there are damaged products out of my mistakes, I will replace every damaged item. I also deliver the goods directly to my customers."

Respondent #3 again stands out by providing other types of services. He arranges events related to fishing activities that involve the members of his community. He does this to better strengthen the relationship among JFC members.

"Sometimes I hold fishing competitions. Anybody can join. The point is not to win the competition. It is just a way so that everybody can get to know each other and learn more about fishing. Sometimes I also hold courses and short trainings about fishing. I give invitation through my blog for anybody who wants to know more about fishing. Sometimes I do it for free. I love to do it because I really love fishing."

Other respondents gave no information about improvement in customer's service, particularly due to ICT intervention. However, Respondent #10 shows a distinction. She receives job orders through the internet. Also, since she is included in Kampong Cyber web site, her profiles are available in the internet. This can be regarded as a form of customer's service, since her potential customers can get information about her products.

Delivery reliability has been mentioned in the previous sub section. Most of the SMEs have little change in this aspect. It is because most of them rely on postal or delivery service to have their products delivered. Only Respondent #2 and #4 show a major improvement.

4.3.6. Human Resource

This variable is about the condition of the employees of the firm. It covers the number of workforce employed, employee skills, employee relationships, labour efficiency, quality of work life, and the labour's productivity. Almost none of the respondents have an employee. Respondent #7 does involve his family members to work on the batik orders that he got, but he declined to call them as his employees. Only Respondent #3 has employees. He employs them mostly in making fishing leads and baits. Most of the handicraft is left on him.

"I have two employees. They work on make fishing leads and baits. Sometimes they also help make fishing rods. But most of the time, I work on it myself, because if someone asks me to make a fishing rod, he wants to have a certain quality on the rod. Otherwise, they can buy the manufactured ones. They only need to say which brand they want."

He claimed that nothing much has changed in terms of his employees' skills, particularly as the effect of Kampong Cyber network. No significant improvement has occurred. He said

that he did share some skills he had. So far not so much improvement has taken place. However, he claimed that his relationship with his employees is good so far.

“Sometimes I share knowledge about making a fishing rod, but not everything. There are also things that I keep for myself. So far not much has changed. They still work as usual....Every day they start at 10 am. Go home at 5 pm. They work five days a week. There is a half-hour lunch break. The salary is Rp. 500 000 (about €42) a month. That is the amount that I can give for now. They have no complaint so far. I think we have a good relationship. Every religious holiday, I give some allowance. I think they work diligently. So far we still can fulfil all of the job targets.”

4.3.7. Reflection on the Performance Improvement

These findings confirm another theory in the literature review. Theories state that it requires another aspect to make ICT interventions really improve performance. There should be a specific capacity by which SMEs can really absorb the benefit of ICT and implement it for performance improvement. The literatures call it Absorptive Capacity. Absorptive Capacity determines whether a firm can really utilize ICT for its benefit. Therefore, it can be used to understand the discrepancy between ICT intervention and performance improvement. The next section tries to assess the respondents' condition in terms of this capacity.

4.4. Absorptive Capacity of the Respondents

As explained in Chapter 2, Absorptive Capacity is the measure of a firm's ability to recognize, learn, understand and implement a certain innovation in its business context (Flatten et al. 2010). It contains several dimensions, namely Acquisition, Assimilation, Transformation and Exploitation. These dimensions should coexist within a firm if it wants to really cultivate the benefit of a certain innovation. The size of each dimension also determines the extent of benefit that the firm can reap from that innovation. Therefore, assessment of these dimensions may give relevant explanations about the performance of the respondents.

4.4.1. Acquisition

This variable relates to the ability of SMEs to identify an innovation. In the context of ICT, it is about the extent to which SMEs know the features and facilities provided by ICT. It can be assessed by observing the modes and extent of ICT intervention within the firms. It ranges from merely possession of an internet connection to capability of adding modifications to ICT facilities. Based on the information on Table 3 and Table 4, it can be said that all of the respondents have attained this dimension since they at least have already connected to the internet. This means that at some level they have acquired ICT. However, Respondent #9 has a situation that is different with other respondents. He only has internet connection. He doesn't have any other internet facilities. This is an indication of a weaker acquisition level compared to the others.

From Table 4, it is obvious that Group I is the most advanced in ICT interventions compared to other groups. They are familiar with more internet facilities and understand more features than the other respondents. Of the respondents in Group I, Respondent #4 is the most advanced. It is observable from the extent of ICT interventions that he has mastered. Moreover, he and Respondent #1 are the technicians from whom RT 36 residents ask for help whenever they have problems with computer or internet. This was confirmed by Respondent #10.

“We built this network from scratch and everything was done on our own....We install it ourselves. As technicians, we use the residents of this neighbourhood as well, such as Respondent #1 and Respondent #4.”

This condition relates very much to the fact that Respondent #4 has already known ICT longer than the other respondents. He has been introduced to ICT during his education years.

“I have long been familiar with computers. Before Kampoeng Cyber network, I already have my own internet connection. I started to know computers and the internet during college. We certainly need to know computer, because many assignments required that knowledge.”

His education plays an important role in his level of acquisition. From the interview findings, it is known that other respondents didn't go further than high school. Moreover, they never had any experience with computer-internet during school years.

Acquisition level will influence assimilation level. Having various internet facilities may drive the owners to learn how to use the facilities or search for information elsewhere. In Respondent #9's case, he may not be so keen to do it since he will probably see little relevance with his needs. A more detailed explanation about assimilation is presented in the next subsection.

4.4.2. Assimilation

Assimilation is about the effort to learn and better understand an innovation. It represents the things that an SME does in order to be capable of actually using ICT facilities, such as joining computer-internet trainings or searching information about computer-internet. It is also about identifying the relevance of an innovation with the business activities of a firm, which relates very much to the dimension of transformation.

From the interview findings, it can be known that Respondent #9 has got some internet training in the past. He gave the following statement.

“I spread my business through the words of mouth. Not because I don't know internet. It's more of a health problem....Actually I have known and used computers for a long time. I once participated in a 2 weeks training in 1989. It was an extensive training, starting from 13.00 to 22.00. I also have a hobby to play chess....with the computer. I can take hours. As a result,....My view become so vague and I often feel a bit dizzy. Maybe also because I used to smoke, the smoke got into my eyes and gave more damage. Since then I have never used a computer for too long....But, I don't join the recent ones held here in RT 36.”

The above findings indicate that Respondent #9 doesn't spend much effort to increase his knowledge. Furthermore, he saw little relevance of ICT with his present business. He markets his business through word of mouth. This is an indication of low assimilation level.

Other respondents show more efforts by attending the trainings about computer-internet. However, Respondent #5, #6, #7, #10, and #11 stated that their progress was a bit slow. It makes it difficult for them to master many internet facilities. Respondent #5, #7 and #10 expressed that they also looked for help from others who know more. Respondent #10 gave the following statement.

“I joined the basic training of computer and internet introduction....The progress is not very good....Then, I continue to learn by myself....I also try to asks my neighbours. Mostly I ask Respondent #1 and Respondent #4.”

Although they have given more efforts to master ICT than Respondent #9, these five respondents still show slow progress. This is also an indication of low assimilation level

although probably not as low as Respondent #9. Respondent #2 is somewhat better than them due to his ability to find more facilities in the internet to help his business.

“I can find several web sites giving free consultation about mobile phone reparation. It is really helpful to give me knowledge and improve my skills. I still don’t know much, but I think I have made some progress....There is a web site that I use to top up credits. Through that web site I can top up any mobile phone provider that you want.”

Respondent #2 has been able to further use the facilities that he has learned for his business. It makes him, along with Respondent #3, #4 and #8, able to attend a considerable assimilation level among the respondents due to the ability to further utilize internet facilities.

Again, assimilation relates very much to the dimension of transformation. If a firm tries to learn more about ICT and manages to achieve a good result on it, its probability to comprehend all benefits of ICT may increase. If combined with the ability to identify the relevance with the firm’s context, it will achieve a good transformation level. Further explanations are given in the next subsection.

4.4.3. Transformation

Transformation relates to the efforts of a firm to combine old knowledge with newly assimilated innovations. In the context of this research, old knowledge represents existing work system of the firm, and new innovation refers to ICT brought by Kampoeng Cyber network. Transformation is about bringing these two matters together. Consequently, it can only be made possible if the firm sees the relevance of ICT with its existing work system.

Bearing this idea in mind, it can therefore be said that Respondent #6, #9 and #11 are ruled out from transformation dimension. They don’t recognize the need for their business to incorporate ICT. Inability to see the link between the firm and ICT will consequently block further effort to put ICT in that firm’s business context. Respondent #6 gave the following statement.

“I don’t think I need it. I take orders from Mirota and I think it is sufficient for me and my family. My husband also works. So with the amount of extra money that I have I can still look after my family, although I now have to share the amount of money I receive with my sister....So far I have always get the jobs finished in time. I think everything has been going well this way.”

After recognizing the link, the next question is how to combine the old knowledge and ICT. The respondents’ efforts to combine these two are reflected in the purpose of being connected to Kampoeng Cyber network. From the interview findings, it can be known that Respondent #2, #3, #4, #5, #7, #8 and #10 connect to the internet to build networking. Respondent #3 gave the following statement.

“My main motivation is to market my product and build networking with my customers....We are talking about the ones that really want to spend considerable amount of money to buy fishing equipment. Some people are just fishing to kill time. A real enthusiast will search for the best products....These kinds of people are potential customers....So, I need to have a network with those enthusiasts. I think internet may provide many opportunities for it. It enables me to communicate with many people from many places. If I can have a good network with many fishing enthusiasts, I will have a better chance to market my products.”

Respondent #3 added that one of his main reasons to build networking is to market his products. Consequently, he also has the purpose of improving access to market. This is also the case for Respondent #4, #5, #7 and #8. Respondent #7 gave the following statement.

“I use facebook to market my commodities....I don’t have a web site. Fortunately there is Kampoeng Cyber web site. I can use the web site to promote my products.”

Respondent #2 and #10 didn’t give an explicit statement of the desire to improve access to market. Although building network, particularly with customers, will indirectly improve access to market, it still indicates absence of old knowledge in terms of access to market. They lag behind the Respondent #4, #5, #7 and #8 in realizing the importance of enhancing access to market in order to improve performance. However, they use the internet to find information valuable for their business. Respondent #10 gave the following statement.

“I have found many new ideas for cakes and cookies. I found new recipes of cakes and how to make them. I used to know to make only few types of cakes, but now it’s quite a lot....I don’t really market my products over the internet. I do it through social gathering and community meeting....I have some relationship with my friends and families. They are my customers.”

The statement shows that Respondent #10 joins the network to find ideas for innovation and knowledge building. Respondent #2, #3, #4, #5 and #7 also gave similar statements. None of the respondents, however, stated that they joined the network to find access to financial sources. Respondent #5 gave the following statement.

“I have never tried to find any sources for financial aid, because I am still afraid not to be able to pay for the loan. Right now, I am just working on the things I possess.”

The purpose of having ICT interventions is more than just a motivation. It is also the thing that embodies the firm’s effort of transformation. Respondent #3, for example, stated that networking is the key to build success in business. In this case, building networking is the old knowledge. Therefore, he adopted ICT for this purpose. This is partly a form of transformation. Respondent #3 gave the following statement.

“In my opinion, the key factor is in networking with your customers. That is the most difficult part. It is not easy to build relation with your customers. It takes time and patience, and you also need to build trust with them. You also must be able to promote your products and show why they are better than any other products. That is how internet helps my business to grow.”

A link can be established between these purposes and performance improvement. In Table 5, it can be seen that the respondents that have the purpose of gaining access to market and networking have increased performance in terms of Finance and Customer Satisfaction, while the ones that have the purpose of finding ideas of innovation increase their performance in terms product related variables, such as Quality and Flexibility. It indicates that purpose of having ICT intervention partly affects performance improvement.

Real transformation includes continuous efforts to adjust ICT and the business context. This is what puts Respondent #3, #4, #5 and #7 ahead in terms of transformation. Respondent #3 gave the following statement.

“My main motivation is to market my product and build networking with my customers....I built a fishing community. The name is JFC (Jogja Fishing Community)....This community enables me to have a close relationship with my customers. I can easily get useful inputs related to fishing products. I founded JFC around the time of Kampoeng Cyber network construction. The internet makes it easy to communicate with JFC members....I build a blog and use social network web site, like Facebook, to promote my shop. I upload pictures of my products along with their prices. That way, my customers can easily spot the products they want to buy. If there is something wrong

about the product, they can also easily tell me about it and I can improve my products....I also hold some events in the community. Sometimes I hold fishing competitions. Anybody can join. The point is not to win the competition. It is just a way so that everybody can get to know each other and learn more about fishing.”

Respondent #3 realized that building networking with customers might need an organization in which they can have a means of sharing and communicating. He also realized that bringing the members together required a sense of belonging by which the members can feel that they gain something from the community. It drove him to hold events that can make the community become more cohesive.

Respondent #7 also shows some extra effort in transformation. Although he doesn't do very well in assimilating, he utilized what he knew to combine his old knowledge with new innovation of ICT. Respondent #7 gave the following statement.

“I once received training on entrepreneurship. I was trained to plan a business. One of the important factors is to recognize the market. That's what I do first. I tried to find a potential market. After obtaining a partner, I received orders and handing out orders to my family members. Many of them are also batik painters.”

Respondent #7's old knowledge is that recognizing the market is a key point to start a business. Based on that knowledge, he first looked for partners using the internet. It doesn't require the ability to operate blog or web site. A simple Facebook account can build networking with many people around the world.

This kind of effort is not so obvious in Respondent #8's case. In the findings mentioned previously, it can be seen that all of his firm's on-line activities are conducted by his son. The activities are somehow only related to marketing. There is no significant activity related to production process, for example searching for latest techniques or designs. Respondent #8 relies only on his inspiration or experience. He doesn't utilize ICT, even through his son, to find ideas for further innovation in his work. It indicates lack of transformation in terms of product innovation. It further blocks Respondent #8 to reap the benefit of ICT to improve Quality.

Respondent #2 and #10 also lack the attempts in improving access to market. They only rely on their friends and relatives. They don't give extra efforts to develop their market. Respondent #10 only uses Kampoeng Cyber joint web site to advertise her products. Respondent #2 doesn't even join the web site. These findings indicate that these three respondents have lower transformation level than Respondent #3, #4, #5 and #7.

The findings above show that transformation puts a firm foundation to the final dimension, Exploitation. It draws the outline by which the SMEs can decide how to implement ICT in their business. In the case of Respondent #5 and #7, transformation can also amend the deficiencies in Assimilation. Transformation drives them to select the appropriate modes of internet facilities that can give the optimum benefit. However, traces of Assimilation can still be found in Exploitation since the latter dimension requires the ability to conduct development and modification on the internet facilities. More detailed explanation is presented in the next subsection.

4.4.4. Exploitation

Exploitation is the end of the absorption process of an innovation. It ranges from mere implementation to the ability to modify a certain innovation. Exploitation also determines the types of ICT intervention that a firm can utilize. As mentioned in Chapter 2, there are three types of ICT intervention, namely General-use, Production-integrating, and Market-oriented

(Luchetti & Sterlacchini 2004). Therefore, Absorptive Capacity will eventually provide a firm with certain type(s) of ICT intervention of certain level of exploitation. It is presented in Table 5. It is important to keep in mind that these types of ICT intervention are in the context of business purposes. Therefore, Respondent #6, #9 and #11 are ruled out from these dimension since they use ICT for purposes other than business purposes. The types of ICT intervention of the respondents can be mapped based on the findings. It is displayed on Table 6.

Table 6: Extent of ICT Interventions of the Respondents

Types of ICT Interventions	Respondents									
	I			II				III		
	#4	#3	#8	#5	#7	#2	#10	#11	#6	#9
General-use	▒▒▒	▒▒▒	▒▒▒	▒▒	▒▒	▒	▒	-	-	-
Production-integrating	▒▒▒	▒▒▒	-	▒▒	▒▒	▒	▒	-	-	-
Market-oriented	▒▒▒	▒▒▒	▒▒▒	▒▒	▒▒	-	-	-	-	-
Legend : ~ ▒ : Implementation ~ ▒▒ : Implementation and Development ~ ▒▒▒ : Implementation, Development and Modification/Revision										

From the interview findings above, it can be known that Respondent #2 and #10 are still yet to use ICT for marketing. However, they already utilize it for general use and production. They are also still limited in implementation of facilities with provided features. They are still unable to use facilities that require skills to develop self-made features, such as blogs.

Internet facilities, such e-mail, Facebook account and Yahoo Messenger account, have already attached many features useful for passing information from their owner to their visitors and vice versa. Blogs, however, require more efforts to shape the layouts, contents, designs and other features that the owner sees fit. That somehow puts blog owners in a more advanced position than others since a blog requires the ability to not only implement but also develop and modify or revise.

That is why Respondent #5 and #7 are somewhat more advanced than Respondent #2 and #10. They are able to develop blogs although they claimed that they still need help to add modifications on their blogs. This is an indication of a little setback in Exploitation. Respondent #5 and #7 still need a lot of help to improve their knowledge. This is due to their low assimilation level. From the above findings, it can also be known that they have already utilized ICT for marketing, in addition to general use and production.

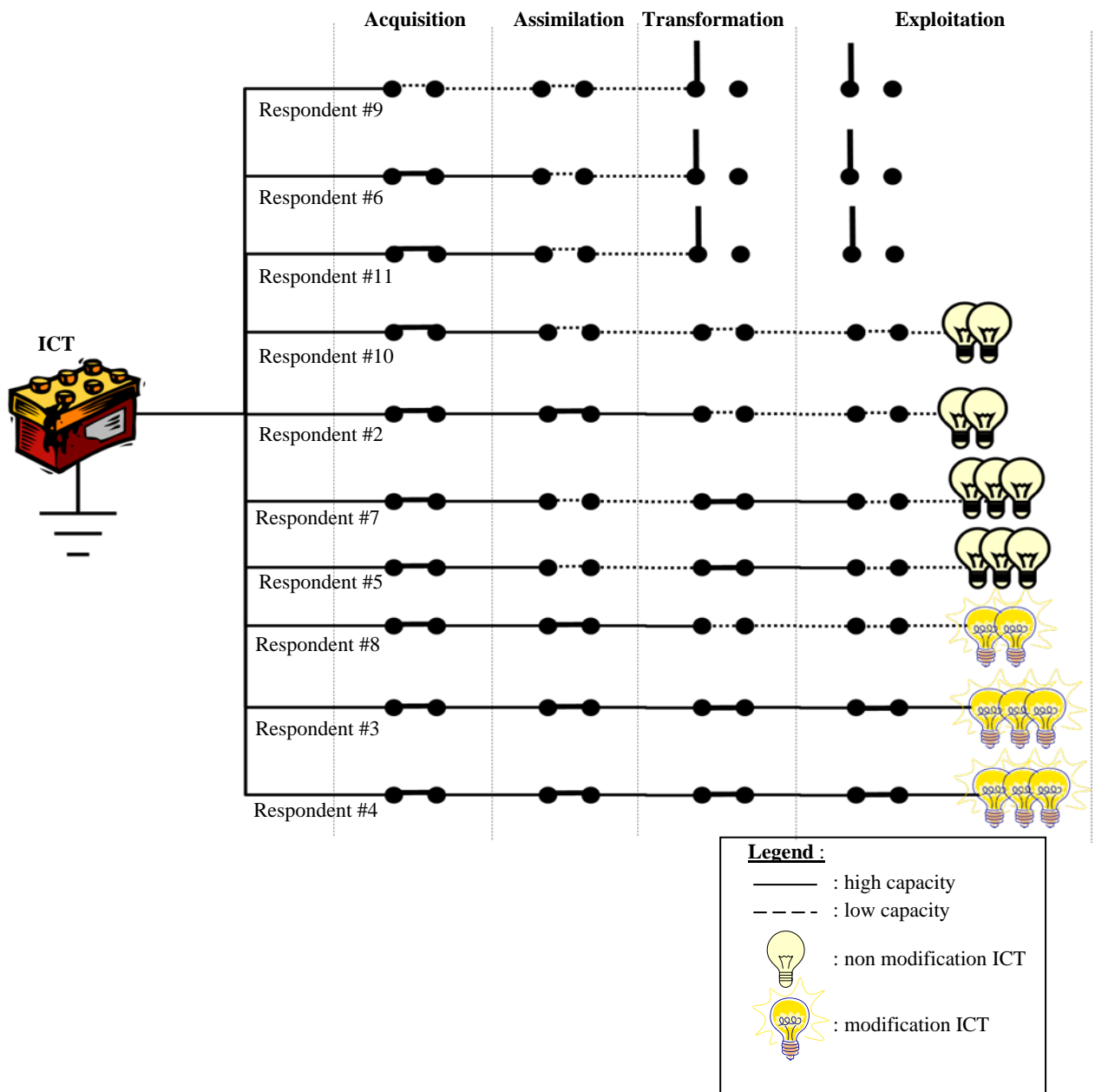
Respondent #3 and #4 are in the top position in terms of Exploitation. They have utilized ICT in all three types of intervention. Furthermore, they can implement, develop and add modifications to the facilities that they utilize. Respondent #4, however, leads further due to his ability to work on web site and internet hardware.

Respondent #8, unfortunately, lags behind the two respondents. From the interview findings, despite high level of exploitation in general use and marketing, it is not the same case in production. In fact, there is no evidence of ICT intervention in the production process. It is due to lack of transformation in production related aspects.

4.4.5. Reflection on Absorptive Capacity

The above explanations described the process through which the firms absorb ICT to improve their performance. It describes that some respondents excel in certain dimension(s), perform moderately or lack in other dimension(s). Their capacity can be mapped as illustrated in Figure 7.

Figure 7: Illustration of the Respondents' Absorptive Capacity



By studying Table 6 and Table 5, one can identify a link between both tables. It can be seen that the respondents in Group III that haven't utilized ICT in any type of ICT intervention gain no or little improvement of performance. Respondents in Group II somewhat gain better improvement, and Group I is even better. An interesting finding is identified in Respondent #8. In Table 5, he indicates a less improved performance compared to Respondent #5 and #7. It is explained in Table 5 that he is still yet to transform ICT in his production process although his firm has marketed through the internet. It results in stagnant performance in

variables related to production process, such as quality, time and flexibility. This is an evidence of the role of Absorptive Capacity in utilizing ICT to improve performance.

It is interesting to find out how a firm can have a certain level of Absorptive Capacity. The literature review has described that there are several factors that contribute to a firm's Absorptive Capacity. The next section presents an explanation about those factors and how they affect the respondents' Absorptive Capacity.

4.5. Factors Affecting the Absorptive Capacity of the Respondents

There are several factors that influence each dimension of Absorptive Capacity. Macpherson & Holt (2006) mentioned three aspects, namely human and social capital of the firm's owner, the firm's networking, and organizational systems and structures of the firm. The study will further elaborate these factors within the respondents and identify their possible links with Absorptive Capacity.

4.5.1. Human and Social Capital

This variable consists of two sub-variables, namely human capital and social capital of the SME owner. This is particularly relevant in SME context because SME employs few labours. SME owners are often self-employed. Therefore, the SME management relies so much on the owner's personal capacity; in this case his/her human and social capital. Not all aspects of human capital and social capital are discussed in this thesis. For human capital, Macpherson & Holt (2006) highlighted aspects of education level, entrepreneurial capital and behaviour toward knowledge. Related to social capital, they underlined nature of relationships with partners, in terms of trust, familiarity and reciprocity.

In terms of education, it can be indicated that the level is relatively low. Of all SME owners who responded, only Respondent #4 who has a bachelor degree. Others have the education not higher than high school. Respondent #8 and Respondent #11 even only graduated from junior high school. Moreover, only Respondent #4 has known computer and internet during schooling years. Others just have experience with the computer recently. This may influence their Acquisition and Assimilation level since they might know very little about ICT and find difficulties to learn its features. However, there are still more aspects to look at. One of them is entrepreneurial capital.

Erikson (2002) highlighted two aspects of entrepreneurial capital, namely entrepreneurial competence and entrepreneurial commitment. Entrepreneurial competence is partly about the ability to understand own condition and recognize opportunities. This is important when a person wants to start and manage and business. It can be identified in the interview with Respondent #7.

"I think the internet can give a broad benefit. I can say this because in my experience, before Kampoeng Cyber, I found it difficult to market batik products. In the past, when I was still working with my parents, the marketing only stuck on one or two galleries. Sometimes we made partnership with tourist guides. But most of the time the income division is not fair. The guides get more. We got a little. It is also difficult if you want to have your own gallery, because the location of this kampung is not on the major road. Not many people even know that this kampung exist. The Internet can build network with various people in various places."

Respondent #7 was able to realize the reasons why batik painters in his neighbourhood found it difficult to grow. Then, he could see the opportunities that the new innovation can bring. It drove him to acquire the innovation. This is in an indication in which entrepreneurial

competence can overcome the deficiency in education level. Although Respondent #7 has low education level, his entrepreneurial competence made him able to attain Acquisition level.

Entrepreneurial competence is also about creativity, by which an entrepreneur tries to find solutions to difficult problems. With creativity, an entrepreneur can look for alternative ways whenever he/she find obstacles in the way. It can be identified in the interview with Respondent #5.

“In the past, I have to wait for design examples. I often got confused when creating a new design....I used the Internet to find examples of designs....I often get examples of designs from the internet, which I developed into my own design.”

Respondent #5 often got stuck when trying to design his product. He managed to overcome the problem by using examples from the designs he found in the internet. Although it intersects with issues of plagiarism, it is still an example of creativity. Respondent #5 was able to find an alternative solution for his problem. This is also an explicit example of Transformation. Respondent #5 combined the new innovation of design brought by the internet with his ideas and developed a “hybrid” design. Therefore, it can be said that entrepreneurial competence contributes to Transformation level.

Entrepreneurial commitment is about the willingness to accomplish the objectives of the firm (Erikson 2002). It is also about the eagerness to grow the firm. This is important to drive an entrepreneur to push for better performance. This is somewhat absent from Respondent #2, #6, #9 and #10. Respondent #2 gave the following statement.

“I am an employee in a mobile phone service shop. I also open a shop here at my house. I sell credits for mobile phones, as well as accessories for mobile phones. Sometimes, I also repair mobile phones. I sell mobile credits to add my monthly income. It is not very difficult to do, especially after there is internet in this kampong. Mostly, I sell mobile phone credits among my friends. If they want to top up their credits, they send me messages through mobile phones or emails....I still have not much time for it though. I spend most of my times working at the shop. I only spend time taking care of my business during my day off.”

Respondent #2 lacks the commitment to give full attention to manage his business. It may drain the opportunity for his business to grow since he may have already lost some energy after a whole day of working somewhere else. Respondent #6 gave another statement.

“I don’t think I need it. I take orders from Mirota and I think it is sufficient for me and my family. My husband also works. So with the amount of extra money that I have I can still look after my family....I think everything has been going well this way. With the things that I must do at home, I think I can’t handle more orders. If the orders are bigger, I won’t have enough time for other things. Now, I even have to share the jobs with my sisters.”

Respondent #6 has been satisfied with her situation and finds no need for more growth. This is also an indication of lack of entrepreneurial competence. Lack of both aspects disables her to see opportunities in new innovation which may eventually weaken her Transformation level.

Entrepreneurial commitment also relates to the willingness to take risk in investment. An interesting finding was found in the findings related to ICT investment. When compared to their monthly income, investing for computer-internet equipment installation is relatively large. It can be identified from the interview with Respondent #5.

“The cost for network cables and hubs was around Rp. 250,000. The computer costed about Rp. 1 million. Then I bought a printer. It was approximately Rp. 600 thousand. I

bought scanner for Rp. 300 thousand. There were also other devices. So the total was about Rp.2.5 million. My monthly income was below Rp1 million. At the time I had to save some money little by little so that I could buy the equipment."

From this interview it can be seen that the investment incurred for ICT utilization is Rp. 2.5 million or around €208. This is a big challenge for SME owners in RT 36. With an average income of Rp1 million to Rp.1.5 million or about €83 - €125, an investment worth of €208 clearly requires a strong commitment, considering they also have other monthly expenses to comply. This commitment is crucial because it will be difficult for them to better utilize the internet for their business without it. It is also associated with a willingness to experiment on new ideas. It is similar with the willingness to take risks since such amount of investment is indeed a big risk for them. Without such willingness, they will have no courage to invest such amount of money which could be used for other goods with more immediate effect.

However, such commitment is not necessarily aimed for business purposes. Respondent #6's respond is an example for this. She stated that she installed the equipment just because her neighbours did the same thing. She didn't have any business intention in mind. Respondent #9 has another reason. The internet is only aimed for educational purposes.

"At first, it's just for my children's needs for their school home works....Lately I have learnt a little bit about internet. Now, sometimes I use internet to get news and for entertainment as well."

As mentioned before, both respondents have low Transformation level. This is an indication that commitment to invest without proper Transformation will not lead to an adequate ICT absorption of a firm. All dimensions of Absorptive Capacity should be in the right proportion so that the firm can optimally utilize ICT for performance improvement.

Behaviour toward knowledge also plays an important role in pushing the SMEs to better understand new innovations. An enthusiasm toward new knowledge will drive the SMEs to search for more information about new innovations. This can be identified among RT 36 residents. Respondent #1 stated that several trainings were held in the neighbourhood.

"We held several times of training programs. Starting in 2008. A lot of the people here join the programs. The trainings are pretty basic, mostly about basic introduction of using computer and the internet."

Some respondents also show extra efforts to find further knowledge about internet from many sources. Some search in the internet, while others ask those who know better. It indicates that behaviour toward knowledge holds an important role in Assimilation. It urges an entrepreneur to improve his/her knowledge level. However, sometimes the entrepreneur's personal capacity is so low that he/she cannot step over the impeding wall. This is when social capital gives its contribution.

One of the main aspects of social capital is familiarity. Through familiarity, a community can feel free to share anything. It can take away the awkwardness in relationship and make communication goes well. It can be identified in RT 36. Respondent #10 gave the following statement.

"The relationship between people here is quite compact. We help each other in many ways. The spirit of mutual cooperation is quite high. It's probably because there are many young people here. The elderlies also give their support."

Familiarity can only happen if there is reciprocity. Respondent #2 gave the following statement.

“I also often discuss with my neighbours here. Sometimes we have a chat in Cakruk (the neighbourhood’s public room). We discuss about anything. We also share about the difficulties that we sometimes face in the internet.”

The RT 36 residents share their knowledge among each other. It can build a feeling of mutual need. However, it is possible through trust. Respondent #5 gave the following statement.

“I have no knowledge of computers and the internet.... Respondent #1 then suggested me to create a blog. Initially I did know nothing about blogs. Then, after a recommendation of Respondent #1, I now have a blog.”

Only by trusting Respondent #1’s suggestion can Respondent #5 gain new knowledge. It also applies in knowledge sharing. If one party doesn’t trust another’s information, the knowledge sharing will not be effective.

Social capital doesn’t always bring good news to everybody. Respondent #4 gave the following statement.

“....I haven’t updated my own blog for a long time. I have even forgotten the name....Sometimes, I also teach the citizens here how to make and utilize facilities like facebook or blogs..”

Being the person who knows more about ICT somehow “forces” him to share his knowledge and help others to better utilize ICT. He also has to help his father to be online. All of these can draw significant amount of time which he could have used for his firm’s own benefit. This is an indication in which social capital can give a negative impact for a firm. Another unpleasant impact is social pressure. It can be identified in the case of Respondent #6. She gave the following statement.

“My children said they needed some materials for their school homeworks. They often went to internet cafes to look for them. They said they wanted an internet connection, so they didn’t have to go to internet cafes. Then, I saw my neighbors did it, so I thought I should follow them too, otherwise I would be left behind....So, I join the network. Initially, my husband refused. He feared all the negative impacts of internet. You know, with all pornographic things. He also thought it too expensive. But then I said it was better to have internet at home. That way we can control the children.”

Probably, Respondent #6 really doesn’t need ICT. Given her condition, such amount of investment for installing computer-internet equipment may only give negligible impact. However, the social pressure from her neighbours and children compelled her to invest on internet.

Nevertheless, social capital does enable knowledge sharing among partners. Knowledge sharing is an important part of Assimilation by which SMEs try to learn about an innovation. Therefore, it can be concluded that social capital also holds an important role in Assimilation. It is also important in Acquisition since the sharing can help an SME to identify emerging innovations.

4.5.2. Networking

This variable relates to the networks that the firm has. It varies in types of partners, namely with peers, customers, professionals or academic institutions. A good networking may result in fruitful collective learning and collaboration. From the findings above, it can be said that RT 36 demonstrates some good example in terms of collective learning. The cohesiveness within the neighbourhood helps them to build a good networking among peers. This also support knowledge sharing among them and help them prevail over problems of internet

illiteracy. Eventually, it may smooth Acquisition and Assimilation process of ICT. Networking with customers also gives similar impact. Respondent #3 confirmed this.

"The community also provides many inputs in my blog. Sometimes for example, the layout of my blog is criticized by a member who happened to visit the blog. He sent comments and advises about how to make the appearance on my blog more interesting. It's quite helpful because I've mostly learnt to make this blog myself. Such positive feedbacks further add to my knowledge."

Through his networking with customers, Respondent #3 was able to improve his own knowledge in utilizing his blog. In return, he may be more able to pass more knowledge, for example about fishing, through the blog which will serve his customers even more.

Collaboration also has its own proportion in Absorptive Capacity. As mentioned in the previous findings, Kampoeng Cyber network was constructed by the collaboration of RT 36 residents. Through networking among peers, they are able to install an internet network. It indicates the impact of collaboration on Exploitation. Collaboration can also be influenced by networking with professionals. In the previous finding, Respondent #1 told a story about how a relationship with an expert in web site construction may result in a rather cheap joint web site. Respondent #4 also mentioned collaboration between RT 36 and the internet provider, facilitated by the government. These collaborations enable RT 36 residents to better implement and develop ICT for their benefit. This is another indication that collaboration gives significant contribution to Exploitation.

Networking with academic institutions also has its own role to strengthen Absorptive Capacity. Respondent #1 gave the following statement.

Some universities have conducted various activities in this village, for example, Gadjah Mada University, Yogyakarta State University and Atmajaya University. The activities such as Community Field Work, computer trainings, English training. I think all of these activities are useful to bring knowledge and insight into the society here....Recently, the Dean of Faculty of Social and Political Sciences, University of Atmajaya also paid us a visit. We had long discussions about possible development of SMEs here and Kampoeng Cyber network. Some SME owners join the discussions at that time. After the discussion, he expressed his interest to bring the story of Kampoeng Cyber to a seminar at Atmajaya. He said the seminar also invited international organizations. I wish it so, because it's a big opportunity for us to promote RT 36.

The above findings show a relationship in which RT 36 residents and academic institutions can gain mutual benefit. Universities are often required to conduct social activities. RT 36 neighbourhood can be a good object for such activities. The neighbourhood in return can obtain the benefit by having free training, such as English course. The experience with the Dean of Faculty of Social and Political Sciences also presents another opportunity to even develop their networks.

4.5.3. Organizational systems and structures

This variable is related to the existence of enabling environment within a firm that may help the absorption process of a certain innovation. It relates to the extent to which the internal situation of the firm ameliorates its Absorptive Capacity. The physical shape of this variable is the existence of a Research and Development (R&D) Department. This variable can also be measured by looking at the amount of innovation-related investments. It also can be seen from the willingness to experiment on new ideas. From the interview findings, there are no respondents who have a special R&D Department. Almost all of the respondents are even

self-employed. The only respondent that has employees is Respondent #3 who only employs two people. Such situation is clearly not suitable for a specific department of R&D.

The situation also gives a similar implication on the variables of investment on knowledge search and experimenting. Although the respondents provide some information regarding the variables, it has more relationship with entrepreneurial capital since they are self-employed or have very few employees. Therefore, no significant analysis can be performed about these variables.

Chapter 5: Conclusions and recommendations

This chapter will finalize this thesis by drawing a conclusion of the whole study. It is followed by some recommendations for further studies related to the topic of the thesis.

5.1. Conclusion

ICT has become an interesting phenomenon, specifically in the business world. Its impact on firms has attracted curiosity as to how exactly ICT can give impact on the performance of the SMEs. This is the main concern of this study. To deal with it, the study formulates several research questions. Therefore, drawing a conclusion of this thesis means answering those questions. This section will then proceed by presenting answers to the sub questions followed by the main question. It will be finalized with the general conclusion of this thesis.

The first sub research question asks about the condition of ICT intervention in the fieldwork location. During the fieldwork, it was discovered that ICT implementation in RT 36 is relatively advanced considering the socio-economic condition of the kampung. RT 36 residents are relatively poor, have relatively low education level and reside in a highly populated area. Despite all the facts, they have been able to self-sufficiently install a computer network that connects almost all houses to the internet. Furthermore, many of them have also utilized computer and internet software for various needs, ranging from education, entertainment and personal purposes, up to economic activities. The residents have also succeeded to own their own web site which is managed collectively. Some SMEs in the area have started to incorporate ICT in their business activities. The extent of ICT intervention varies, both in quantity or quality. The variation constructs a pattern by which the extent of ICT intervention by the respondents can be classified into groups.

The next sub question seeks to assess the performance of the SMEs, particularly as the result of such ICT intervention. After analyzing the data, it is discovered that the performance of the respondents improves in a pattern that generally follows the pattern of ICT intervention. The group with the least extensive ICT intervention still falls in performance improvement. However, the study identifies some discrepancies in which the respondents with more extensive ICT intervention have less performance improvement than other respondents with less extensive ICT. It indicates that the performance of the SMEs doesn't automatically improve after having ICT interventions. It confirms the theory that it requires a certain capacity to optimally harness ICT for the benefit of SMEs.

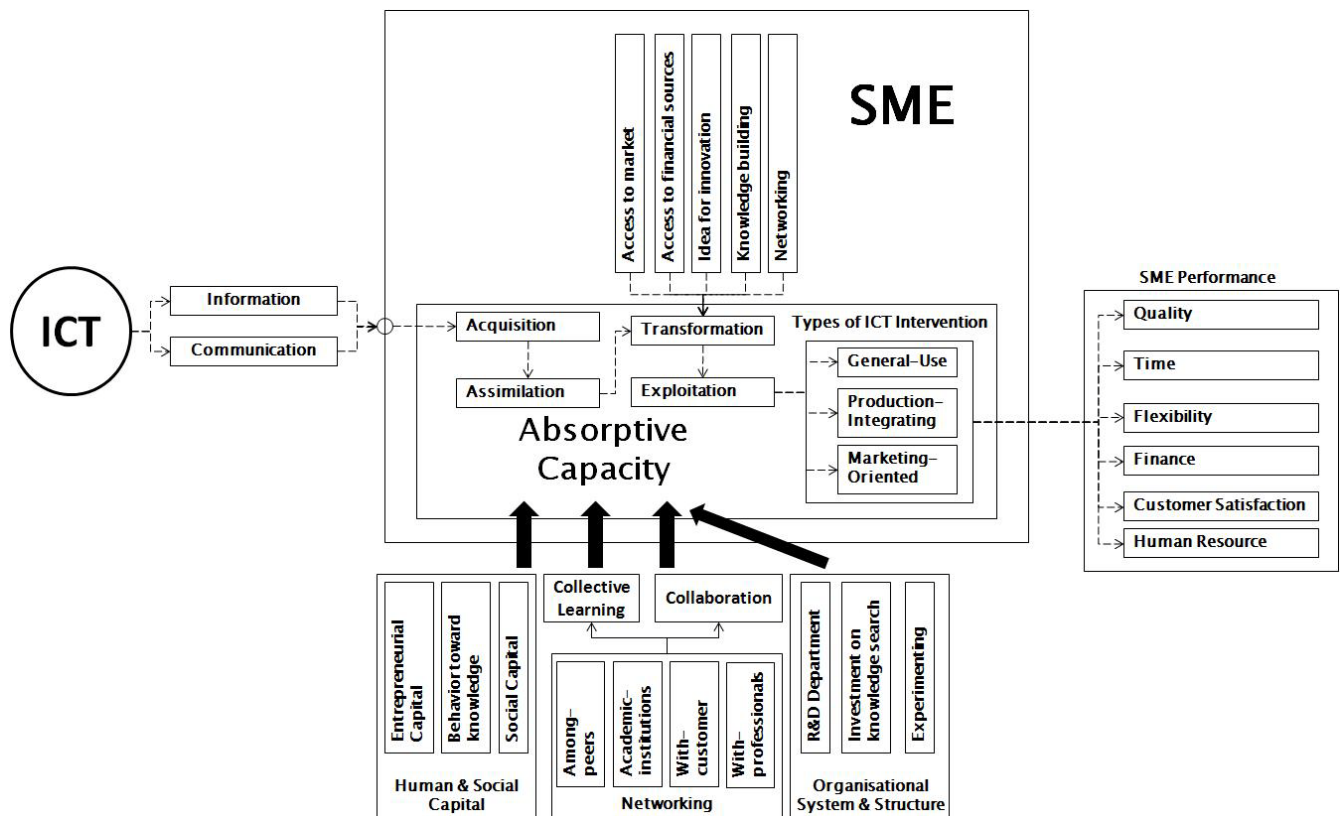
The third sub question enquires into the Absorptive Capacity of the SMEs in their attempt to absorb ICT. Answering this question entails detailed assessment on each dimension of Absorptive Capacity, namely Acquisition, Assimilation, Transformation and Exploitation. In terms of Acquisition, the respondents indicate a somewhat adequate level. Variations emerge in terms of Assimilation. Although all respondents have ever joined trainings about ICT, most of them show slow progress which results in limited ICT mastery. This indicates a rather low Assimilation level. Next, the study indicates that many respondents lack the dimension of Transformation. The main reason is the failure to recognize the relevance of ICT with their firm. Some respondents lag behind in terms of combining the new innovation with their old knowledge. It further confirms a low transformation level. Other respondents, however, are able to put ICT into the context of their existing work system and properly merge the new innovation into their work mechanism. Some respondents can even go further by adjusting their current system to better improve their performance which requires skills beyond the existing ones. For some respondents, it can also amend the lack of Assimilation. However, traces of these Assimilation deficiencies are still recognizable in Exploitation. Some

respondents are only able to implement and develop existing internet features but still unable to add further modifications. Nevertheless, two respondents stand out for being able to properly embrace all types of ICT intervention and manage to optimally exploit ICT for their business purposes. The analysis finally shows that there is a link between types of ICT intervention and performance improvement. The link demonstrates that the respondents which cover all types of ICT intervention manage to significantly improve their performance, whereas those that lack some aspects also lag in the improvement of related performance variables.

The above explanation about Absorptive Capacity implies a change in Conceptual Framework. Figure 4 describes types of ICT intervention as outside the domain of Absorptive Capacity. The analysis somehow indicates that it is the output of Exploitation and lies within the Absorptive Capacity by which the SME utilizes ICT to improve its performance. The revised Research Framework is presented in Figure 8.

The fourth sub question investigates the purposes of the SMEs in acquiring ICT. Most respondents claim the purpose of building networking, find ideas for further innovation and build knowledge. Some respondents claim the desire to market their products, but none look for financial sources. After analyzing these purposes, the author comes to the conclusion that the purposes can be seen as part of the old knowledge of the SMEs. Their experience in running their business so far shapes their perception on ICT and underlies their decision to acquire ICT. Therefore, it can be said that these purposes partly influence Transformation. It also implies a change in Conceptual Framework illustrated in Figure 4. In the figure, purposes of ICT intervention are positioned outside the domain of SME. The analysis, on the other hand, indicates that they are part of the old knowledge and should be consequently located inside the SME's domain.

Figure 8: Revised Research Framework



The final sub question seeks to examine the factors that influence Absorptive Capacity of SMEs. The literature review has listed three factors, namely human and social capital of the firm's owner, the firm's networking, and organizational systems and structures of the firm. In terms of the first factor, although education level may influence Acquisition, it holds a minor role in Absorptive Capacity. Entrepreneurial capital is more important because it essentially affects all dimensions of Absorptive Capacity. Behaviour toward knowledge also holds an important role since it underlies the willingness to welcome new innovation. Social capital serves as the way out of the of the firm owner's lack of knowledge. With a strong social capital an entrepreneur can look for alternative sources of information for better mastery of ICT. However, the research also indicates that social capital may not always be beneficial due to possibilities of social pressure. Networking holds another role to enable collective learning and collaboration which may smooth the process of absorbing ICT. Through networking with various partners, such as peers, customers, professionals and academic institutions, SMEs can have a better chance to acquire, assimilate, transform and exploit ICT for performance improvement. Organizational systems of the SMEs are also crucial since they encompass the cultures of the firms. However, no significant findings can be analyzed regarding this variable because the respondents are very small firms.

Finally, to make a conclusion, an answer to the main research question can be formulated. SMEs can properly utilize ICT to improve their business performance by having adequate and proportional dimensions of Absorptive Capacity. Although all dimensions should be present, Transformation holds a significant role since it relates to placing ICT into the specific context of the SME. For an optimum absorptive capacity, SMEs should possess entrepreneurial capital, adequate networking and appropriate purpose of ICT intervention.

This study is conducted in a limited domain of ICT, more specifically computer/internet technology. However, it is meant to draw a conclusion which is applicable to a greater scope of innovation. In accordance with that intention, it can be suggested that in order for an SME to be able to fully incorporate any innovation for its performance improvement, the SME should have adequate and proportional dimensions of Absorptive Capacity. Again, the SME should have a good entrepreneurial capital and appropriate purpose of adopting the innovation. Adequate networking can also give significant assistance to smooth the absorbing process of the innovation.

5.2. Recommendation

The above statement implies that some recommendations can be suggested. Firstly, any SME should really comprehend its own business context. Investment on ICT without full understanding of its own condition may make it difficult for an SME to integrate ICT into its work system and hamper its optimum utilization for performance improvement. A good spirit of entrepreneurship holds a fundamental role in this matter. An SME should maintain the commitment to grow and setting the right course for further development by continuously adjusting its work system with the market to make the most of any emerging innovation.

Building mutually beneficial networking has another vital role in breaking the classic barriers for SMEs to grow, such as lack of finance or educational insufficiency. Networking will make way for collective learning and collaboration. The findings of this study have indicated that collective learning can overcome internet illiteracy while collaboration can open the path to new resources through relationships with various partners. With these tools, an SME can better absorb innovation and improve its competitiveness.

These explanations also apply on government policies. Giving out revolving funds without proper assistance to the SMEs might not be sufficient to push their performance. Relentless

campaigns and trainings to improve their Absorptive Capacity are essential, so that the SMEs can maximize their resources and potentials to capture the opportunities in the market.

Finally, further studies can be recommended. As stated above, this thesis only studies limited modes of ICT. As the matter of fact, ICT covers many kinds of technology, including fixed-line telephone, mobile phone, multi-media equipment, mass media, etc. These kinds of technology should also be studied to grasp a full understanding about the impact of ICT.

Another issue relates to the fact that most of the respondents are self employed. The situation makes it difficult for the assessment of SME performance in terms of human resource. It also limits the investigation on the influence of organizational system toward Absorptive Capacity since having employees will require an entrepreneur to consider the needs of his workers. At some extent it may affect decision making. Therefore, studies taking larger firms can be conducted for a bigger context of the research.

It will also be interesting to conduct a deeper study about the factors affecting the Absorptive Capacity of an SME. Although Chapter 2 of this thesis gives out three factors, a more profound study might result in a broader scope of influencing factors. Furthermore, more studies can be conducted within the three factors, for example entrepreneurial capital. It is actually a broad concept because entrepreneurship itself is difficult to define. Therefore, it will be useful to understand the extent of its impact on Absorptive Capacity. Chapter 4 also indicates that social capital is not always beneficial for some respondents. It implies that at some extent social capital becomes a boomerang. Consequently, it will be insightful to have deeper understanding of the relationship between social capital and Absorptive Capacity. The same thing can be done with networking and organizational systems and structures.

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Annex 1

Operationalization of the Concept

Research Sub-question	Variables	Indicators	Questions	Analysis
How is the ICT intervention in the fieldwork location?	Hardware	~ Internet connection ~ Computer hardware	~ Are you connected to the network? ~ What equipment do you have?	Qualitative
	Software	~ E-mail ~ Social networking account ~ Blog ~ Web Site	~ What internet facilities do you have?	Qualitative
	Business relevance	~ Utilization for business	~ Have use internet for your business?	Qualitative
How is the performance of SMEs as the result of ICT intervention? (before and after ICT)	Quality (before and after ICT)	~ Product performance ~ Innovation ~ Delivery reliability ~ Waste	~ How is the quality of your product? ~ Is there any improvement of the quality of the product after implementation of internet? If yes, in what way? ~ How reliable is the product delivery now? How can it be? ~ How much waste that is produced now as the by product of production process? How can it be?	Qualitative
	Time (before and after ICT)	~ Process time ~ Delivery speed ~ Productivity ~ Labour efficiency	~ Is there any improvement in the time length of production process? If yes, how do you manage to do it? ~ Is there any improvement in the delivery time of your commodities to your customer? If yes, how can it be? ~ How long is the work hour in your firm? Is there an improvement in efficiency? ~ Does the internet give any influence toward improvement in time? If yes, in what way?	Qualitative
	Flexibility (before and after ICT)	~ Product innovation ~ New product	~ Have you ever conducted innovation on your commodities due to changes in trend/fashion?	Qualitative

		<p>introduction</p> <ul style="list-style-type: none"> ~ Volume flexibility 	<ul style="list-style-type: none"> ~ Have you ever introduced new products due to changes in the market? ~ Are you able to easily change the volume of your products? ~ Does the internet give any influence toward improvement in flexibility? If yes, in what way? 	
	Finance (before and after ICT)	<ul style="list-style-type: none"> ~ Cash flow ~ Cost reduction ~ Amount of sales ~ Efficiency 	<ul style="list-style-type: none"> ~ Is there any increase of income, especially after the implementation of internet in your daily business practices? If yes, how can it be? ~ Are you able to reduce the cost of production? If yes, in what way? ~ Is there any increase in the amount of sales? ~ Does the efficiency also increase? 	Qualitative
	Customer Satisfaction (before and after ICT)	<ul style="list-style-type: none"> ~ Integration with customers ~ Delivery reliability ~ Customer's Service 	<ul style="list-style-type: none"> ~ Do you build relationships with your customers? If yes, what kind of relationship do you build? ~ How do you build those relationships? ~ How is the nature of those relationships? ~ What customer's service that you provide with your customers? 	Qualitative
	Human Resource (before and after ICT)	<ul style="list-style-type: none"> ~ Workforce ~ Employee skills ~ Employee relationships ~ Labour efficiency ~ Quality of work life ~ Productivity 	<ul style="list-style-type: none"> ~ How many labours that you employed? ~ How is the skill of your employees? ~ How is the nature of your relationship with them? ~ How is the nature of the work situation within your firm? ~ Is your firm able to achieve the production targets that you have set? ~ Does the internet give any influence toward improvement in human resource? If yes, in what way? 	Qualitative
How is the Absorptive Capacity of SMEs in absorbing ICT?	Acquisition	~ Identification of ICT	<ul style="list-style-type: none"> ~ How familiar are you with the development of internet? ~ What features of internet that you understand? 	Qualitative
	Assimilation	<ul style="list-style-type: none"> ~ Learning ICT ~ Recognition of ICT relevance with 	<ul style="list-style-type: none"> ~ Do you join any training to learn internet applications? ~ Do you find internet useful for improving your 	Qualitative

		business	business? If yes, in what way?	
	Transformation	<ul style="list-style-type: none"> ~ Selection of ICT mode ~ Developing methods of adoption 	<ul style="list-style-type: none"> ~ What features of internet that you usually utilize in daily business practices? ~ How do you adopt and utilize internet applications in your daily business practices? 	Qualitative
	Exploitation	<ul style="list-style-type: none"> ~ Implementation ~ Development ~ Modification/ Revision 	<ul style="list-style-type: none"> ~ To what extent do you implement internet applications on business activities? ~ Have you done any modification or improvement in the applications that you implement on business? ~ Have you done any development or revision on the internet applications that you use to improve the performance? 	Qualitative
For what purpose(s) has ICT been implemented by SMEs?	Access to market	<ul style="list-style-type: none"> ~ Advertisement ~ Marketing ~ Payment 	<ul style="list-style-type: none"> ~ Do you use internet to advertise and market your business and products? ~ Do you utilize internet banking for the payment of your products 	Qualitative
	Access to financial sources	<ul style="list-style-type: none"> ~ Government financial sources ~ International financial sources ~ NGOs 	<ul style="list-style-type: none"> ~ Are you aware of any source for financial aid from the government, NGOs or international organizations? ~ Have you ever searched for those sources through the internet? ~ Have you ever got financial aid through the internet? 	Qualitative
	Idea for innovation	<ul style="list-style-type: none"> ~ Products ~ Production process ~ Managerial knowledge 	<ul style="list-style-type: none"> ~ What type of innovation that you have ever done in producing your commodities? ~ Have you ever searched for many kinds of innovation through the internet? 	Qualitative
	Knowledge building	<ul style="list-style-type: none"> ~ Best practices ~ General know-how ~ Management capabilities 	<ul style="list-style-type: none"> ~ Have you ever found knowledge about practices, tips and tricks, and managerial knowledge related to your business from the internet? 	Qualitative
	Networking	<ul style="list-style-type: none"> ~ Customers ~ Fellow entrepreneurs ~ Experts-professionals 	<ul style="list-style-type: none"> ~ Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business? 	Qualitative

How do human and social capital, networking, and organizational systems and structures influence the Absorptive Capacity of SMEs?	Human and Social Capital	<ul style="list-style-type: none"> ~ Education level ~ Entrepreneurial capital <ul style="list-style-type: none"> o identifying a useful knowledge, o understanding own level of mastery, o effort to increase level of mastery, o willingness to take risks. ~ Behaviour toward knowledge ~ Nature of relationships with partners <ul style="list-style-type: none"> o Trust o Familiarity o Reciprocity 	<ul style="list-style-type: none"> ~ What is your education level? ~ Have you ever known internet during your education years? ~ To what extent do you think internet can influence your business? ~ How much do you invest on improving the utilization level of internet of your business? ~ Do you always follow the latest improvement in computer and internet technologies? ~ How is your level of knowledge in utilizing internet for your business? ~ Do you do anything to improve that level of knowledge? If yes, what are the efforts that you have done? ~ Do you share the knowledge of internet that you have mastered with your employees? ~ Do you share the knowledge of internet that you have mastered with other partners? ~ How is the nature of your relationships with your employees and partners, in terms of trust, familiarity and reciprocity? 	Qualitative
	Networking	<ul style="list-style-type: none"> ~ Among peers ~ With academic institutions ~ With customers ~ With professionals 	<ul style="list-style-type: none"> ~ Do you have a networking with fellow SMEs practitioners, academic institutions, customers, or professionals? ~ How is the nature of the networks? ~ Do those networks give you significant impact on your business? If yes, in what way? 	Qualitative
	Organizational systems and structures	<ul style="list-style-type: none"> ~ Availability of R&D Department ~ Investment on knowledge search ~ Experimenting 	<ul style="list-style-type: none"> ~ Do you have a specific department or section for R&D? ~ How much do you invest for improving the knowledge of your firm? ~ What kind investment that you have done? ~ Do you encourage experimentation of various innovations within your firm? 	Qualitative

Annex 2

Interview Transcripts.

1. Respondent #1

What is your occupation?

I am an employee in Atmajaya University. I work in the Computer Laboratory in Faculty of Social and Political Sciences. In 2005, I was elected by the citizens here to be RT chief. Then in 2008, I was reelected. My term is supposed to end this year. But the election is postponed due to Election of Yogyakarta Mayor in the coming months. Perhaps, the election of new RT chief will be done next year.

Could you tell me a little story about this neighbourhood?

RT 36 is apart of Patehan village. In the past, families of Abdi Dalem (servants of the Yogyakarta Sultanate) lived here. Many are Abdi Dalem for the needs to serve royal family whenever they come to Taman Sari for a bath. But, now Taman Sari is no more used by the royal family. It is just a touristic site. So, the number of Abdi Dalem here has significantly reduced. Some of their descendants have moved out. I, myself, am a descendant of Abdi Dalem. Abdi Dalem was a prestigious occupation because they got to be close with Sultan. It still is, although not like in the past. They can eventually be given a royal title. But not all the time. However, the salary is not so good. That's why most Abdi Dalem have side jobs to increase their earnings. As a tradition, Abdi Dalem has various skills such as making batik, shadow puppets, making and playing gamelan (Javanese traditional musical instrument). In RT 36, there are many descendants of batik makers. They also inherit the skills. Some choose to continue, while others don't. There are now 133 people living here. The households are 43. They have various occupations. Mostly are SME owners. There are also civil servants, private employees, tourist guides, students, retirees, and so on. There are thirty households that have SME as their main source of income. Some produce batik products, like batik shirts, batik paintings and batik souvenirs. Others produce handicrafts products, like shadow puppets, wooden statues, carvings, fishing equipment, snacks, cakes, screen printing products, graphic design products, etc. There are also many small shops. Many were still struggling to thrive. The average income is still low. It is averagely Rp.1 million to Rp.1.5 million or about €83 – €125. One of the main challenges is the location. As you can see, RT 36 lies inside a crowded area. The situation makes it difficult for them to sell their products, since few can even notice the existence of the SMEs. To market their products, most of them depend on bigger firms. Almost all SMEs worked as an out source of larger firms. This, of course, demanded the SMEs to make deals that are most of the time not so beneficial for them. Sometimes the SMEs make deals with tourist guides. Since this neighbourhood lies near Taman Sari Water Castle, tourists are potential buyer of their products. Therefore, the SMEs make deals with tourist guides, so that the guides will bring the tourists to their shops to buy their commodities. However, the guides ask a share of the purchase up to 50%, which is not a good deal for the SMEs, I think. Another challenge is lack of information about anything, for example sources of financial aids. In the past, nobody here even knew that there are aids like these. It inspired me to build internet network here.

How is the story of internet network here?

At first Respondent #4 and I made a blog just for fun. We made it originally to raise fund for Indonesia Independence Day celebration. It was about in mid 2008. Through the blog we sent proposals for donation to this kampung's former residents. There was no response, but then

we became interested to build a more serious promotion of this village through internet. We began by improving the blog. Eventually we thought that if there's internet connection here, it will better advertise this kampung in many aspects. That's when we decided to construct computer networks here. We thought that by constructing a computer and internet network, the people would be "compelled" to learn computer and gain a lot of knowledge. It was a big a challenge, since the people here are financially weak and have little interest on computer and the internet. Not to mention, the negative stigma of internet as sources of pornography, cyber crime, individualism, etc. However, we kept on pushing it because we thought that although it now might seem not important at the moment, but we are confident in the long term it will be more useful.

How was the reaction of the citizens here?

At first only few joined the program. We started constructing the computer network in 2009. Only 6 households were connected. Most of the people were not interested because they didn't see the need for it. Some were interested, but couldn't afford a PC and internet equipment. They said that they needed to save some money first to buy the equipment. However, the number of interested people kept on growing. Now, almost all households have computers and are connected to Kampoeng Cyber network. We also tried to improve their knowledge about computer and internet. We held several times of training programs. Starting in 2008. A lot of the people here join the programs. The trainings are pretty basic, mostly about basic introduction of using computer and the internet. It's because most of the people here are computer illiterate. So, there are still a lot of efforts required to make them more interested on computer and internet. Some of the trainings are held in the campus where I'm working at. We thought it would arouse their interest to learn more about internet.

How was the impact on the SMEs here?

Honestly, only a few that have already used for business. Mostly are still improving relatively slowly. It's because their knowledge to utilize computer and internet is still very poor. That's why we tried to push it by making a web site. Some have utilized it quite well. Like Respondent #4, Respondent #3, Respondent #5 or Respondent #7. Maybe you can start the interviews with them. Or with Respondent #2. He lives in front of my house. But, I don't think his home yet. He works in a mobile shop. He also open a mobile shop himself. It's like a side job. I think he also uses internet for his business. I think Respondent #10 is also quite active in Kampoeng Cyber Facebook account, but I don't think she has applied it for her business. She did join the joint web site. Maybe you can check it out yourself. If you also want to interview the SMEs that haven't use the internet for business, maybe you can interview Respondent #6, Respondent #9 or Respondent #11.

How did you manage to have a web site?

Initially we tried to build it on our own. But it was difficult, because there are many aspects to deal with. First, the design. Then, web programming. Finally getting a domain and host. There are also other things to look after. All of those aspects cost a lot. Respondent #4 and I tried to build a blog-based web site. We had <<http://rt36taman.multiply.com/>>. But it was not a web site. It's a blog. I have a vision for a real web site. I think it may lift up the confidence of this kampung's citizens. Then I met a friend in the internet, who was a resident here, proposing to build a web site with the whole infrastructure. But, he proposed a large a cost. He said it would cost us US\$ 2,000. That is a lot of money for us. Then I met another acquaintance. He lives in Bali. He was also a resident here. He said he could help make a web site much more cheaply. It only costs Rp.500,000. Rp.120,000 for hosting and Rp.380,000 for the domain. He said he would handle the programming. We handled the design. Respondent #4 and I did that. So now, we have done it. It is not so sophisticated yet,

but at least we already have one. Our official web site is <<http://www.rt36kampoengcyber.com/>>. We handle the cost collectively.

For what use do you utilize the web site?

We upload the information of the commodities produced by the firms in RT 36. There are many kinds of products, such as batik products, handicrafts, snacks, plants, and so on. The photos of those goods are uploaded on the web site. If anybody is interested, they can send messages through the web site. We hope that by doing it, the small businesses here will be promoted better. We hope that the SMEs can be more adept to market demands. This kampung is actually a batik painting kampung. It was one of the centers of batik craftsmen. But, it keeps declining. Mostly because the batik artists cannot play with the system. Most painters here depend on a single gallery or touris guides. They get a little profit because of it. It is worsened by the not-so-competitive mentality. Many still think that at least they can eat. There is not so much orientation towards profit. So, at least by having a web site, we can push the advertising so that the products can be better marketed.

Do you manage to pass more information about financial aids?

I think so. Some time ago, we have got Rp. 40 million financial aid from Depnaker Pusat (Ministry of Labour and Transmigration) for business training. We found a business group. It consists of the small firms in RT 36. Disperindag Kota (Municipal Agency of Industry and Trade) has also offered financial assistance of Rp. 50 million, targeted to be given next year. But from now we have started to prepare the requirements necessary to disburse the aid. The aid will be managed together since we already established an organization. We do the management of the aids together, since we have already established the organization. We can also get more than just financial aids. We can build a larger networking. For example, with universities. Some universities have conducted various activities in this village, for example, Gadjah Mada University, Yogyakarta State University and Atmajaya University. The activities such as Community Field Work, computer trainings, English training. I think all of these activities are useful to bring knowledge and insight into the society here. There once was a visit from Acer Indonesia. Their coming here at least suggests that they found Kampoeng Cyber interesting. Who knows in the future they may give material assistance to us. Recently, the Dean of Faculty of Social and Political Sciences, University of Atmajaya also paid us a visit. We had long discussions about possible development of SMEs here and Kampoeng Cyber network. Some SME owners join the discussions at that time. After the discussion, he expressed his interest to bring the story of Kampoeng Cyber to a seminar at Atmajaya. He said the seminar also invited international organizations. I wish it so, because it's a big opportunity for us to promote RT 36.

So, how have the SMEs been doing?

I think, only Respondent #3, the fishing shop owner, who has gained major increase of income. His success relies on the internet. I think he can manage his business quite well. He already has a strong networking. He also is quite famous. His writings about fishing have been used by many media. He often appeared on television shows about the fishing activities. Respondent #8 was also quite successful, but I don't think he is relevant with your research, because he doesn't know computer and internet at all. His son helps him to do the uploading. He is so conventional. He never utilize computer at all. It is Respondent #4, his son, who has used internet for business. I think he is the first to have internet connection here, even before Kampoeng Cyber. In terms of business, however, I think it is still difficult for him to grow because he takes care of everything by himself. He only relies on friendships. Although he has already made quite a fortune, I think he can be better if he has more help in order to divide attention between working on designs and building the market, especially because he also helps his father. Respondent #5 is also similar to Respondent #4. He has no employee.

Everything is done alone. I suggested him to start promoting his business via the internet. It was difficult, because he still has a low knowledge about the internet. I tried to help. Initially I taught him to use facebook. Now he has blog. But it is still difficult for Respondent #5 to split time between internet and working on his orders, because he works alone. Sometimes he is assisted by his wife. As a result he did not have time to manage the blog and facebook.

What are the main challenges for Kampoeng Cyber network?

First of all, I think their level of knowledge. Almost all people here still can't use computer properly. Many don't know computer at all. The quality of equipment here is also poor. Almost all of the computer here are second handed computers. The speed of the internet connection is still not enough. To get a higher speed will definitely cost more. But I think the price is getting cheaper. So, we're planning to upgrade the speed in the near future. We have made an agreement with TelkomSpeedy (an internet provider). It was facilitated by the Municipality. Hopefully, we can double the speed with the same speed before September this year.

2. Respondent #2

What is your occupation?

I am an employee in a mobile phone service shop. I also open a shop here at my house. I sell credits for mobile phones, as well as accessories for mobile phones. Sometimes, I also repair mobile phones. I sell mobile credits to add my monthly income. It is not very difficult to do, especially after there is internet in this kampong. Mostly, I sell mobile phone credits among my friends. If they want to top up their credits, they send me messages through mobile phones or emails. I graduated from High School some years ago. I didn't feel like going for college. Besides, my parents didn't have the money for it. I was unemployed for many years. I didn't know much to do. I tried to do some batik paintings like my brothers, but it seemed I don't have the talent for it. I guess I am different. Then, a friend asked me to join a mobile phone shop. He said the shop could use extra hand. I agreed to join him. It doesn't pay much, but at least I have a job. I got some training to repair mobile phones. Then some of my friends and neighbours asked to fix their phones. They said that I should start a shop myself. I got interested and finally started a little shop of my own. Just selling credits and a little phone repair. It has been like three years now.

How was it so far?

It has been good so far. I still have not much time for it though. I spend most of my times working at the shop. I only spend time taking care of my business during my day off. Sometimes my sister looks after the shop when I am still not home. But, lately she starts working on batik paintings. My brother, Respondent #7, has restarted his business. He asked our other brothers and sister to work with him. He asked me too, but I don't have the talent for it. It made my shop is mostly closed when I haven't come home yet, because my sister has not enough time to look after it anymore. So, it's open mostly during my day offs. I work 5 days as an employee. I am off on Saturdays and Sundays. That's usually I open my shop for phone reparation. For selling credits, I can do it everyday.

Are you connected with Kampoeng Cyber network?

Yes, I am.

What is your purpose to be connected with the network?

I want to know much more about the internet. I think now the technology is growing so fast. I need to catch up on it. Otherwise, I will be left behind. So, I decided to have myself connected. I also want to look for job vacancies. Many job vacancies are advertised through the internet. So I try to look for some. I also want to communicate better with my friends and families.

Through the internet, I can communicate with old friends that you have never seen for a long time. You can also communicate with many people in a distant. I also think that internet can provide entertainment. I can watch movies, hear songs and play games.

Do you use internet to advertise and market your business and products?

Not really. I sell the credits mostly to my friends and acquaintances, although sometimes they ask me to top up their credits through facebook. But I don't really announce on my account that I sell credits.

Do you utilize internet banking for the payment of your credits?

No. Usually my customers pay in cash or transfer through the bank.

Have you ever searched for any financial aid through the internet?

No. I don't. I never even look for any financial loan. I don't think I really need it. The situation is still alright for me now.

Have you ever searched for many kinds of innovation through the internet?

Yes, I do. I always try to search for tips and tricks in repairing mobile phones. There is always new knowledge about it. I need to always stay in touch in new skills. That way, I can do reparation in a better way. I can find several web sites giving free consultation about mobile phone reparation. It is really helpful to give me knowledge and improve my skills. I still don't know much, but I think I have made some progress.

Have you ever found knowledge about managerial knowledge related to your business from the internet?

No, I haven't. So far, I just look for information about technical aspect of phone reparation.

Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business?

Yes. Mostly my customers are my friends. So through my friendship with them I can sell my mobile credits. In the past, it is difficult to increase income because of the competition. You can find mobile phone shop everywhere. It is not very easy to get a loyal customer. Now, I can better market my credits through my friends. Whenever they need to top up their credit, they just send message to me and I can quickly respond. I also befriend fellow partners or fellow mobile shop owners. Sometimes I can ask fellow mobile shop owner through Facebook about problem that I find in fixing mobile phones. Also some mobile phone consultants, to get new information about mobile phone reparations.

What features of internet that you understand?

I have an e-mail, Facebook account, Friendster account and Yahoo messenger. I can also operate MS-office and a little graphic design and photo editing software, like Corel. I started to learn it. The other day, a friend asked to print a photo from her mobile phone. She wanted to have some effects on the photos. So, I learn to do it with Corel. Since then, I am interested to learn more about Corel.

Do you join any training to learn internet applications?

Yes. I joined two trainings here in RT 36. One was about basic introduction to computer and the internet. The other was about building blogs.

Do you find internet useful for improving your business?

I think so, because I can get more friends through the internet. I can sell more mobile credit through my friends. I can also get more knowledge about fixing mobile phones and the latest update about mobile technology.

What features of internet that you usually utilize in daily business practices?

There is a web site that I use to top up credits. Through that web site I can top up any mobile phone provider that you want. But to be able to use it, you need to register first. You also need to give some deposit. The web site is helpful because you can trace back all transactions that you have done. Another facility, I think, will be Facebook and e-mail. It's because I usually sell credits to my friends and relatives. They can send me messages through those facilities, then I top up their phones.

To what extent do you implement internet applications on business activities?

Basically there are two activities for which I use internet. Sending mobile credits and looking for information about mobile phone repair. So far those are the activities that I conduct with the help of internet.

Have you done any modification or improvement in the applications that you implement on business?

Not yet. I only use the top up web site, e-mail and social networking. I can't do much modification on it.

You said that your education level is High School, didn't you?

Yes, I did.

Have you ever known internet during your education years?

No. I only learned about computer and the internet recently. Since there is Kampoeng Cyber network.

To what extent do you think internet can influence your business?

I think it can provide many potential customers. By having more friends, hopefully they will buy mobile credits from me. That way I can get more income. Also, I can increase my skill. It will enable me to better repair mobile phones.

How much do you invest on improving the utilization level of internet of your business?

I bought the computer for about Rp.1.500.000. It was a used a computer. I also bought a printer for about Rp.600,000. It can print on photo papers. That way I can print photographs from mobile phones. The cost for building networks, cables and hub was about Rp.250,000. So the total was about. Rp. 2.3 million.

Do you always follow the latest improvement in computer and internet technologies?

Not so much about computer. I am more interested in mobile phone technologies, because I need it for my shop.

How is your level of knowledge in utilizing internet for your business?

As I said, it is still very low. I still don't know how to make a blog. That's why I attended the trainings. There was a training at Atmajaya, a few days ago. But I couldn't make it. I had to go to work. My boss wanted me for something. I am still learning to increase my knowledge. Sometimes I ask Respondent #4 or Respondent #1.

Do you share the knowledge of internet that you have mastered with your partners?

Yes I do. I often discuss with my friends and fellow shop owners. I also often discuss with my neighbours here. Sometimes we have a chat in Cakruk (the neighbourhood's public room). We discuss about anything. We also share about the difficulties that we sometimes face in the internet.

Do you have a networking with fellow SMEs practitioners, academic institutions, customers, or professionals?

Yes I do. I always communicate periodically with my friends fellow mobile shop owners. I also have a correspondency with a mobile phone expert. I ask for some advices about repairing mobile phones. But I don't have links with academic institutions.

How is the nature of your relationships with your partners?

I think we have a good relationship. Also with fellow mobile shop owners, particularly with my friends. We share some skills, although I'm sure we don't share everything. I keep many things on my own. Because we have competition. For example, I don't share about the price that I give to my customers. It doesn't differ much actually, but I think it might give some influence. People will always look for the cheapest price.

Do you have an e-mail specifically for business?

No, I don't. I still mix the use for personal and business matters. I receive request for credits through my personal e-mail as well.

Do you have a web site?

No, I don't.

Is there any improvement of the quality of the product after implementation of internet?

I don't think so. Because I sell mobile credits. The only quality about it is the price. The price depends on the provider. I don't know if the internet has anything to do with it.

How reliable is the product delivery now?

I think there is an improvement now in delivering mobile credits. In the past if I wanted to send mobile credit, I sent them via mobile phone. Sometimes the credit couldn't be delivered because the telephone network was out of order. Through the internet, sending credits is easier since internet connection rarely drops. I can also check to my provider via the internet if the credits that I send have reached my customers. There is a log containing the record of credit sending. We can check it to know the status of the credit. We can therefore trace to make sure the credit is delivered.

Is there any production waste?

No, I don't think so. My business is more like a service. I don't produce any goods.

Is there any improvement in time aspects?

I don't think so. Sending mobile credits can be done right away, even in the past. You can send mobile credit via mobile phone in less than 10 seconds. The only possible problem is about reliability. So, either you get it right away or not at all.

How long is your work hour?

In looking after my shop, it is not certain, because I look after it after I come from my work. Sometimes until 10 pm. Mostly I do it in my day off.

Have you ever conducted innovation on your commodities due to changes in trend/fashion?

I don't think so, because I don't sell commodities. I do reparation services. Maybe it is more like having new skills. I did get some new insights about techniques of fixing mobile phones.

Does the internet give any influence toward improvement in flexibility?

Yes. I can know new things. For example, I can understand photo editing software. That way I can improve the resolution of photos taken with mobile phones. It helps me to fulfil the request of printing photographs. I am also able to find information about fixing errors that I haven't known before. That way I can solve various mobile phone problems.

Is there any increase of income, especially after the implementation of internet in your daily business practices?

Yes. In the past I can get maximum Rp.700,000 a month from this shop. Now I get about Rp.1-1.25 million a month.

Are you able to reduce the cost of production?

I don't think there is a reduction in cost. If there is any reduction, it is because the price of the credits from the provider reduce. Not because I use the internet.

Is there any increase in the amount of sales?

Yes. I have more income, because the number of people asking credits from me also increases.

Does the efficiency also increase?

I think it also increases, because now I make more money with averagely the same effort. I can send more credits now while still having the same size of shop.

Do you build relationships with your customers? If yes, what kind of relationship do you build?

Yes, I do. It is more a relationship of friends. I think I get more requests for credits from my friends although some people also come to the shop to buy some credits. But because my shop is closed during the day, most requests come from my friends asking for credits through sending messages by e-mail, facebook or phone.

What customer's service that you provide with your customers?

Not so much, I think. Perhaps money-return-service, if my customers didn't get the credit due to some network error. I also take orders sent through the internet or requests from mobile phones.

How many labours that you employed?

I don't have any employees. I just employ myself. Sometimes my sister helps me, but I don't think it is employment. Besides, she is now more on painting batik.

3. Respondent #3

What is your occupation?

I have a shop producing fishing equipment such as fishing rod, reel, lead, baite, etc. It is called "Omah Pancing". I also sell fishing equipment. But sometimes my customers want more than just fabricated equipment. For example, sometime my customers want fishing rods with certain specifications. Sometimes, those kinds of fishing rod should be made manually. I make fishing equipment based on my own experience when I was still working in the shop "Samudera". It is a fishing equipment shop as well. It was quite big. But then I decided to start a shop of my own. I wanted to start my own business. It was quite difficult in the beginning. I had difficulties to market my products, because the location of my shop is inside a crowded area. Having a shop on the roadside needs an investment of Rp 10 million a year for renting a store, and Rp.25-30 million to buy goods. So the total is Rp. 40 million to own a store. By the time my income was still low. My shop was still small. Only one window. That's why my business couldn't grow. My monthly income at that time was roughly about Rp. 5 – 6 million. It was not enough to open a new store.

Are you connected with Kampong Cyber network?

Yes, I am. I am one of the first persons to join the network.

What is your purpose to join the network?

My main motivation is to market my product and build networking with my customers. Being in a crowded area like this is not so beneficial for a business. Not so many people come here, let alone fishing enthusiasts. We are talking about the ones that really want to spend considerable amount of money to buy fishing equipment. Some people are just fishing to kill time. A real enthusiast will search for the best products, from fishing pole to bait. These kinds of people are potential customers, because there are detailed specifications for those things. So, I need to have a network with those enthusiasts. I think internet may provide many

opportunities for it. It enables me to communicate with many people from many places. If I can have a good network with many fishing enthusiasts, I will have a better chance to market my products.

Do you search for any type of innovation?

Yes. Sometimes I also get information about new products or new technologies in fishing equipment. New brands or new designs of fishing leads or baits. It really helps to keep me up to date with the latest inventions.

Do you get information about innovation in managerial knowledge?

Not so much, I think. So far, I think I have done well with my business management. I can get more than enough. I am able to give my employees' salaries. I can also fulfil the request of my customers. So, I think the condition is enough now.

Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business?

Yes, I do. It is one of main purposes. I want to build a good relationship with my customers, so that I can get valuable input concerning the products that I make or sell. I built a fishing community. The name is JFC (Jogja Fishing Community). I did this because I think the community is closely related to my business. This community enables me to have a close relationship with my customers. I can easily get useful inputs related to fishing products. It will help me improve the quality of my products. I founded JFC around the time of Kampoeng Cyber network construction. The internet makes it easy to communicate with JFC members. Consequently, with more intense communications, JFC becomes more cohesive. I also build relationship with fellow fishing shop owners and fishing experts as well, because from them I can get important information about fishing goods. All of these are valuable for my business. I also build relationships with mass media. Particularly with a fishing show. Trans7 (an Indonesian TV station) has a fishing show, called "Mancing Mania". They came and make a story of my shop. All of these are very useful for me. It helps advertise my business. I got to be on TV too. It is fun, don't you think? Internet helps in it because my blog can be accessed by anybody in the world.

What features of internet that you understand?

I know e-mail, youtube, blogs, facebook, sometimes look for latest news. You don't newspaper nowadays. You can find news more quickly through the internet.

Do you join any training to learn internet applications?

Yes, I do. There are several trainings held here in RT 36. Sometimes, Respondent #1 takes us to a training outside. The other day we attend a workshop in Atmajaya. He really gives a lot of support for the people here. I admire him for that.

Do you find the relevance of internet for your business?

Yes, I do. It helps to build relationships and networks. It is not just a local network. It can reach a national level, even international level. So, if we can utilize it in an optimum manner, it will give a maximum benefit. Of course you need to be careful with all the negative impact. Everything in this world has positive and negative impact. We need to maximize the positive and minimize the negative.

What features of internet that you usually utilize in daily business practices?

I mostly use facebook and blogs. I find it the most effective to build networking. In my opinion, the key factor is in networking with your customers. That is the most difficult part. It is not easy to build relation with your customers. It takes time and patience, and you also need to build trust with them. You also must be able to promote your products and show why they are better than any other products. That is how internet helps my business to grow. I

build a blog and use social network web site, like Facebook, to promote my shop. I upload pictures of my products along with their prices. That way, my customers can easily spot the products they want to buy. If there is something wrong about the product, they can also easily tell me about it and I can improve my products.

To what extent do you implement internet applications on business activities?

Well, I think I use it quite intensely. Everyday I always update the information on my blog. I give information about new things in my shop. I learn to do it in a training. Sometimes I ask Respondent #4's helps. Mostly, I learn new things myself.

Have you done any modification or improvement in the applications that you implement on business?

Yes, I do. I make considerable revisions in my blogs. Initially it was very simple, but as I learn more I managed to improve the facilities on it. Sometimes I upload photos of my products. Sometimes I upload videos. The other day a TV station shot my activities during sea-fishing. I uploaded the video. I hope it can advertise my business. And I think it does. The blog helps to promote my business and now I have clients even more than ever before. I now have at least 2.000 loyal customers from all around Indonesia. They frequently communicate with me about the products they want to buy and how they intend the products should be. If you see the Facebook account of Omah Pancing, you will see that it has more than 4,000 friends. Of course not all of them are fishing enthusiasts, but I won't be exaggerating if 50% of them are.

What is your education level?

I am a High School graduate.

Have you ever known internet during your education years?

No. I learn it these past few years

To what extent do you think internet can influence your business?

I think it gives me a lot of influence. I get a big increase in number of customers, income, not to mention all the coverage that I have been in. It helps me to advertise the shop. It also helps advertise the whole kampung, I think. In the past, nobody knows about RT 36. Now, it is famous. It invites people to come here just to see the situation in this kampung. I think it gives big help for the firms here, mine included.

How much do you invest on improving the utilization level of internet of your business?

I think it is about Rp. 12 million. I bought a PC, along with a printer and scanner. All of them cost about Rp. 6 – 7 million. I did some upgrades as well to improve the speed of my computer. The networking cables and gadgets cost about Rp. 300,000. Then, I bought a digital camera. That way I can take photographs of my products and upload them on the blog or facebook account. There also other small gadgets.

Do you always follow the latest improvement in computer and internet technologies?

Yes, I do. Sometimes I look for new spareparts, such as hard drives, VGA card, RAM. Those devices get cheaper and better. There are also various brands now. We can choose many brands other than the expensive ones.

How is your level of knowledge in utilizing internet for your business?

There is still much to improve. I still don't know how to make a web site. We do have a collective web site here, but having a personal web site will be nice. I also think that my blog can still use some improvement. I am still learning to utilize blog even more.

Do you do anything to improve that level of knowledge?

Yes. As I have told you, I join trainings. I buy some books about it. I also ask my friends who know more about internet and computer.

Do you share the knowledge of internet that you have mastered with your employees or other partners?

Well, I don't really share it with my employees. They don't need really need it. I do share knowledge about fishing equipment. But I share it with my partners, especially the citizens of RT 36. Sometimes we discussed about how to use this and that. I tell them my experience, they share theirs. That's what I like about this kampung. People are very open. We can talk almost about anything.

How is the nature of your relationships with your employees and partners, in terms of trust, familiarity and reciprocity?

I think it has been well. My employees and I can work well. I guess you can't work well with anybody if you don't have a good relationship with him. We have trust inside the firm. I also try to build trust with my partners and customers. JFC is non-profit in nature. Any fishing enthusiast can join it. That is how JFC can grow. Now the member is about 2,000 people. In my opinion, building a community here is the key point. It was difficult in the beginning, because we need to build trust among the members. Through JEC, everyone can share their experiences about fishing. We share tips and tricks about fishing. Sometimes we talk about the latest products on fishing equipment. Lovely. I can get to know with various people from anywhere. Often someone came into my store from afar. Some came from outside of Java. They came just want to make sure that my store is for real. It is understandable because there are often many scams on the internet. Some also want to learn fishing. Sometimes we hold a fishing event together. Just simply hang out and have fun. It makes the relationship more compact in JFC.

Do you also have a networking with fellow SMEs practitioners, academic institutions or professionals?

I do have with fellow fishing shop owners as well as fishing experts. I can get useful information about fishing equipment and latest technology. But I don't have a specific relationship with academic institutions. Respondent #1 did bring some universities to this kampung. We also have some students coming here occasionally.

Do those networks give you significant impact on your business?

I think so. With the latest information, I can stay up to date with with the latest technology. That way, I won't be left behind from other competitors. I also get to know important opportunities for better improvement of my business. The community also provides many inputs in my blog. Sometimes for example, the layout of my blog is criticized by a member who happened to visit the blog. He sent comments and advises about how to make the appearance on my blog more interesting. It's quite helpful because I've mostly learnt to make this blog myself. Such positive feedbacks further add to my knowledge.

Do you have a specific department or section for R&D?

No, I don't. I only have two employees.

How much do you invest for improving the knowledge of your firm?

I am not quite sure. I invest on purchasing the internet equipment. Sometimes I also buy books and software. Probably, about Rp.100,000 a month.

Do you encourage experimentation of various innovations within your firm?

I think starting to engage internet for my business is a kind of experimentation. I also tried some tips and tricks that I got from fellow fishing handicrafters. I did it to improve the technical aspects of my business.

Does your firm have a corporate e-mail?

Yes. I have an e-mail mainly used for business. It goes with the facebook account as well. I also have a blog specifically for Omah Pancing.

Do you have a LAN or intranet within your workplace?

No, I don't. I don't need it. My shop is small. But all of the people in the kampung are connected to Respondent #4's computer through LAN.

Does your firm have a corporate web site?

No. I still plan to have one. We only use Kampoeng Cyber web site.

Is there any improvement of the quality of the product after implementation of internet?

I think so. I think my customers are satisfied with my products' quality so far. As I said I got my experience to make fishing equipment from experience and my times in Samudera. Since JFC existed, I got a lot of inputs from fellow fishing enthusiasts, especially since I had blogs. They give many comments about the products they bought from me. For example the leads are too heavy, or the leads are not big enough. Some said that the fishing rod was not too flexible or the fishing rope broke easily. Others advised to make fishing rods made of some bamboo material. The bamboo is taken from the Dieng area. Sometimes there is also a request made fishing pole is given a particular design. The design is sometimes strange, but what could I do. People say that the consumer is king. So I try to search some interesting design. Sometimes I ask my friends, but most of the time I search for it by myself through the internet. I can get various design. Then I put it on the fishing pole.

How about delivery reliability now?

I don't think there is a change about it. I send my products through postal services. I think it all depends on their performance. There is nothing much I can do about it.

Is there any change in production waste?

Not so much. We still go on the way it is used to be.

Is there any improvement in the time aspects of the whole production process?

So far, I don't see significant improvement. We still work as in the past. we work about seven hours a day, and five days a week. As for me, sometimes I work overnight. Some orders demand to make hand made fishing rods. It can take me a week to work on such personal item. I work on it on my own. I don't give it to my employees, because it requires high precision. After finishing it, I send it through postal services. It's up to them to deliver it on time. Not so much I can do.

Have you ever conducted innovation on your commodities due to changes in trend/fashion?

Yes. I often look for information on the Internet, for example on fishing equipment brands that is a trend in the market. Most of the time, fishing equipment is not advertised on TV. I usually get such information from fishing communities. In addition, fishing equipment has many variants. Each has advantages and disadvantages. Such a lot of information I got from the internet. Also sometimes there are new forms of fish bait. It depends on the type of fishing. Sea fishing is different with freshwater fishing or rock climbing fishing. Such information is usually obtained from fishing experience."

Have you ever introduced new products due to changes in the market?

Yes. Sometimes there are new types of bait. I need to also introduce it.

Are you able to easily change the volume of your products?

So far there has been no fluctuation in product volume. We are still growing in products. More customers are joining my community. I think it really helps to better improve the sales.

Is there any increase of income, especially after the implementation of internet in your daily business practices?

Yes. Now I can reach about Rp.40.000.000 (about €3.300) per month.

How can it be?

I think it relates to the fact that my fishing community has grown large. I have a lot of people subscribing to me for information in fishing products. They ask for information about particular equipment and I recommend them some products. If they need some assistance about it, I am happy to help them. That way they always return to me for further help.

Are you able to reduce the cost of production? If yes, in what way?

I don't think so. The cost is still as how it used to be.

Is there any increase in the amount of sales?

Of course. The number of customers increases. Therefore, sales also increase.

Does the efficiency also increase?

I think no significant improvement has taken place about it. The situation is still as in the past.

What customer's service that you provide with your customers?

I take online orders from internet. If there is dissatisfaction about the product, they can return it. I also hold some events in the community. Sometimes I hold fishing competitions. Anybody can join. The point is not to win the competition. It is just a way so that everybody can get to know each other and learn more about fishing. Sometimes I also hold courses and short trainings about fishing. I give invitation through my blog for anybody who wants to know more about fishing. Sometimes I do it for free. I love to do it because I really love fishing."

How many employees do you have?

I have two employees. They work on make fishing leads and baits. Sometimes they also help make fishing rods. But most of the time, I work on it myself, because if someone asks me to make a fishing rod, he wants to have a certain quality on the rod. Otherwise, they can buy the manufactured ones. They only need to say which brand they want.

How is the skill of your employees?

Nothing much has improved. I did try to give them some skills. Sometimes I share knowledge about making a fishing rod, but not everything. There are also things that I keep for myself. So far not much has changed. They still work as usual.

How is the nature of the work situation within your firm?

Every day they start at 10 am. Go home at 5 pm. They work five days a week. There is a half-hour lunch break. The salary is Rp. 500 000 (about €42) a month. That is the amount that I can give for now. They have no complaint so far. I think we have a good relationship. Every religious holiday, I give some allowance. I think they work diligently. So far we still can fulfil all of the job targets.

4. Respondent #4

What is your occupation?

I have a small business working on graphic design. The name of my firm is "KOKO Indie GraphicDesignIndustry". I make graphic designs, such as product design, T-shirts design, stickers, mugs, banners, brochures. I then sell the idea for the design publishers. You can say it is a home based industry, because most of the time I stay home. I have a bachelor degree. I used to study in Institut Seni Indonesia (Indonesia Institute of Art) in Yogyakarta from 1996, majoring in Graphic Design. I finished my study in 2001. After that I tried to look for jobs. It

was tough. I spent the first two years after graduation just being unemployed. I sent job application everywhere, but it seemed nobody wanted me. Then, in 2003 a friend asked me to help him work on his project. I came along. I thought at least I did something. Then, he recommended me to his boss. I was accepted to work. I work for about two years. Then the company went bankrupt. I got unemployed again. I tried to look for jobs again, but there wasn't much luck. Along the time, I help some friends in their project. It is more of free lance projects. I think I got many experience during the time. It eventually gave me idea to start a business of my own. I decided to start a graphic design business, by giving ideas of design. I thought I can make use my friends to sell my ideas. I thought it would not be so tiring. I don't really have to invest much money to start. All I have to do was just sit and draw. Then, I learnt how to design using computer software. I did learn to do it during college, but no so intensely. So I had forgotten much. I started in early 2007. By the time, I mostly received orders from the friends with whom I work before. Then I got more clients. It seemed that my friends were satisfied with my work and told their colleagues about me. In 2008, I decided to give a name for this business. I thought it might give some identity on it. And, I think so far it is running well. I still have some time to do other things. Sometime, I help my father arrange a little bit of his business. But lately I got more job orders. I have been quite busy. Also, I am arranging for my marriage. I plan to get married in November this year. You should come. I will send you an invitation. So lately I have been withdrawing from managing his business. Beside, my father said it is enough for him. He also told me to focus for my business and the wedding things. It can be quite occupying.

So you have known computer and internet for quite some time.

Yes, I have. I have long been familiar with computers. I started to know computers and the internet during college. We certainly need to know computer, because many assignments required that knowledge. Mostly, I learnt by myself, but I also asked my friends quite frequently about computer. Then I decided to have an internet connection in my house. Before Kampoeng Cyber network, I already have my own internet connection. It was still quite expensive at the time. If I am not mistaken, it was about Rp. 300,000 a month. Now it is only Rp. 40,000 because we split the cost with fellow citizens here. The speed is moderate. But lately it's getting slower. Sometimes it takes a lot of time just to open a single web site, especially around dinner time when everybody is at home and online. It was because of the bandwidth. It was 1 MB. With the number of connection now, it had become too small. We have tried to increase the bandwidth. Some people didn't agree though, because increasing bandwidth means increasing the cost. So the issue was stagnant for some time. Then, the municipality decided to facilitate a meeting between us and Telkom Speedy, the internet provider. It resulted in them agreeing to increase the bandwidth up to 2 MB without increasing the cost. It appears that the municipality has a program to provide not-so-expensive internet connections for schools in Yogyakarta but with considerably quick speed. So, now I think the connection speed is nice.

What was your purpose of having the internet connection?

Initially, my reason for having internet connection is to communicate with my friends, looking for ideas for my business and also for entertainment. I feel that the internet was also very helpful to market the results of my work. As I have said, I started with friends, and then with their friends and other acquaintances. I uploaded my designs on facebook or on my blog. The internet helps me promote my business. I often get inspiration from a variety of graphic designs that I met on the internet. I can also get graphic design software. In addition, I can get knowledge how to use the software, for example, from the Internet or just ask my colleagues who know better. It helps me to better be able to use the software.

Have you ever got financial aid through the internet or from anywhere else?

No. I think I still can manage to work on the current condition. I did hear that there were some financial aids provided by the government, but the requirements are quite complicated. We need to register to some places. I don't have much time for it. So far I can still work on my business well.

Did you use the internet to find ideas for innovation?

Yes. As I have said before, I often get inspiration just by searching designs about anything through the internet. I also got important knowledge about using design software. I got sometimes by searching the internet. Sometimes, I know it by asking my friends.

Any innovation in managerial knowledge?

Not so much, I think. I just work on my own. I think I don't really need a complex management.

But did you manage to build your knowledge?

Yes, I think so. I often find some tricks to do certain design. I used to know only a few design programmes like Corel or Photoshop. Now I can use Cyberlink. It is an editing programme. I also can manipulate photographs. It is useful for making graphic designs.

You also mentioned about networking.

Yes. I started my business by working with my existing friends. But, I thought it wasn't enough. I need to start a business of my own network. So, I need to find as much customers as possible. That way I can market ideas further. Internet is a useful tool for it, especially with social networking web sites. It is so easy now to get in touch with many people all around the world. You can have relationship with anybody. Even with big companies. Recently, Acer Indonesia came to this kampung. They were just like sight-seeing. I thought they wanted to give a laptop for free or something. But, at least they showed some interest. Many universities have also come here doing various activities. Sometimes we engage in academic discussions. The universities invite us to such activities. Mostly, Respondent #1 and I attend the discussions.

Do you have a networking with experts or academic institutions yourself?

Not individually. It is more like a collective. Respondent #1 brought some of them here. He is an employee in Atmajaya. Then other universities were interested. Some mass media are also interested. Newspapers, magazines, TV stations. They came and made stories about us. I think those stories help us to be connected with many other partners.

How familiar are you with computer and the internet?

I can use several programmes. As I said, I know some graphic design programmes. I know some internet facilities such as internet browsers, e-mail, yahoo messenger, web search engines, blogs, web sites for social networking site, recently we also worked on a web site for Kampoeng Cyber. I often use the features and facilities, as they relate at all with my business. I often work at home and communicate with my friends and customers via the Internet. Sometimes, I look for ideas for the design or looking for design software. Also, I am the administrator of the Kampoeng Cyber network.

What exactly do you do as the network administrator?

Firstly, my computer is the server of the whole network. All computers here are connected to mine through a Local Area Network. So most of the week, my computer is turned on 24 hours a day. Once a week I turn off the computer during the night to keep the computer from breakdown. Usually on Wednesday evenings. Most of the time, I also help the citizens to solve their computer problems. Respondent #1 also helps them. I also collect the collective payments for the internet. If there is any connection problem, usually I am the one to contact the Internet provider. Respondent #1 also helps to do it if I don't have time for it. Sometimes,

I also teach the citizens here how to make and utilize facilities like facebook or blogs. Many of them still have very little knowledge about those facilities. My father is one of them. But it seems that he is not interested at all. Sometimes, it is more difficult to talk to your own father.

Do you join any other training to learn internet applications?

Not so much. Mostly I learn by myself or by asking my friends.

Do you find internet useful for improving your business?

Yes. It helps to expand my scope. I have many customers now beyond my existing friends. I can also get new knowledge and insight about designs. I can also save considerable time in my business. I can communicate without having to meet face to face.

Have you done any modification, improvement, development or revision in the applications that you implement on business?

Yes, I have. I regularly upload new photos of my design. Sometimes I modify the layout to make it more attractive. I also put on facilities to enable the visitors to comment or give any input concerning my design.

What features of internet that you usually utilize in daily business practices?

I use e-mail, social networkin web sites like facebook or twitter, blogs. I use it to market my products. I have started to build a website. We did it with Respondent #1. We worked on the design. The programming is done by a friend of Respondent #1 in Bali. It really helped a lot, because we can reduce a lot of cost. We used to have an offer to build a web site, but he said it costed \$2,000. We couldn't afford it. With this friend of Respondent #1 it only costed Rp.500,000 (about \$56).

So, do you and Respondent #1 design the web site?

Yes. Respondent #1 gave the ideas and I design the layout of the web site. I use various programmes. We try to accommodate the needs of the firms here to advertise their business. We provide some facilities on the web site that enables people to see the commodities of RT 36.

Did you say that you have known internet during college?

Yes. I have used computer and internet for my study, for example to do assignment and bachelor thesis.

And you said the internet can influence your business?

Yes. I did.

How much do you invest on improving the utilization level of internet of your business?

I don't really remember. I have bought several gadgets along with the PC, like printer, scanner, hub, modem, sometimes I upgrade the specifications. I think it is roughly Rp. 10 million (about €840).

Do you always follow the latest improvement in computer and internet technologies?

Yes, I do. I do it to upgrade my PC. For example, there is a cheaper and faster RAM or hard drives. We need to always look for information like that. You can get a good gadget for cheaper price.

How is your level of knowledge in utilizing internet for your business?

I think so far I have done moderately well for my business. But I still try to enhance my knowledge. I keep learning by myself. Sometimes I look for books about internet and graphic design software. I always maintain relationship with my friends. Sometimes I go to seminars and workshops. I also subscribe to internet newsletter and monthly magazines. It helps to give new insight concerning ICT.

Do you share the knowledge of internet that you have mastered with your partners?

Yes, I do, especially here in the Kampung. As I said, sometimes I teach the people here to use their computer facilities. I also share it with my friends, because I ask them about things about some software. In return, I tell them what I know about computer technologies. It has been a mutual relationship. I think that is important, because nobody will help you if you don't help them in return, right? You should also trust your partners that they want to help you. I think any relationship should have a positive aura. Otherwise, it will only be based on suspicion.

Do you have an e-mail specifically used for business?

Yes, I do. I also have a separate facebook accounts for personal and business matters.

Do you have any employees?

No, I don't. I just work on my own

So, you don't have any specific R&D department, do you?

No, I don't.

Do you have a corporate web site?

No, I don't. I only have a blog, but I haven't updated my own blog for a long time. I have even forgotten the name. I don't think you can call it a corporate web site. The only web site is the collective Kampoeng Cyber web site. I also upload my works there. It also helps to promote and advertise my business.

How do you thing the quality of your product especially after you had internet connection?

I think I have had some improvement. I get many varieties now in my design. Also, especially after I can master some software, I can add more details and colouring on my design. I can also do 3D designs now.

How about reliability in the product delivery now?

I can say the Internet helps a lot in this manner. Before I had an internet connection, I sent my work by mail. Sometimes it arrived after a few days. Sometimes it didn't arrive at all. Once, a customer contacted me complaining why his order had not been completed. I said I had already sent it. Probably, there were some problems with the post office. So, I had to send it again. Sometimes, the customers complained about the design. They didn't feel right about the design or something like that. So they sent it back by mail or come directly to my shop. I worked on it and sent it again by mail. All of it could take days. Since the internet exists, I do it via e-mail. It arrives directly to my customers. They can also send their comments right away. I can also directly repair that needs to be repaired. Then I send it again. All can take place within a short time.

Do you have a waste in production?

I don't think so, because I work with digital software. Maybe in the past, because I used to work by drawing on papers. Sometimes, I can use many sheets of paper before I got a final design. Now, everything is done digitally. I think it is more environmentally friendly.

What do you think the time aspect of the production process?

I think many improvements have taken place. As I said, many activities have been conducted in shorter time due to communication via e-mail. Also, with the software I can work on my design faster. Manual drawing can take days. It got worse if you made mistakes. With software, I can just undo the mistake or use the earlier version. It helps in finishing the designs. After I finish I can send it right away to my customers through e-mail. If there is any complaint they can send it back again. Everything can be done a lot faster.

How long is your work hour? Is there an improvement in efficiency?

I don't have regular work hour. Sometimes, I work on my design for several hours. Sometimes, I spend times overnight. It really depends on the job orders. Sometimes, I don't have the mood for work. I take a holiday and go fishing with Respondent #3. So, I guess I still need to improve my efficiency.

Have you ever conducted innovation on your commodities due to changes in trend/fashion?

Yes. I always search for the latest trend in design. When I was in college, Japan is a major trend in design in Indonesia. You can see many Japanese comic books dominated book stores. It influenced the design as well. But now Korean designs are catching up. You need to stay update on this kinds of thing so that your product is more interesting.

Have you ever introduced new products due to changes in the market?

I think so. I started to work on papers. Now, I also make products design. Recently, a friend told me that she wanted to start writing novels. She said she had finished her first novel and wanted me to design the cover. At first, I hesitated to take the order. I had never done it before. Also, the novel was rather difficult to understand. It has a complicated story. I don't really like reading novels. I am a comic fan. Then I asked her to explain the content of her novel what is it really about. From her story, I try to imagine the picture that can more or less explain the story. It is a bit difficult because it must be able to describe the entire novel in one view. Then I tried looking on the internet graphic designs that roughly correspond to the novel's story. I found some examples. I took it and develop the design into my own. I gave it to her and she liked it.

Is there any increase of income, especially after the implementation of internet?

Yes. I think I am able to increase my income. When I started this business, I think I only made about Rp. 1.5 million month. Now, I can make Rp. 2.5 – 3 million a month.

Are you able to reduce the cost of production?

Not so much I think. In the past, I did use some papers and pencils. It was not so expensive. Probably, in terms of delivery cost, but it was not so costly as well. The main problem is the reliability. Perhaps, there is also some reduction in communication cost. In the past, I need to call them through phones. Now, I can just communicate with e-mail although sometimes we also need to clarify something through phones for better clarification.

Is there any increase in the amount of sales?

Yes. In the past, I only got maximum four or five job orders. Now I can get up to 15 orders. Many are small orders, such as stickers. It can be finished in a day or two.

Do you build relationships with your customers?

Yes, I do. I try to always have a good communication with them. I try to be friends. I think facebook help me a lot with it. We can communicate in more a fun way. It also helps to get many knowledge from them. Just by communicating we can share a lot of things and I can get valuable information and knowledge about anything.

Do you provide with some customer's services?

I think so, for example in the forms of e-business. My clients can always communicate with me through the internet. They can give job orders through e-mail, facebook, Yahoo Messenger or blog. I send them the results through internet as well. Everything can be done in a short time. I think it is also a form of customer's service.

5. Respondent #5

What is your occupation?

I make screen printing products. Screen printing is a type of printing using film material like canvas. To work on screen printing, first we make the negative part. This is like a negative in

photography. Then, we put it on the materials on which a certain design is being put on. Then we swipe the ink on it. We can do screen printing on many materials. I mostly work on papers and plastics.

Do you use internet to advertise and market your business and products?

Yes, I do. That is one of my main intentions. I want to better market my products. Through internet I can communicate more easily with my customers, usually through e-mail. I can get orders and present potential designs without having to meet face to face.

Do you utilize internet banking for the payment of your products?

No. Right now I only receive cash. I still don't have a bank account.

Are you aware of any source for financial aid from the government, NGOs or international organizations?

I heard that once, but I am never interested to get financial aids or loans or such kind. I have never tried to find any sources for financial aid, because I am still afraid not to be able to pay for the loan. Right now, I am just working on the things I possess. Besides, we are used to work on our own. In the past this RT lags behind other neighbourhoods. Other RT once had a family relationship with a former central bank governor. The people there often received financial help from him. There are many sorts of activities. It's different with RT 36. We have no sources of aid like others. We do everything on our own. Even from the government there is no help. The bureaucracy was very difficult.

What type of innovation that you have ever done in producing your commodities?

The benefit that I feel the most is especially in getting the business card designs. In the past, I have to wait for design examples. I often got confused when creating a new design. Now I can look for it myself. Then, I give recommendations to my customers. It is very important to me, because I need to keep updated with the latest designs. I used the Internet to find examples of designs. Sometimes I can also download the design software from the internet. I often get examples of designs from the internet, which I developed into my own design.

Have you ever found knowledge about practices, tips and tricks, and managerial knowledge related to your business from the internet?

Yes, I do. I use computer software to design my product, like Corel and Photoshop. In the past, I manually drew my designs on film materials. It took a long time and required high precision. Now I can finish it in a shorter time and with more variation on the design. Mostly I learn by myself, but sometimes I ask my friends. They teach some skills to operate the software. Also, sometimes I search through the internet to find tips of using design software. But not so much on managerial knowledge though. Besides, I work on my own. I don't think I not much management knowledge yet.

Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business?

Yes, I do. I try to create a network by building relationship with my customers. Mostly by communicating. We can have a chat through facebook. By doing this, I get closer with my customers. Sometimes they recommend me to their friends. It helps me to get more customers. I also communicate with fellow screen printing shop owner. I can get valuable information to work on screen printing better. However, I don't really have an effective relationship with experts or academic institutions. Respondent #1 has more acquaintances like those people. It is because of his job.

What features of internet that you understand?

I have no knowledge of computers and the internet. Respondent #1 and Respondent #4 helped me a lot in understanding this internet matters. I was advised by Respondent #1 to have a

facebook account as a means to promote my products. Previously I had no idea of how to use computers and the internet. Respondent #1 then suggested me to create a blog. Initially I did know nothing about blogs. Then, after a recommendation of Respondent #1, I now have a blog.

Do you join any training to learn internet applications?

Yes, I do. I attended some trainings about computer and internet.

Do you find internet useful for improving your business?

Yes. As I said, it helps me to find new designs for my products. I also can find information about the software that I often use for making screen negatives. Finally, it helps me to communicate with my customers.

What features of internet that you usually utilize in daily business practices?

Mostly, I use e-mail, facebook and blogs.

How do you adopt and utilize internet applications in your daily business practices?

I upload photos of my design examples on my Facebook account and blog. When there is a job order, I send these examples to my customer's e-mail. They can look on it then make a selection.

To what extent do you implement internet applications on business activities?

I still don't know much about. I am still limited within using existing facilities such as e-mail and facebook. I have started to make a blog, but much improvement is still required. I am still trying to learn more

Have you done any modification, improvement, development or revision in the applications that you implement on business?

Not really. As I said, I still need to learn much. Most of the time, I ask Respondent #1 to teach me more about it. He has more experiences about computers and internet.

What is your education level?

I am a high school graduate.

Have you ever known internet during your education years?

No, I haven't.

How much do you invest on improving the utilization level of internet of your business?

The cost for network cables and hubs was around Rp. 250,000. The computer costed about Rp. 1 million. Then I bought a printer. It was approximately Rp. 600 thousand. I bought scanner for Rp. 300 thousand. There were also other devices. So the total was about Rp.2.5 million. My monthly income was below Rp1 million. At the time I had to save some money little by little so that I could buy the equipment.

Do you always follow the latest improvement in computer and internet technologies?

Not so much, I think. I am more interested in searching new designs for my products. If I need to know a more sophisticated product, usually I just ask Respondent #1.

Do you do anything to improve your level of knowledge?

Mostly, I ask my friends that know better. Sometimes I look for it in the internet. I also attend trainings.

Do you share the knowledge of internet that you have mastered with your partners?

Yes, I do. In fact, we always share new insights, especially here in this RT. Not all knowledge, I am sure. But, we have discussions many times. It can be about many things, from technology to politics. I think we have a warm relationship here.

Do you have a networking with fellow SMEs practitioners, academic institutions, customers, or professionals?

Yes, I do. I try to build relationships with them. Not so much with academic institutions or professionals though. It is mostly with my customers. Sometimes I greet them on facebook. They do it as well. I try to have an close relationship with them.

How is the nature of the networks?

I think it has been good. So far I have no decrease in number of customers. I think I can conclude that we still have a good relationship so far.

Do you have a specific department or section for R&D?

No, I don't. I only work on my own. Sometimes my wife helps working on the orders.

Do you experiment on various innovations that you found?

Perhaps, using new motifs can be said as an experiment. But, it is after my customer's agreement. Sometimes I try to work screen printing on different surfaces, to find out which materials are better to retain the ink.

Does your firm have a corporate e-mail?

Yes. I have a separate e-mail just for business. I also have a specific e-mail for business.

Does your firm have a corporate web site?

Not yet.

How is the quality of your product?

I think I have improved my product quality. I have to, because the competition is tough. I have to push the quality of my product. For my product, it includes the durability and fineness of the screen printing products. But I think the internet does not give effect to the quality of my product. It is more out of experience, for example, I used to use a certain brand of ink. Then I received feedback from my customers. Like some time ago, someone complained about my work. He sent me an email saying that the writings faded. We then chatted through facebook. He asked me what kind of brand that I used. I said this brand. He then recommended the ink of another brands. Since then I use the brand and the quality of my product is getting better.

How reliable is the product delivery now?

It is not really influenced by the internet. Because all the products I send by myself. My customers are still within Yogyakarta city.

Is there any change in production waste?

Nothing has changed much about it either.

Is there any improvement in the time aspects of production process?

I think there is also some increase in production time. In the past I could work on about 1,500 items per day. Now I am able to do 5,000 items. I have to increase the speed of production due to increasing competition. Now, whoever finishes the first will sell his products. I do feel the influence of the Internet. In the past, to work on the order I made some design examples. Then I brought the examples to my customers. If some revisions were needed, I returned to my shop and improved the design again. Then I returned to my customers to confirm the revision. All of it could take days. Now I only need to send design alternatives via e-mail. Then my customers can give comments. After that I can start working it. So in maximum three days I can start working on the orders.

Is there any improvement in the delivery time of your commodities to your customer?

I don't think so, because I deliver my goods by myself.

How long is the work hour in your firm?

I still don't have a certain work hour. Sometimes I can work overnight, especially during special occasion like religious holiday. People can order for a lot of greeting cards. Those orders can take a long time to finish.

Have you ever conducted innovation on your commodities due to changes in trend/fashion?

Yes, I do. I often find new information on the design of screen printing from the internet. I need to know the latest trends in design screen printing, for example, design invitations, business cards, and plastic designs. This is necessary so that I could meet my customer's orders.

Have you ever introduced new products due to changes in the market?

I produce a paper and plastic screen printing. I have not had a new idea to create a new type of screen printing. I did try glass screen printing some time ago. A customer asked me once, but only a small amount. I have not dared to take a large order

Are you able to easily change the volume of your products?

I think so, because so far I am still able to fulfil any job orders required of me. It is increasing now. It gets more during special days. But I still can meet the deadlines.

Is there any increase of income, especially after the implementation of internet in your daily business practices?

Yes. Averagely, now I can work on 3,000-5,000 items a day. In the past I only get maximum 2,000 items a day. That only happened on special occasion, such as Idul Fitri (Islam Holy Day). One item values Rp. 50.

Are you able to reduce the cost of production?

No. In fact, it is slightly increasing I think. Maybe about 5%. Because, now plastics and papers are little bit more expensive.

Does the efficiency also increase?

I think so. Now, I can produce more in same amount of time.

Do you build relationships with your customers?

Yes, I do. Relationship with customers has been fairly good. Mostly, it is a business relationship, but many also become good friends. I think the facilities in the internet make my relationship with my customers good. In the past, I communicate with my customers only if there are jobs to do. We communicate only by phone. But now with the internet and facebook, we can have more intense communication. It enables us to communicate better. I think it helps to strengthen relationships

Do you provide any customer's service?

Yes, I do. Firstly, I can take job orders online. Secondly, If the jobs are about printing on materials provided by my customers themselves, I come and pick the materials. They don't have to deliver the materials here. I also take orders via email. If there are damaged products out of my mistakes, I will replace every damaged item. I also deliver the goods directly to my customers.

How many labours that you employed?

I don't have any employees. I work on my own. Sometimes, if there are a lot of job orders, my wife helps me.

6. Respondent #6

What is your occupation?

I am a house wife. I have three children. My husband works as a tourist guide. Sometimes, he also arranges transportation services for tourists. He sometimes goes to Bandung, Semarang

or Surabaya for work. He can go for days even weeks. He has to do that because there is not enough money as a tourist guide. That is also why we decided that I should have a job as well. We can have extra money. Also, I can have some money in my hand in case of emergency. Initially, a friend told me to work on a factory or supermarket. But, I refused because I need to look after my kids as well. Then, another friend told me that she got job orders to make some souvenirs. I was interested. Then I got the idea for the job I work on now.

What exactly do you do?

I make purses made of Batik motive materials. I receive orders from Mirota Batik (a major Batik shop in Yogyakarta). Usually I get 500 orders of purse per month. I am paid Rp.5.000 (around € 40 cents) per piece. But now I ask for my sister's help to work on it, because I need to look after for my children as well.

Are you connected to the Kampoeng Cyber network?

Yes, I do.

What is your purpose to be connected to the network?

My children said they needed some materials for their school homeworks. They often went to internet cafes to look for them. They said they wanted an internet connection, so they didn't have to go to internet cafes. Then, I saw my neighbors did it, so I thought I should follow them too, otherwise I would be left behind. My neighbors told me to join the network. Since it is not very costly, only Rp.40,000 (€3.33) per month, I thought "Why not". So, I join the network. Initially, my husband refused. He feared all the negative impacts of internet. You know, with all pornographic things. He also thought it too expensive. But then I said it was better to have internet at home. That way we can control the children. So we bought a used computer. That way we can reduce the cost.

Do you use it for your business?

No, I don't. I don't know much about computer and internet. I never really learn about it before. But, lately I have learnt a little bit about internet. Now, sometimes I use internet to get news and for entertainment as well. I have also started to know more about e-mail and facebook.

Do you ever try to market your product through internet?

No, I don't. I don't understand how. I don't think I need it. I take orders from Mirota and I think it is sufficient for me and my family. My husband also works. So with the amount of extra money that I have I can still look after my family, although I now have to share the amount of money I receive with my sister.

Have you ever try to search for financial aids for your business through the internet?

No, I don't. I am afraid to do that, because, there is no guarantee that anybody that you meet in the internet is for real. I heard stories about people being deceived in the internet. One of my friends was told to transfer some money for business found in the internet. Apparently it was a fraud. I don't want to experience it."

What features of computer or internet that you understand?

I don't know much about computer. I can open Internet explorer. Mostly I open facebook. My son taught me how to do it. He is in junior high school right now. But it seems that he has known a lot. I now try to learn little by little. It is quite exciting to open facebook. I can communicate with my friends and neighbours and families. Also with old friend that I haven't met a long time. Sometimes I open you tube. I can watch some video clips of old songs. I quite like it.

Do you join any training to learn internet applications?

Yes. I joined some of the trainings, but I'm not very good at it. I have forgotten many of the trainings.

Do you find internet useful for improving your business?

I don't think so. Because I only need to fulfil the job orders from Mirota. So far I have always get the jobs finished in time. I think everything has been going well this way. With the things that I must do at home, I think I can't handle more orders. If the orders are bigger, I won't have enough time for other things. Now, I even have to share the jobs with my sisters.

So, you don't use the internet facilities, like facebook, for your business, do you?

No. I only use it to communicate with my friends and relatives. Besides, I still don't know much about it. I am still learning. Sometimes, my son teaches me. Sometimes, I ask my neighbours.

What is your latest education?

High school.

Have you ever known internet during your education years?

No. I just learn about it recently after we have an internet connection at home.

How much do you invest to have the internet connection?

I don't really remember. I need to ask my son about it. The computer is about Rp. 1 million. For the network I think it is about Rp.200,000. You know, the cables and the gadgets. The printer is about Rp. 300,000 if I'm not mistaken. So, the total is about Rp. 1.5 million.

Do you always follow the latest improvement in computer and internet technologies?

Not so much, I think. I am still in the process of learning here. I still know very little about computer and internet.

What do you do anything to improve that level of knowledge?

I joined some trainings, but as I said, I am not doing very well on it. Mostly I ask my son and my neighbours.

How is the nature of your relationships with your partners?

I think I have good relationship with them. I have a good relationship with Mirota. So far I can still fulfil their orders. I think we also have a good relationship here in the kampung. My neighbours always encourage me to learn more about internet. They always help me whenever I have something to ask them, especially Respondent #4.

Do you have a networking with fellow SMEs practitioners, academic institutions, customers, or professionals?

I think so. I communicate with fellow batik crafter. Sometimes, I ask about how to make purses in certain motifs. Also, I build relationships with purse makers. They provide the raw materials for my products. I don't have any acquaintance from academic institutions though. Some students like you did come here several times. They want to do some research. Some did a KKN (Community Field Work). But after they're finished I never heard from them anymore. I don't have a customer network. I don't really have one. I only make purses for Mirota and that's it.

Do those networks give you significant impact on your business?

Some of them, yes. For example with purse makers. There is a person I know who makes purses near this Kampung. He said that if I ordered a large number of purses in a longer period, I might get a discount. So I told him that I would need a large number, but not in one time, because I can't store all the purses here at home. I just need 500 hundred a time. He agreed to give me discount since he already knew me. That can help me reduce the cost.

Do you have e-mail? Do you have separated e-mail between personal and business e-mail?
I have an e-mail. I only use it for personal purposes. I still don't use it for doing my business.

Do you have web site?
No, I don't.

How is the quality of your products?
I think it is good now. At least so far Mirota hasn't complained much about my products. There are few defects but not significant.

How do you deliver your products?
I delive the products myself. It is not so far from here.

How much is your income now?
Averagely, I get 500 orders of purse per month. Each purse values Rp.5.000 (€0,42) per piece. So I get maximum Rp. 2.5 million (about €208,33) month. But since I have to share it with my sister, I get about 60% of it.

7. Respondent #7

What is your occupation?
I make batik painting. I used to work at a Castrol distributing company. Then I decided to start working on batik again. When I was still in junior high school, I have started making batik paintings. At the time I worked for my father. After that I worked at Castrol. Recently, I planned to quit because the work there is very tiring. I more enjoy making batik. In addition, I can also share my time taking care of the kids because my wife also works. I think there are a lot of potentials in making batik. When I was a teenager, I already have a lot of money. I thought if I could have more focus on making batik, I can produce more and better batik products. I will certainly make a lot of fortune.

Do you use internet to advertise and market your business and products?
Yes, I do. For now, I use facebook to market my commodities. I'm still learning to use blog. I don't have a web site. Fortunately there is Kampoeng Cyber web site. I can use the web site to promote my products. The result, now I have some partners. There are two partners that are the most intensive. One lives in Cordoba, Spain. Another one in Bali. I received job orders from them and I send them my products.

Do you utilize internet banking for the payment of your products?
So far, still through banking transfer. I don't really know to use internet banking. Usually payment is made after I send the goods.

Are you aware of any source for financial aid from the government, NGOs or international organizations?
I did hear from Respondent #1 that there are such aids from the government. But, I never try to find such aids. The requirements are sometimes complicated. You need to register to the government. It costs some money. I can still work without any aid. I can work freely without being attached to anybody.

What type of innovation that you have ever done in producing your commodities?
The type of innovation that I did, for example, is making new motifs. I also get some improvement in batik painting techniques and colouring. I also made several innovations in my business management. I once received training on entrepreneurship. I was trained to plan a business. One of the important factors is to recognize the market. That's what I do first. I tried to find a potential market. After obtaining a partner, I received orders and handing out orders to my family members. Many of them are also batik painters. When finished, I collect

them and send them back to my partner. Right now, I only dare to work with my brothers and sisters because I know the level of their skills. Therefore, I can guarantee the quality of their work. I found many new ideas for motifs over the Internet, for example for contemporary motifs and natural motifs. I usually search through Google. From there I can often create new forms of motif. I often get motives ideas from my acquaintances. I emulate the motifs and try them on my batik.

Have you ever found knowledge about practices, tips and tricks, and managerial knowledge related to your business from the internet?

Yes, I have. I got a lot of knowledge about batik and also how to run my business. I often got information from some web sites. I share the information I got with my friends and acquaintances. I often got inputs through my Facebook account. I use it as a means of promotion for my business. Photos of my paintings, I uploaded on my account. Many times I receive comments from my friends about the motifs.

Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business?

I communicate with my partners over the Internet. They give orders through my facebook account. Only a few orders initially. But then it increases. It seems that they are satisfied with my work. Now the orders are up to 30-40 batik pieces per month.

What features of internet that you understand?

Initially, I know nothing about computers, let alone internet. Then since there is Cyber Village, I began to learn little by little. Respondent #1 really helped me a lot about it. Now, I know a bit about blog, emails, facebook and other facilities in the internet.

Do you join any training to learn internet applications?

Yes, I do. The first training is about introduction to computer. It was conducted Atmajaya University. Respondent #1 arranged for it. Then, I attended training about Microsoft Office. I also learn by asking some friends about many facilities, for example how to use blogs.

Do you find internet useful for improving your business?

I think it is very useful mas, especially in promoting my designs. I can better market my products. I also can have a lot of acquaintances and more friends. Evidently I now have a partner with whom I can send my products.

What features of internet that you usually utilize in daily business practices?

Mostly, I use facebook. I still don't know much of the facilities in the internet. Facebook can be easily understood. It is quite practical. I can use facebook to promote my designs. I do it by uploading photos of my work on facebook. I also communicate with my partner through facebook, especially those that are overseas.

To what extent do you implement internet applications on business activities?

I have not mastered a lot of applications on the internet. I use facebook more to promote my products. I did some modifications on my blog, although not much. I still have difficulties in dividing time between making batik with updating my facebook account or my blog. That's why not much development can be done. Moreover, I still have little knowledge about Internet facilities. Fortunately, I receive many helps from my friends here, especially Respondent #1 and Respondent #4.

What is your education level?

I am a high school graduate.

Have you ever known internet during your education years?

I have never learned computer and the Internet in high school.

To what extent do you think internet can influence your business?

I think the internet can give a broad benefit. I can say this because in my experience, before Kampoeng Cyber, I found it difficult to market batik products. In the past, when I was still working with my parents, the marketing only stuck on one or two galleries. Sometimes we made partnership with tourist guides. But most of the time the income division is not fair. The guides get more. We got a little. It is also difficult if you want to have your own gallery, because the location of this kampung is not on the major road. Not many people even know that this kampung exist. The Internet can build network with various people in various places.

How much do you invest on improving the utilization level of internet of your business?

I bought a second hand computer. It was about Rp. 1 million. Then to install the network, the cost is about Rp. 250.000. I bought a digital camera. I use to take pictures of my work and upload it to my blog and facebook. It was about Rp. 1 million. So, with all the gadgets, the total is about Rp. 2.4 million

Do you always follow the latest improvement in computer and internet technologies?

Not really. I have not been too updated with the development of Internet technology. I have not had much free time for it.

What efforts that you have done to improve your level of knowledge? If yes, that you have done?

I keep learning by myself. I also ask a lot of friends here, especially Respondent #1 and Respondent #4. Also, I attended courses about computer and Internet several times.

Do you share the knowledge of internet that you have mastered with your partners?

Yes, I do. We share a lot of knowledge among fellow batik workers, especially here in RT 36. We can always discuss about anything. I think our relationship here is good. We have mutual trust and help each other. We also share the difficulties we face in our business. Especially Respondent #1. He gave me a lot of input on how to improve my business. He also helped me connect with partners in Cordoba. I also have a good relationship with them. We have trust. Usually, I send my products first, then a few days later he transfers the money. Sometimes it's the other way around. He always challenges me to produce more. He challenged me to 100 sheets per month batik. I'm still trying to reach those targets.

Do you have a networking with fellow SMEs practitioners, academic institutions, customers, or professionals?

Yes, I do. I relate well with fellow batik makers here. Many people here can make a batik painting. We often share the techniques of batik. I also intend to engage them to work on the orders that I got. But maybe later, because I am still in the stage of building trust with my partners. Network with academic institutions also exist, but mostly through Mr. RT because he works at Atmajaya University. We also have a good relationship with other universities such as UGM (Universitas Gadjah Mada – Gadjah Mada University), and UNY (Universitas Negeri Yogyakarta – Yogyakarta State University). They often come here mainly for the KKN (Kuliah Kerja Nyata – Community Field Work). They often held trainings here. I

Do you have a specific department or section for R&D?

No, I don't. I am self employed. I do work with my brothers. But we're fellow painters. They are not my employees. I give them job orders. They can keep their payment. I am just the middle man for it.

Do you encourage experimentation of various innovations?

Probably not too much. At most, in the use of new motives. I often get new ideas for motifs. I try to put it on my batik. So far the motives are still accepted by my partner. I also often try new techniques that I got from my friends.

Do you have an e-mail specifically for business purposes?

Yes, I do. I also have facebook account and blog just for uploading the photos of my products

Do you have a LAN or intranet within your workplace?

Not really. We do have LAN connecting the houses in the kampung.

Does your firm have a corporate web site?

No. I am still even not adept on blogs. But we do have a collective web site.

How is the quality of your product?

I think there has been some improvement. Since there was Kampoeng Cyber network, I can access many types of motifs. I also got a lot of knowledge about new techniques in batik. It increases my ability to make batik using high difficulty material, like silk. It is much more profitable. The price of a cotton batik sheet with the size of 150x90 cm is about Rp. 150,000 – Rp. 200,000 (€12.50 – €16.67) per sheet, but a silk batik, especially with a complicated motif, can reach Rp. 2 million (about €167) per sheet. Usually I make natural motifs, such as the butterfly and landscapes motifs. Sometimes I search for abstract and contemporary motifs in the internet. We need to keep updated on the patterns that are in trend at the moment. Otherwise, no one will be interested on the products.

How reliable is the product delivery now?

There has not been so much improvement. I use delivery services. It depends a lot on those services whether my products are delivered on time or not. So far it always reached my customer on time.

How about the production waste?

Nothing much has changed either, I guess. Everything is still the way it used to be.

Is there any improvement in the time aspects of production process?

Well, so there is an increased production. I used to produce five sheets of batik every week. Now I can produce 10 pieces of batik a week. So, I guess it means I can produce more quickly. Perhaps I can say the same thing about delivery time of the goods, because I can communicate with the delivery service over the Internet. My relationship with them is good, because I subscribe with them. Now I only tell them the delivery schedules. They can come to pick up my goods at that time. I don't have to take my goods to their office and take a line. It becomes more efficient.

How about the work hour?

The working hour is erratic. I can sometimes work overnight. Depending on the number of orders I have to work on.

Have you ever introduced new products due to changes in the market?

Sometimes I focus on batik painting. Sometimes I made batik t-shirts. It depends on the current trend. To know it, sometimes I ask my friends who work on batik galleries, which types of batik products that are popular at the moment. Sometimes I chat with several friends in different cities. They can give important information about the trends in Batik

Are you able to easily change the volume of your products?

Currently the volume of production tends to increase. Initially 5 sheets per week. Now an average of 30-40 pieces per month. The trend is indeed still likely to increase. But, so far I am still able to comply with the orders.

Is there any increase of income, especially after the implementation of internet?

Yes. In the past, I got maximum Rp.2 million a month. Now, in a month I can produce up to 40 sheets a month. One sheet of batik values around Rp.150,000 to 200,000. That excludes high quality batik, such as silk batik. That could reach Rp.2 million a piece. But I can work on it in

3 days. It depends on my choice. Sometimes, I am invited to conduct training courses at various institutions. I get a salary of Rp.50,000 to 100,000 a day. When I asked them where they got the information, they said from the internet. Kampoeng Cyber is famous now.

Are you able to reduce the cost of production? If yes, in what way?

The cost tends to be stable. There may be a slight increase, due to rise in kerosene prices. The total cost itself is not so much, because my partners provide the cost for the materials. Sometimes they send the materials. I only need to paint on it.

Is there any increase in the amount of sales?

Yes. As I said earlier the sales increase rapidly. My target is to achieve 100 pieces per month.

Does the efficiency also increase?

I guess so. Because now I can produce more batik sheets.

Do you build relationships with your customers?

Yes, I do. I built a good relationship with my customers. It is more a employer-employee relationship, because they gave the order for me to do. It mostly goes through ongoing communication with my partner. Mostly, over the internet. I think so far my it has been going well. It is based on trust. I kept trying to fulfil the deadline on time as requested by my partners. So far there has been no complaint. We also have a lot of communication about the products they want.

What customer's service that you provide with your customers?

I don't think I have any. At most, in the form of fixing defective products. If there is any, I will change it with the good ones.

How many labours that you employed?

Perhaps the term employee is not appropriate. It's more like fellow batik painters. Because they are my brothers. So far there are 6 people who join with me working on orders that I got. Averagely, they have good skill. My family do have a lot of talented artists. We share various motives that each of us know.

8. Respondent #8

What is your occupation?

I make batik painting. Basically there are two types of batik works. One is batik press printing. The other is batik painting. Batik painting is the original way of making batik. It is made by drawing manually the motifs on clothing materials. It can vary from simple material like cotton to high quality material like silk. It is difficult and can take days to make it. Press printing is faster to make it, because it is done by stamping on the clothes. But, it is cheaper than batik painting. Firstly, it's because it less difficult than batik painting. Secondly, batik painting has a personal touch on it. It is an artwork. So, we can say a batik painter is an artist who has to put his ideas on the clothes in the form of motifs.

How long have you been doing batik painting?

I feel like I have been doing it all my life. I have started painting batik since I am still a teenager. Now, I am 50 years old. It is quite a long time.

How has your business been so far?

In the past, it was very difficult to market batik painting. It is because my place here is not near a major road, so very few people notice my products. That's why batik painters are decreasing. Mostly turn to make batik t-shirts. Since there is internet connection, my son can promote and market the paintings through blogs and facebook. He is Respondent #4. He looks after the network. Then, after there was web site of Kampoeng Cyber, the photos of my batik

are also put on it. That way, many people can see my paintings and become interested to buy. I think it has been very significant, up to four times as much as the income before internet. Now I can market 80 to 120 pieces of painting, with the average price of Rp.50.000 (€4) per piece. It gets more expensive for more sophisticated patterns.

So, you use internet to market your products, don't you?

Well, not really. I am internet blind. Most of the time my son uses the internet. He helps me to market my products. I don't know anything about internet. It seems that I don't have the talent for it at all. That's why my son does all the internet things. If not because of him, probably I will never have a computer. I think he is doing very well with computer and internet. He knows a lot about it. But, I don't know exactly what kind of skill he has about computer and internet.

Do you join any training to learn internet applications?

No, I don't. I can't even understand the things that my son taught me. The other day he tried to show me some tricks about computer. I couldn't even turn it on. It seemed that knob hide somewhere. Then, my son showed me how told me some key points about it, but I just didn't get it. Finally, I gave up and I told me it's not my thing. I should stick on painting batik. That's why I think joining any training will not do any good for me.

But, do you find internet useful for improving your business?

Yes, I do. In my case, I can sell more batik paintings. Lately more requests come to me. I can send up to 30 sheets every week. I have been very busy quite lately, trying to catch up with the orders that I have got.

What is your education level?

I am a junior high school graduate.

Have you ever known internet during your education years?

No, I haven't.

How much do you invest on improving the utilization level of internet of your business?

I don't really do that. It is my son that installed all the gadgets for the internet and computer. He said he spent quite a lot of money for it. He never asked me the money for it. He has his own business actually. He just tried to give me some help.

Do you have a networking with fellow SMEs practitioners, academic institutions, customers, or professionals?

Yes, I do. Regularly, I spend some time meeting and chatting with my friends. I join a group of batik workers and artists in Yogyakarta. I also know how to play gamelan. We have a gamelan band here. We will go to London for a show. There will be a traditional music festival there. I don't remember the name. Many countries will join. We will represent Indonesia. I'm happy for it. I enjoy playing gamelan. It's a lot of fun. I can meet fellow artists. Most of them also know how to make batik products. We can chat for hours discussing many things. Sometimes we share experiences in making batik. I find it very useful. I get to know many new things that I haven't known before. I can make various kinds of batik paintings. I don't really have a relationship with academic institutions or professionals. I think, Respondent #1 has more acquaintances from those kinds of people, because he works in a university.

Do you have an e-mail?

No, I don't.

Do you have a web site?

No. Only that of Kampoeng Cyber web site, but I don't know if I can say it is mine. Because it is collective. Everybody in RT 36 can upload photos of their products.

Is there any improvement of the quality of the product after implementation of internet?

I am not really sure. Nothing has really changed in the batik materials that I have made. I am not sure about the motifs either. Usually I just make batik spontaneously. Indeed, there are traditional motifs, such as canting and parang rusak. There are also contemporary motifs. That can be used as a start point to work. But then I develop further. Most ideas come spontaneously. Sometimes I get ideas after chatting with fellow batik workers. They share some ideas of batik. Sometimes I also see the work of others. Everything can be combined into new motifs. I did try to combine new motifs.

How reliable is the product delivery now?

I think it is still the same. I send goods using postal services. So far it can reach the customers. I haven't received any complaints about the delivery doesn't reach my customers. I guess if the address is right and complete, nothing can go wrong.

Is there any change in production waste now?

I don't think so. Nothing much has changed about the waste, but I think it is not really a problem.

Is there any improvement in the processing time?

No. Nothing has changed about it.

How long is your work hour?

It's not certain. Sometimes I work for several hours. Sometimes I work until past midnight. It really depends on the orders. Sometimes there orders to make batik for ceremonial outfit which require a complicated motif on silk. There is also a dateline to fulfil. When it happen, I might have to work three days three nights on it

Have you ever conducted innovation on your commodities due to changes in trend/fashion?

So far I stick to batik painting. I want to show the young people that this is our tradition. We need to maintain it. Yogyakarta has been known as one of the centres of batiks in Indonesia. Even this kampung was known for its batik. But, many young people have left the tradition. I guess its because of the competition with press printing batik. I still believe that batik painting needs to be upheld.

Are you able to easily change the volume of your products?

So far I have always been able to comply with the orders. I am still able to fulfil the target.

Is there any increase in income?

Yes. It is because there is an increase in sale of batik sheet. I think it is up to four times. Now I can sell 120 sheets of batik in a month. The price varies from Rp.50,000 – Rp. 200,000 depending on the type of the motifs. It also depends on the material types. Silk is much more expensive. It can be more than Rp. 1 million.

Are you able to reduce the cost of production?

Not yet. The cost even tends to increase, because I use kerosene. The oil price increases all the time. Averagely, I can say the cost for a sheet of batik is about Rp.5,000 – 10,000.

Do you build relationships with your customers?

Not really. I don't know my customers. Most of the communication is done by my son. I only work on the batik.

How many labours that you employed?

I don't call it employees. Sometimes my daughter helps me work on the batik. She has some talent too. If there is an order for batik shirts, my wife can do the tailoring. But, it is just occasionally. Most of the time, the customers only ask for batik clothes.

9. Respondent #9

What is your occupation?

I sew Batik clothes. I was a civil servant. After I retired, I decided to be a tailor shop. I knew a little bit about tailoring. In fact, I do tailoring as a side job, even when I was still active as a civil servant. My wife and I run this business. I take orders from my friends and my former colleagues in the Municipality. They spread my business from mouth to mouth. I think it is enough. After all, I am old now. I don't need a lot of money. At least, I can still provide for my own needs. With my monthly pension and the income from this small business, I feel sufficient.

Are you connected to Kampong Cyber network?

Yes, I do.

What is your purpose to be connected?

At first, it's just for my children's needs for their school homeworks. But, lately I have learnt a little bit about internet. Now, sometimes I use internet to get news and for entertainment as well.

Have you used internet for business?

No, I haven't. As I said I spread my business through the words of mouth. Not because I don't know internet. It's more of a health problem. Actually I have known and used computers for a long time. I once participated in a 2 weeks training in 1989. It was an extensive training, starting from 13.00 to 22.00. I also have a hobby to play chess. I play chess with the computer. I so often use computers to play chess. I can take hours. As a result, I experienced eye problems. My view become so vague and I often feel a bit dizzy. Maybe also because I used to smoke, the smoke got into my eyes and gave more damage. Since then I have never used a computer for too long. If I need to look for certain information, I ask for my friends' help.

Are you aware of any source for financial aid from the government, NGOs or international organizations?

Yes. But I never arrange to get it. I don't really need it.

Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business?

No, I don't. I don't think I need it. This business is just to get me busy.

What features of internet that you understand?

I don't know much now. I used to know word star and lotus. But, I don't think they still exist now. I don't follow the latest technology now. But, I do know to look for some news or here old songs.

Do you join any training to learn internet applications?

Yes, I did, as I have just told you. But, I don't join the recent ones held here in RT 36.

Do you find the relevance of internet for your business?

Not really. It is just a small tailoring. I work on the orders I received from my fellow civil servants when I was still actively working. I still go occasionally to my former office. Just to have a chat with my friends there. Sometimes they ask me to sew them a shirt. That's how I get job orders.

What is your education level?

I graduated from High School.

Have you ever known internet during your education years?

Not in school. Only during work.

Do you think internet can influence the business in this neighbourhood?

Perhaps. But there is still some problem to look at. I told this to Respondent #1 when he gave the idea to build web site. I often speak directly with him. He is my nephew. I think a web site can help market the products of the SMEs here, but there is problem if it goes public. There is a management problem. Who should hold the financial? What if somebody wants to place advertisement on the web site? We need to have a good organization and management. I don't think the people have been ready for it yet. It may result in friction among the citizens. So, we still need to train the people here at least with accounting skills, so that whoever in charge will be able to manage finance. It also applies to managing the aids that this kampung has received. If not managed well, some might get dissatisfied.

Do you always follow the latest improvement in computer and internet technologies?

No, I don't.

How much do you invest on having the internet equipment?

I bought the computer for about Rp. 2 million. The equipment for the network is about Rp.300,000. So the total is Rp.2.3 million.

Do you also have a networking with fellow SMEs practitioners, academic institutions or professionals?

I think I don't need a network with my customers. It will require some organization and I don't think I'm up for it right now. I am old and retired. At least this business can get me busy doing something. This is alright for me now.

Do you have an e-mail?

No, I don't.

Do you have a web site?

No, I don't.

How is the quality of your product?

No, I don't.

10. Respondent #10

What is your occupation?

I am a house wife. I make snacks and cookies. I do this to add to my husband's income. He also has a small business. He sells flowers and plants. We also have a little shop selling cold drinks.

Are you connected to Kampong Cyber network?

Yes, I do.

What is your main purpose to connect to Kampong Cyber network?

I want to communicate better with my friends and relatives. I also want to get information about everything. I also use internet to get variation of cookies, so that I can make more types of cookies. Sometime I share information with other women who do the same thing as I. I also like to search for songs and other types of entertainment from the internet.

Do you use internet to advertise and market your products?

I don't really market my products over the internet. I do it through social gathering and community meeting. I don't give much attention to my business. It is just an addition to my

husband's earnings. I'm not like Respondent #3. I think he is the most successful here. He is now having a shooting with Trans7 (an Indonesian TV station), with the show "Mancing Mania". It was planned for yesterday. But it rained so hard yesterday. So they delayed it. It seems that it is today because the shop is closed.

Do you utilize internet banking for the payment of your products?

No. It is mostly in cash, because most of the orders that I get is near this neighbourhood. The job orders are not so much either. I don't have any employees. Besides, it is just a side job as an addition to my husband's income.

Are you aware of any source for financial aid from the government, NGOs or international organizations?

Not really. I heard that Respondent #1 has arranged for one, but I don't really know the mechanism.

Have you ever found knowledge about practices, tips and tricks, and managerial knowledge related to your business from the internet?

I have found many new ideas for cakes and cookies. I found new recipes of cakes and how to make them. I used to know to make only few types of cakes, but now it's quite a lot. I know how to make pastels, brownies, traditional cakes such as lumpia, lemper, onde-onde, etc. I don't find so much about managerial knowledge.

Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business?

I have some relationship with my friends and families. They are my customers. They send messages whenever they want me to make some snacks for them. I also communicate with fellow snacks makers. We share ideas about making snacks and cookies. We share recipes. But I still have no relationships with experts such as professional chefs. It is still the ladies here. Mostly, within and around RT 36.

What features of internet that you understand?

I know how to operate internet utilities, such as Internet explorer, Firefox, and Opera. I am still learning to use Office Softwares like Word and Excel. The progress is not very good. But, I think I'm improving little by little. I also have an email, Facebook and Yahoo Messenger Account.

Do you join any training to learn internet applications?

Yes, I do. At first I joined the basic training of computer and internet introduction. Then, I continue to learn by myself and ask for my neighbour's help.

Do you find internet useful for improving your business?

I think so, especially if I look at other businessman like Respondent #3. But not in my case. I'm still learning for it. But I think that internet makes the relationship here better. The internet is very useful for communication among citizens, instead of making us more individualistic. That is because we have already been cohesive. When the internet came, it only made us have a more intimate relationship.

What features of internet that you usually utilize in daily business practices?

I think facebook and e-mail. Sometimes my friends send message from mobile phone as well if they want me to make some snacks. I haven't made facebook specifically for my business.

To what extent do you implement internet applications on business activities?

I use internet almost every day, but mostly just to communicate with my friends and relatives. I have not really utilized it for my business other than taking orders to make cookies from my friends and families through Facebook.

Have you done any modification, improvement, development or revision in the applications that you implement on business?

Not so much, because I am still in the process of learning. Besides, I haven't needed it for now. The volume for my business is still small. I only take orders from around here.

What is your education level?

I am a high school graduate.

Have you ever known internet during your education years?

No, I haven't.

How much do you invest on improving the utilization level of internet of your business?

We bought the computer for about Rp. 1.5 million. For the networking and other gadgets it was about Rp. 500,000. So the total was about Rp. 2 million.

Do you always follow the latest improvement in computer and internet technologies?

Not really. I am more interested in looking for songs and recipes.

Do you do anything to improve your level of knowledge?

I attend some trainings. I also try to ask my neighbours. Mostly I ask Respondent #1 and Respondent #4.

Do you share the knowledge of internet that you have mastered with your partners?

Yes, especially with the women. We sometimes spend the afternoon hang out and have a chat about many things. Sometimes we share about the things that we learn on the internet.

Do you have a networking with fellow SMEs practitioners, academic institutions, customers, or professionals?

I only have relationships with customers which are my friends or families. I also have a good relationship with all the citizens here.

How is the nature of the networks?

I think the relationship in RT 36 is good. We help each other in many things. I think we have a good spirit of Gotong Royong here. The example is when we construct Kampoeng Cyber network. We built this network from scratch and everything was done on our own. Nobody helped at all. We don't ask outside technician for help. We install it ourselves. As technicians, we use the residents of this neighbourhood as well, such as Respondent #1 and Respondent #4. Even from the government there is no help. Some people might think that all of us are relatives, but in this kampung, not all have blood relations. There are indeed some related by blood, like myself with the man live behind my house. He was my uncle. Then next to Respondent #3's house is also still my relative. Most of those who were born here are family. There are also many immigrants. The relationship between people here is quite compact. We help each other in many ways. The spirit of mutual cooperation is quite high. It's probably because there are many young people here. The elderlies also give their support. For example my father and uncle. They are two of the elders here. My father often stay at home. My uncle is rather more active. They monitor the activities here, but they don't interfere much. It seem that they understand that their time is different with present time. So they just come along. Although they often disagree with some of the activities here, but they still honor the decisions that are made democratically.

Do those networks give you significant impact on your business?

Not really. I haven't really utilized them much.

Do you have a specific department or section for R&D?

No, I don't.

Do you do any experimentation of various innovations that you found?

Yes, I do. Sometimes I found new recipes of cookies. I tried to make it. But still in small amount.

Do you have an e-mail just for business?

Not yet. I only have one e-mail.

Do you have a web site?

No, I don't.

Is there any improvement of the quality of the product after implementation of internet?

I think so. Now I can make better cookies. At least, that's what my friends told me.

How reliable is the product delivery now?

Nothing has changed much, because I deliver my products myself. Sometimes, the customers pick them from my house.

Is there any change in the production waste?

Not so much either. It is still as before.

Is there any improvement in the time aspects of production process?

I don't think so. Not so much improvement has taken place

How long is your work hour in your firm?

It is not certain. It depends on the orders. Sometimes there is a rather big occasions that requires more cookies. But I never work overnight. Besides, it just like for me to have some activities to do, and it pays although not so much.

Have you ever conducted innovation on your commodities due to changes in trend/fashion?

Yes, I have. For example brownies. Sometimes, people like steamed brownies. Some other times they like baked ones. We need to see the change in this trend.

Have you ever introduced new products due to changes in the market?

Yes, I have. Like the other day, many people like brownies. Then, suddenly there is an increased appetite for pastel. So I switch to pastel.

Are you able to easily change the volume of your products?

Not really. I never accept too big job orders, because I still need to look after my children. I never take orders designed for more than 100 guests.

Is there any increase of income?

Not yet. No significant increase has taken place.

Are you able to reduce the cost of production?

Not yet

What customer's service that you provide with your customers?

Not so much. Maybe if you can say it a customer's service, I give free boxes. I also give advises for menu alternatives.

How many labours that you employed?

I don't have any employee. I just work on my own. Sometimes I ask my neighbours help.

11. Respondent #11

What is your occupation?

I am a klitikhan (used goods) Trader. I collect second hand or used goods, and sell it to the used goods market. It is not very much. So I also work on something else to increase my

earnings. I also arrange sound systems. Usually, I rent sound systems for parties around this neighbourhood. My wife sews clothes at home. She receives orders of making clothes. It can help increase income for our family.

Are you connected with Kampoeng Cyber network?

Yes, I am. I have been connected for about five months.

What is your purpose to be connected?

I think I need to do it so that I am not left behind in terms of technology. I need to follow the stream. I saw my neighbours have been doing it. So, I guess I should follow their footsteps as well. Especially my children. I think they should also know more about internet. Their education demands them to know more about it. Otherwise, they will be left behind compared to other children. Not so much for my wife and I. Our time is different with their time now. Nowadays, they are demanded to master all this knowledge. I also try to know more about internet. But the progress is not so good. I think I can't concentrate more on it, because I don't have much time for it. The main principle of a father is to provide food for his family. If I have some spare time, then I will try to learn it.

Have you used internet for business?

I have not used internet for business. I don't think I need it. I take used goods and sell them to Pasar Klitikhan (used goods market). What good is internet for it.

Do you have an e-mail?

Yes, I do. My son made it for me, but I never open it. I still don't know how to open it.

Do you have a web site?

No, I don't.

Is there any improvement in the quality your product after Kampoeng Cyber network?

I don't think so because I only collect used goods. Used goods are usually left by their former owners because they don't need their anymore, right? If it's still in good shape, I don't think they will give it away. Only if they really some money.

You also rent sound system equipment. How is it so far?

It's going okay, I think. I start learning to operate it about a year ago. There is a man in this kampung who regularly plays music with a band. One day he asked me to help operate his sound system. He gave me a few tips. Then I asked him to teach more so that I can join his band in their shows. At least I can get extra money. Then I started buying my own equipment one by own. In the beginning, it was one equalizer and two speakers. They were seconded hand. The quality was not so good, but at least I was able to fulfil orders for some events around this kampung. Recently, I upgraded my equipment. I also managed to buy a power supply. It is also second handed.

Where did you get the equipment?

From my fellow klitikhan trader. I told them to inform me if they had sound system equipment. One day a friend offered me the equipment with a relatively cheap price. I found that it was still good, so I took it.

Is there any influence of internet on it

No, I don't think so. I got from fellow trader.

How reliable is the product delivery now?

Nothing much has changed I think. I deliver my klitikhan by myself to Ngasem market. It's closeby.

Any change in production waste?

No, I don't think so.

Is there any improvement in time aspects of your business?

Not so much has changed. I don't have some regular time of work. Sometimes I come home late. Sometimes early.

Have you ever conducted innovation on your commodities due to changes in trend/fashion?

Not really. I basically collect any kinds of used goods and sell them back. I don't make products. I'm like a middle man.

Have you experience any increase of income, especially after having internet connection?

No. I haven't. Everything is still about the same. Sometimes I can get a lot of goods to sell, sometimes not so lucky.

Can you reduce cost?

No. The cost can never be decreased. Like the oil price. It always increases.

Do you build networking by utilizing internet either with customers, fellow partners or with experts related to your business?

No, I don't. I don't know how. My son said that he has made a Facebook account and e-mail for me. But I never opened it yet. I only communicate with my fellow worker by meeting face to face.

What features of internet that you understand?

I still don't know much. In fact, it is still zero. My son taught me something about internet, but I forget almost everything.

Do you join any training to learn internet applications?

Yes, I did. Respondent #1 persuaded me to join some trainings the other day. I attended the trainings about typing a letter, but I have forgotten many things. It is my son that knows so much. He teaches me many things. Now I can use Internet explorer a little bit. I use it to find news and information.

What is your education level?

I graduated from Junior High School.

Have you ever known internet during your education years?

No, I haven't.

Do you think internet can influence the business in this neighbourhood?

Well, I hear from some of my neighbors. They are doing better with internet. So, I guess internet is good for businesses. I heard that they got more orders from outside. Also, they can better communicate with their customers.

How much do you invest on improving the utilization level of internet of your business?

I bought the computer for about Rp. 1 million. It is also a second hand computer. I got it from my fellow trader. Then, I paid for the network cables and the gadgets for about Rp.200,000. So the total Rp.1.2 million.

Do you always follow the latest improvement in computer and internet technologies?

No, I don't. I am still trying to know more about internet. I still don't know much about the current technology.

How is your level of knowledge in utilizing internet for your business?

I can say that I am still zero at internet. I have been trying to know more by attending trainings. Sometimes I ask my neighbours. But so far, I haven't really achieved much.

Do you share the knowledge of internet with others partners?

I haven't known much about internet, so I don't have anything to give. Mostly it is my neighbours that teach me new things about internet and computer.

Do you also have a networking with fellow SMEs practitioners, academic institutions or professionals?

Yes, I do. I have relationships with fellow klitikhan traders. Sometimes we meet and have a chat. I don't have acquaintances from academic institutions.

Do you try to experiment of various innovations related to your business?

I don't find much innovation. Sometimes I get new knowledge about sound system. I try it sometimes to make the quality of the sound better.

Annex 3

Web sites and blogs.

1. Kampoeng Cyber Joint Web Site <<http://www.rt36kampoengcyber.com/>>



2. Kampoeng Cyber blog <<http://rt36taman.multiply.com/contacts>>



3. Respondent #3's blog < http://omahpancingjogja.blogspot.com/>

The screenshot shows the homepage of the blog 'Omah Pancing' on Blogger. The header features the URL 'www.omahpancingjogja.blogspot.com' and the blog title 'Omah Pancing SPORT FISHING ...the art of fishing...'. The main content area includes a post titled 'PAKET MANcing ROCK FISHING' with a description of rock fishing and a photo of a fisherman. To the right, there is a 'Spice iklan' section and a 'Mengenai Saya' section with a profile picture and contact information. The footer shows the URL 'http://omahpancingjogja.blogspot.com/undefined'.

4. Respondent #5's blog < http://bonarproduct.wordpress.com/>

The screenshot shows the homepage of the WordPress blog 'Bonar Production'. The header features a banner with the text 'BONAR PRODUCTION SABLON - RUMAH MAKAN - SOUVENIR' and a search bar. The main content area includes a post titled 'PERCETAKAN / SABLON DAN AYAM GORENG' with a detailed description of the business. To the right, there is a 'Kategori' section with links to 'Ayam Goreng Larizqi', 'Ice Juice', 'sablun', and 'Uncategorized'. Below that is a 'Relasi' section with links to 'falla rizqi', 'Galeri Batik Lukis Online', and 'Kampungku RT 36'. At the bottom right, there is a 'Feed' section with links to 'Masukan (RSS)' and 'Komentar (RSS)'. The footer shows the URL 'http://bonarproduct.wordpress.com/undefined'.

5. Respondent #7's blog < <http://www.lekiwonbatik.blogspot.com/>>



6. Respondent #8's blog < <http://ichikawaii.multiply.com/>>

