



**The Economic Impact of Minimart on Traditional Shop in Malang City,
Indonesia**

Bayu Adi Kusuma

**A Thesis Submitted in Partial Fulfillment of the Requirements for the Degree of
Master of Business Administration in Agribusiness Management
Prince of Songkla University**

2015

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Malang City, Indonesia

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ABSTRACT

This study aims to: (1) study the minimart development in Malang; (2) examine the socio-economic characteristics of traditional shops; (3) describe the changes in traditional shops after the minimart presence; (4) measure the economic impact of minimart presence on traditional shops; and (5) investigate the strategies employed by traditional shops to survive in retail business. Data were collected from 172 traditional shops (86 shops each located near and away from the minimart) during June - October 2011. Analyses were based on descriptive statistics, t-test and the difference-in-difference estimator.

The results reveal that the number of minimarts in Malang increased rapidly during 2006-2011. The number rose from 2 outlets in 2006 to 144 outlets in 2011, expanded by 103.96%. There are four major brands of minimart, namely Indomaret, Alfamart, Alfamidi, and Alfaexpress. In 2011, Indomaret has the largest market share (49.1%) in Malang, followed by Alfamart (39.7%). In the city of Malang, the consumers can access to minimart easily.

More than 70% of traditional shops were started by the current owners while the rest established by their parents. The shops have been operated for 19 years

on average, 21 and 18 years for the near and away groups respectively. Around 54% of the shops are located on the main road. The average distances of the shops to minimart in the near and away groups are about 194m and 467m, respectively. The average size of the shop is about 42m². Most of the shops (84%) do not have warehouses. Three-fourth of the shops are operated by their family labors. The average workers are two people. The shops are opened 13 hours daily. The average buyers are 50 and 48 person/day for the shops in the near and away groups, respectively. The shop in near group earns average daily revenue and profit of IDR 1,325,813 and IDR 146,222 correspondingly. Whilst, the shop in an away group obtains average daily revenue and profit of IDR 1,316,162 and IDR 145,384 respectively.

After the presence of minimart, overall there are some major changes in the shops performances, namely number of buyers, frequent buyers, revenue and profit. The number of daily buyers decreased by 11.37 people. The frequent buyers fallen by 6.42%. Daily revenue and profit diminished IDR 253,895 and IDR 34,937 correspondingly.

Using the simple model of DiD estimator, the presence of minimart adversely affects the daily number of buyers and profit with statistical significance at $\alpha = 0.05$ and 0.01 respectively. The number of buyers decreased 5.3 people daily. The profit dropped IDR 25,193.02 per day. Therefore, several strategies have been employed by the traditional shops to survive in the competitive retail business: diversify the product, better display, add new brands, reduce the prices and implementing self-service.

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CHAPTER 1

Introduction

1.1 Statement of Problems

To satisfy the daily needs, peoples cannot separate from retail activities. Retailing gives impact on people lives, all people shopping, although in different levels of enthusiasm. Retailing is one of the strategic businesses. In economic growth, this sector makes a substantial contribution to the Gross Domestic Product (GDP). In Indonesia Statistic (2014), this business absorbs approximately 18.9 million people; it is the second largest sector in employment, it is lowest than the agricultural sector that could absorb around 41.8 million people. In 2011 the third largest contributors to GDP was dominated by the processing industry sector (24.3%), followed by the agricultural sector, livestock, forestry, and fisheries (14.7%), and “trade, hotel, and restaurant” (13.8%). The trade, hotels and restaurants is the second highest growth sectors (9.2%) (Indonesia Statistic, 2012).

Looking at the GDP structure on the trade, hotel, and restaurant, East Java was the largest contributor to this sector, which is 28.3%. It was higher than West Java (14.1%) and Jakarta (19.1%). Approximately 82% of the total output in this sector are a sub-sector of wholesale and retail trade, followed by restaurants (15%), and hotels (2%). Regional East Java GDP in 2013 put this sector in the first place on the regional GDP structure (31.21%) (Indonesia Statistic, 2014).

Indonesia is the second fastest developing market in South- East Asia (Nielsen, 2010). Rangkuti and Slette (2010) and Dyck et.al. (2012) report that the modern market and traditional markets in Indonesia are both experiencing growth.

Increasing the sales of the modern market from \$1,560 million in 1999 to \$5,641 million in 2009 is not despite the rise in the number of modern retail that is growing rapidly. In 2004 - 2009, Nielsen (2010) report a very drastic increase occurred in the number of minimarts, from 1,435 outlets to 10,039 outlets. The increase reached 600% within five years. In the traditional market, despite a rise in the number of outlets, is not significant when compared to the rise in modern markets especially minimart.

Although the number of the traditional shop has increased, the sales have decreased. The decline in 2004 to 2009 was from \$17,137 million to \$16,756 million (Nielsen 2010). Overall, the total share value of retail sales in the traditional shop, from year to year, was getting decreased. In contrast, the total share of modern retail sales value is increasing. The rapid growth of modern retail especially minimart raises concerns in the traditional shop. The more proliferation of minimart should be wary of going to interrupt the "underprivileged people" who work on traditional shop sector. If the proliferation of minimart continuously happens, then they cannot survive and will soon be out of the retail market.

Minimart is the fastest growing channel of modern retail in Indonesia. It is one of the modern retail formats that currently flourishing. Based on government regulation under Ministry of Commerce (2007), minimart is a modern retail business; the size is no more than 400 m²; selling fast moving consumer goods at retail; can be built on any road network, including the local road network system or in a residential neighborhood. Based on the location or road classification, this rule allows to build minimart anywhere in the city.

A few leading players dominate the minimart business in Indonesia, Alfamart (40.3%) and Indomaret (34.0%) (Dyck et.al, 2012). The very high development of modern retail market indicates that Indonesian market is a very promising for the minimart market. The traditional shops are concern with the existence of minimart. Minimart will significantly affect the performance of a traditional shop nearby.

PP 112 of 2007 regulates the provision of retail competition between modern market and traditional markets. However, the regulation is not explicitly set the competition between modern retailers with the traditional shop. If the competition without control is allow, then the traditional shop will be exclude. An omission of these conditions will lead to polemics in the community. Discursive that appears in the community is the rejection of the minimart establishment by the traditional shop, by citizens, and by community leaders in some areas. At the policy level, it is the termination of operating licenses and restrictions on the number of minimarts by parliament and local government.

In many places in Malang, if there is an Indomaret, then there almost certainly can be found Alfamart nearby, and then there will be Alfamidi. Competition between Indomaret and Alfamart is competition among modern retail business that is very prominent. Both of these brands want to beat each other. In some place, one Indomaret flanked by two Alfamart, in other areas, the opposite occurred. It is hard to find an area in Malang without Indomaret or Alfamart within a radius of 500 m. Traditional shop in Malang has strongly felt the impact of minimart. Traditional shops are the most affected. Shops are becoming increasingly deserted; many shops decline

in the number of buyers, revenue, profits, and even some shops cannot survive and had to close the shop.

The high rate of minimart development raises some questions. (1) Is there any change in the performance of traditional shop due to the minimart presence?; (2) Does the presence of minimarts lead an adverse impact on the performance of traditional shop?; (3) Is there any effort by the traditional shop to survive in the tight competition with minimarts? The impact of minimart presence felt by the traditional shop has not been fully captured and academically explained. It is the main background of this research.

1.2 Research Objectives

The objectives of this research are:

- 1) To study the minimart development in Malang city.
- 2) To study the characteristics of the traditional shop in the study area.
- 3) To describe the changes in the traditional shop after the minimart presence.
- 4) To measure the economic impact of the minimart on the traditional shop in Malang.
- 5) To investigate the strategy of traditional shop in order to survive in retail business.

1.3 Scope of the Study

- 1) Study Area

Malang city is the second largest city in East Java Province after Surabaya. In the structure of Regional GDP in East Java, Malang is the second

largest contributor to the sector of "trade, hotel, and restaurant" (Malang City Statistics, 2011). This study deliberately set three districts as research sites. First is Klojen. It is the center of the city. It is the most densely populated regions. Second is Lowokwaru. It is the district with the highest number of minimart. Third is Kedungkandang. It is district with the fewest number of minimarts but has the most extensive area.

2) Population

The Population of the study is the traditional shop located in the research site. To measure the impact before and after minimart, the shop was established at least in 2006; and the size is not less than 15 m². 2006 was the year when the first minimart was built in Malang.

3) Scope of the Content

Minimart in this study limited to a networked or franchise minimart. The brands are Indomaret, Alfamart, Alfamidi, and Alfaexpres. These minimart are the most widely grown in Indonesia and in Malang. Local entrepreneurs founded these fourth minimarts. Along with the development of business, the shares of the four brands were sold to foreign investors such as Carrefour and Philip Morris International.

The scope of the impact analysis is limited to the economic impact on performance of traditional shop. The variables of performance of the traditional shops are limited to number of buyer, revenue and profit in 2006 and 2011. T-test and the difference-in-difference estimator (DiD) were used in quantitative analysis.

4) Period of Data Collection

The primary data were collected during June to October 2011.

1.4 Research Benefits

The results of the study provide benefits for:

1) Traditional shop

This study provides information on strategies that can be done by the owner of a traditional shop that is adjacent to the minimart, so that they are able to survive in the face of intense competition with minimart.

2) Local Government

The results could be used as a reference source for the government to regulate competition between traditional shops with minimart. Fair arrangement by the government will create an equal competition between traditional shop and minimart.

1.5 Definitions

Definitions used in this study are as follows:

1) Minimart

Minimart in this study is a franchised modern retail shop; the size is less than 400 m² and sells fast moving consumer goods and necessity products. The brands are Indomaret, Alfamart, Alfamidi, and Alfaexpress.

2) Traditional Shop

Traditional shop in the study is “mom n pop shop” that traditionally managed, operated by family member and sometimes hired labor, and selling fast moving consumer goods and necessity products.

1.6 Organization of the Study

The study consists of five chapters. The first chapter is introduction; consists of statement of problem, objective of study, scope of study, research benefit, definition, and organization of study. The second chapter is literature review, consists of general information of research site, retail business development in Indonesia, theoretical background and related research. The third chapter is research methodology, consists of data and data collection, and data analysis. The fourth chapter presents the results and discussions; consist of minimart development in Malang city, characteristics of the traditional shop, changes in traditional shop after minimart presence, economic impact of minimart on traditional shop, and strategy of traditional shop to survive in retail business. The fifth chapter is conclusions and recommendations.

CHAPTER 2

Literature Review

This chapter is divided into four sections. The first section is the general information of the research site. This section provides an overview of the geographical location, area and the socio-economic conditions of Malang city. The second is an overview of the retail business. The third section is the theoretical background of the research. This section is consisting of the theory of retail changes, impact evaluation and its analysis. The fourth is related study on the impact of modern retail business development on traditional retail business.

2.1 General Information of Research Site

Malang city is located in the eastern part of Java island, specifically in East Java province. It is the second largest city in East Java, located approximately 90 km south of Surabaya (provincial capital). As the second largest city in East Java, Malang is often becoming a reference to another city in terms of development in various fields. The total area is 110.60 km² of Malang, divided into 5 districts namely: Blimbing, Kedungkandang, Klojen, Lowokwaru, and Sukun.

2.1.1 Population

Population density indicates how many people live in a particular unit area. Table 2.1 shows the total population in Malang city in 2010. The 820,243 people spread across five districts in Malang city. Lowokwaru is the highest population district while the least number is Klojen.

Table 2.1 Malang's Areas, Population, Density, Household, and Family Member in 2010

No	District	Area (km ²)	Population	Density (people/km ²)	Household	Family Member
1	Blimbing	17.77	172,333	9,698	43,558	3.95
2	Kedungkandang	39.89	174,477	3,474	43,666	4.00
3	Klojen	8.83	105,907	11,994	28,213	3.75
4	Lowokwaru	22.60	186,013	8,321	59,304	3.14
5	Sukun	20.97	181,513	8,656	45,660	3.98
Total		110.06	820,243	7,453	220,401	3.76

Source: Malang City Statistic, 2011

Malang's population density was 7,453 people/km² (see Table 2.1). Klojen has the smallest area with the highest population density because Klojen is the center district of Malang. In contrast, Kedungkandang was the largest area, but lowest population density and less development compare to others.

The numbers of households in Malang city were 220,401 families. Klojen consist of 28,213 families with average 3.75 family members, while Lowokwaru included 59,304 families with average 3.14 family members. On the other hand, Kedungkandang has the highest average numbers of family size compared to other districts, four people/family.

2.1.2 Socio-economics

The majority (41.59%) of households in Malang spend their money at more than \$249 per month (see Table 2.2). Some other was expenses in \$100 to less than \$249. Meanwhile, households' spending less than \$50 was only 1.11%. The data indicated that the households in Malang needed more than \$249 per month for household expenditure.

Table 2.2 Distributions of Household by Monthly Expenditure in Malang in 2010

No	Monthly Expenditure in \$	%
1	< 50	1.11
2	50 – 99	5.56
3	100 – 149	16.13
4	150 – 199	19.89
5	200 – 249	15.72
6	> 249	41.59

Source: Malang City Statistic, 2011

There are several levels of formal education in the education system in Indonesia starting from elementary school to doctorate. In Indonesia, nine years of primary education are compulsory. In Malang 21% of the population did not graduate the elementary school, and over 23% graduated elementary school (Table 2.3). The level of education with the highest percentage was senior high school, i.e. about 30%. Only 7% graduated with higher education; Diploma, Bachelor, Master, and Doctoral degree.

Table 2.3 Population by Level of Education and Gender in Malang in 2010

No	Education level	Male (%)	Female (%)	Total (%)
1	Not Graduated Elementary School	19.53	20.10	21.21
2	Elementary School	22.24	22.19	23.77
3	Junior High School	17.08	16.88	18.17
4	Senior High School & Vocational School	28.01	27.76	29.85
5	Diploma, Bachelor	11.21	11.16	5.97
8	Master and Doctoral	1.93	1.91	1.03
Total		100.00	100.00	100.00

Source: Malang City Statistic, 2011

Minimum wage in Malang increases according to minimum expense. In 2006, the minimum wage was not enough for living decently. However, the minimum

wage increased from IDR 681,000/month in 2006 to IDR 1,006,263/month in 2011 which was equal to minimum expense for living (Figure 2.1).

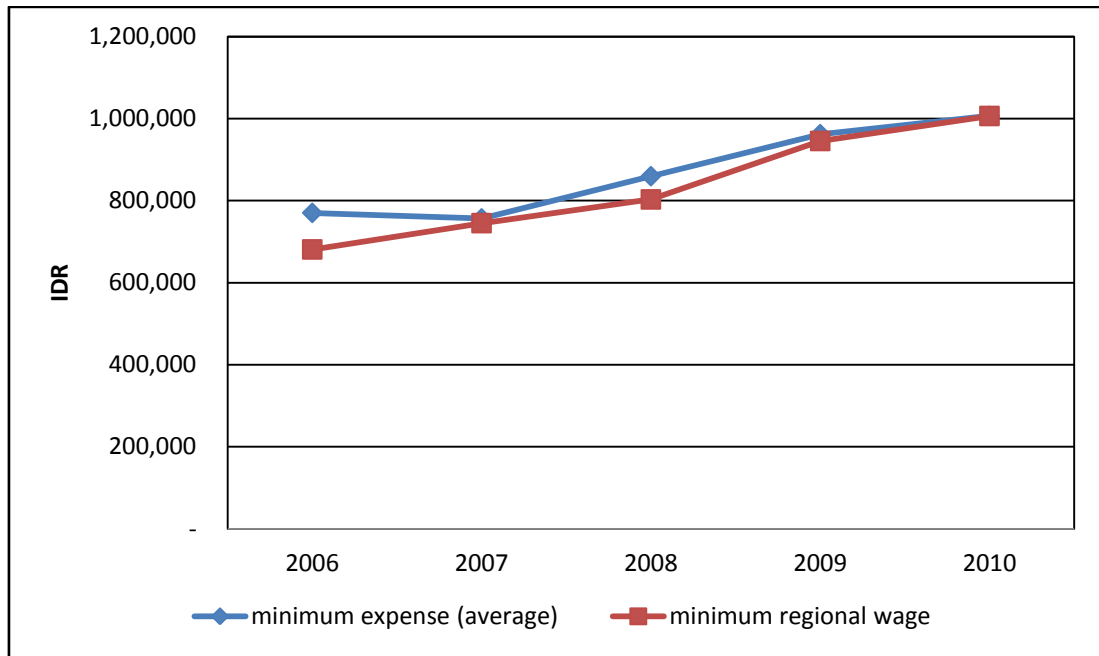


Figure 2.1 Minimum Expenses and Minimum Wages per Month in Malang in 2006-2010

Source: Malang City Statistic, 2011

From Malang statistic, the labor force included people over ten years old. The workforce categorized based on business sectors as presented in Table 2.4. The first three largest groups of the workforce are trade sector (30.11%); services sector (25.81%); and the industry or manufacturer (16.80%). The mining sector engaged the smallest proportion of labor, which is 0.24%.

Table 2.4 Workers by Business Sectors in Malang in 2010

No	Business Sector	%
1	Trade	30.11
2	Services	25.81
3	Industry/ manufacture	16.80
4	Constructions	8.60
5	Transportation and communication	6.33
6	Hotel and Restaurant	4.14
7	Agriculture	3.33
8	Finance	2.84
9	Others	1.14
10	Electricity, Natural Gas, and Water	0.65
11	Mining	0.24
Total		100.00

Source: Malang City Statistic, 2011

In spending their income to meet their daily needs, there are traditional markets and modern markets. Table 2.5 presented the number of traditional markets in Malang which classified by market types. In 2010, there were 30 markets, and the majority of them were type I.

Table 2.5 Traditional Market by District and Class in Malang in 2010

No	District	Number of Traditional Markets					Total
		I	II	III	IV	V	
1	Blimbing	2	-	-	-	1	3
2	Kedungkandang	1	2	3	1	-	7
3	Klojen	6	4	1	3	-	14
4	Lowokwaru	2	-	-	-	-	2
5	Sukun	2	1	-	-	1	4
Total		13	7	4	4	2	30

Remark:

I : permanent building, area minimum 2000 m²

II : permanent building, area minimum 1500 m²

III : semi-permanent building, area minimum 1000 m²

IV : semi-permanent building, area minimum 500 m², fruit, flower and ornamental fish market

V : semi-permanent building, area minimum 250 m², livestock markets

Source: Malang City Statistic, 2011

In Addition, 14 of them were located in Klojen. These traditional markets sell a variety of product such as fresh agricultural products, book, etc. There are some modern retailers in Malang, shopping malls, department stores, hypermarkets, supermarkets, and Minimarts or convenient store. There are 14 shopping malls and hypermarkets, most of them are located in Klojen.

2.2 Retail Businesses

2.2.1 Retailing: An Overview

Retail is the set of business that adds value to the products and services to the consumer for their family and personal use (Levy and Weitz, 2012). Most people noticed that retailing is a process of buying and selling of goods or products in a shop, both physical shops, and online shops. Retailing becomes a necessity in human life. Without it, the people will have difficulty in fulfilling the needs of our lives.

Retail business is a global business; it has an enormous economic and social importance. Retailing improves the standard of living and increases employment, investment, and innovations. It is responsible for anchoring urban regeneration in many parts of the country and embodies the spirit of competition (Sparks, 2008). Retailing is operating through various single outlet entrepreneurial businesses, but the sector also contains some of the world largest companies. For consumers, retail development simply provides a more convenient place and the way to shop. For practical purposes, shopping is necessary to obtain a substantial majority of the goods and services required by modern households. It is also a form of an essential part of social interaction.

Retail business is individual to human life. An activity serves the final consumer. Coverage in the retail business is quite broad, covering the activities of modern retailing and traditional retailing. In modern retailers, it includes hypermarkets, supermarkets, minimart and convenience store, and department stores. In traditional retailers, it includes traders in the traditional/wet market, traders at the traditional shop with a relatively small size, merchant stalls are small, and peddlers use a car or motorcycle, and so forth.

2.2.2 Retail Business Development in Indonesia

Retail businesses in developed countries are dominating by fixed shop outlets. In the last decade, the retail companies are joining with a complex organizational structure of a large distribution company with several retail outlets. Vice versa, in developing countries, the retail business remains only one element, and sometimes it is one of the structures and larger institutions. Furthermore, the small-scale retailers in developing countries are still dominating the economic structure of the retail sector.

The development of modern retail business in Indonesia is experiencing expeditious progress. More than ten years ago, almost all supermarkets located in Greater Jakarta, but now only 50% of them (Pandin, 2009). Supermarket development has expanded into other islands, even large villages in Java. This phenomenon occurs because of incessant supermarket expansion into smaller cities in Indonesia.

Table 2.6 presented the number of retailer in Indonesia in period 2005 – 2009. The number of traditional traders increased from 1.8 million outlets in 2005 to

2.5 million outlets in 2009. Regarding to the number of minimart they increase nearly double in five years from 6,456 outlets in 2005 to 11,569 outlets in 2009. The growth of minimart in 2005 to 2009 was the highest, 15.66% per annum.

Table 2.6 Number of Retailer in Indonesia in 2005-2009

No	Kind of Retailer	2005	2006	2007	2008	2009	Growth (%)
1	Traditional	1,787,897	1,846,752	1,900,332	2,469,465	2,520,757	8.97
2	Minimart	6,465	7,356	8,889	10,607	11,569	15.66
3	Supermarket	1,141	1,311	1,379	1,571	1,146	0.11
4	Hypermarkets	83	105	121	127	141	14.17

Source: Compiled from Nielsen AC., 2006–2010

1) Traditional Retail Business Development in Indonesia

Referring to the classification of retailers, Dharmmesta and Handoko (2008) mentioned that traditional retailer in Indonesia have the following characteristics; privately owned, have a physical shop with a relatively small size. The traditional retail businesses consist of traditional shop or mom and pop shop, independent shops without financial documentation, and a small number of labors and usually are family, as well as having flexible operating hours.

PP No. 112 of 2007 under Ministry of Commerce (2012) defined the traditional market as a market that is built and managed by the government, the local government, the private, state-owned enterprises, local state-owned enterprises, and/or cooperation with the private sector. Traditional markets can be in the shop and tents which owned or managed by small traders, medium, or cooperative organizations with small scale and small capital. The sellers and the buyers can bargain during the transaction in the traditional markets.

Traditional retail business is a very old economic institutions, has the responsibility of distributing daily necessities and other household needs. It plays an important role in supporting the national economic system and employment. At the business level, Traditional retailers usually have their own loyal customers. They usually provide incentives and/or services to keep customers coming back to buy products at their shop. For example, they offer lower price and discount.

2) Modern Retail Business Development in Indonesia

According to PP No 112 of 2007, “market” means a place where more than one seller that refers to as a shopping center, traditional market, store, mall, plaza, trade center or another reference deals in goods. "Store" is the building functioned as a place of business used to sell goods and consisted of only one seller. "Modern Store" is an outlet with a self-service system, selling a variety of goods at retail in the form of a minimart, supermarket, department store, hypermarket, or wholesale. Table 2.7 summarized the differences between each type of modern retailer in Indonesia based on the physical definition and goods available.

Table 2.7 Modern Retail Business Based on Size and Product

No	Modern Retail	Business size	Selling system and kind of product
1.	Minimart	< 400 m ²	Selling consumer goods at retail,
2.	Supermarket	400 – 5,000 m ²	particularly food products and
3.	Hypermarket	> 5,000 m ²	household products
4.	Department Store	> 400 m ²	Selling clothes and its accessories at retail
5	Wholesaler	> 5,000 m ²	Selling consumer goods in wholesales

Source: Ministry of Commerce (2007)

The first modern retail market in Indonesia was recorded in the early 70s. It was Sarinah department store. Ten years after Sarinah was established, there was no further development. In 1978 to 1982, it was continued growth in this retail business format. In the early decades of 1990s, 'Sogo' -one of Japan's largest retailer- was entering Indonesian markets. This decade is often referring to “a historical landmark entry” of retailing in Indonesia. Supermarket outlets began to spread rapidly after 1983 (see Figure 2.2) along with economic growth and an increase in income per capita (Natawidjaja, 2005).

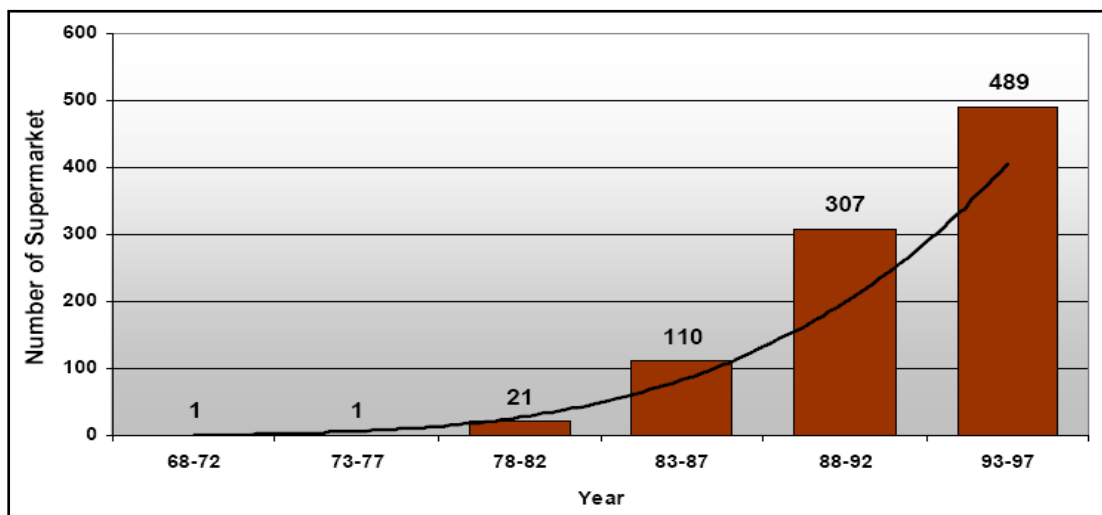


Figure 2.2 Early Development of Supermarket in Indonesia in 1968-1997

Source: Natawidjaja, 2005

In the period of 1978-1992, the supermarket sector grew 85% per year. While the growth rate declined, expansion continued at 12% per year between 1993 and 1997. In that period, initially, the development of supermarkets was mostly in Jakarta and then spread to the big cities in Java, like Bandung, Semarang, Yogyakarta, and Surabaya.

In the mid-1990s, the concept of hypermarkets started to go into Indonesia. It is characterized by the entry of retail giants of French companies, "Carrefour and Continent" in 1997. In Indonesia, they become one company by the name of Carrefour, which operates 12 hypermarkets in Jakarta, Surabaya, and Medan.

In 1998, the giant USA Company "Wall-mart" also entered the retail business in Indonesia. In the same year, their first outlet was on fire during riots in Jakarta because of the multi-dimensional crisis in Indonesia. After the incident, Wal-Mart then decided to leave Indonesia. After the crisis that hit Indonesia, the moment was just like bringing fresh air into the modern retailing development of Indonesia. With the issue of decentralization of development, the construction of the shopping center began to spread to small towns in the area. Natawidjaja (2005) remarked there were two new actors in hypermarket business, Giant, and Hypermart. The Hero Group, and Giant –a retail company from Malaysia- is managing Giant Hypermarket. The Matahari Group is managing Hypermart. The number of hypermarkets was quite small but consistently increasing (see Figure 2.3).

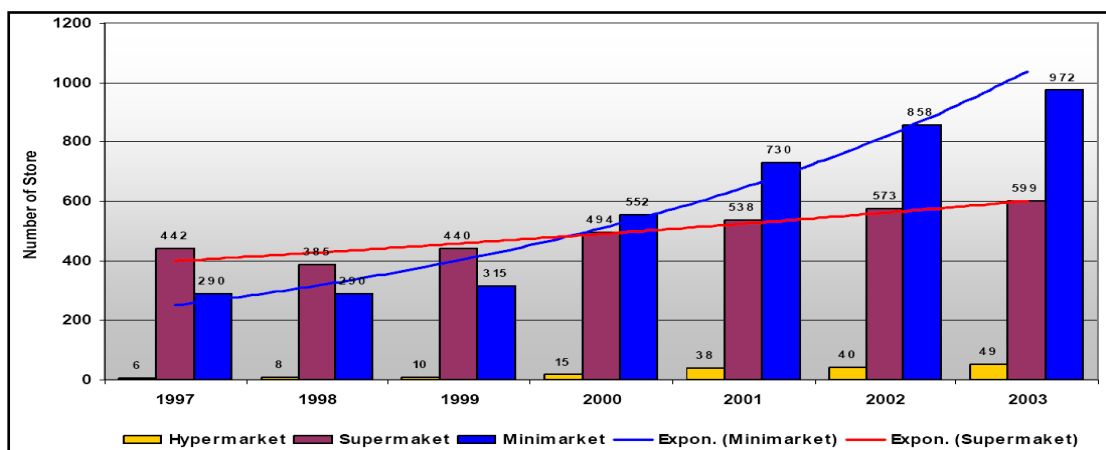


Figure 2.3 Development of Modern Market in Indonesia in 1997-2003

Source: Natawidjaja, 2005

Nielsen AC. (2010) state the 2000's is the decade of changes of the grocery retailing in Asia. Moreover, this was happening in Indonesia. From Figure 2.4, it shows that modern developments in the Indonesian market were growing fast, especially the minimart. Nevertheless, the rapid development of the modern business creates protest from some traditional retail businesses that was affected. APRINDO (Association of Retail Businessmen Indonesia) has filed a complaint against modern retailers concerning the content of regulation.

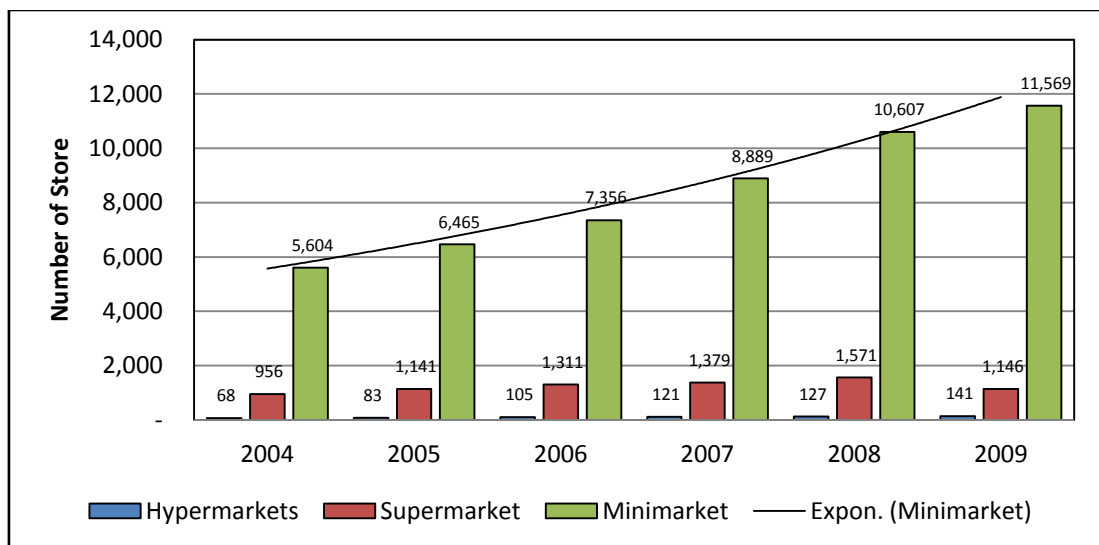


Figure 2.4 Development of Modern Market in Indonesia in 2004-2009

Source: Compiled from Nielsen AC., 2005–2010

The phenomenon of the rapid rise of modern retail business in Indonesia has been seen in the middle of 1990s. Nowadays, the modern retail business in Indonesia is expanding its territory up to the remote areas quickly. In retaliation of their existence, many opinions are pros and cons. For most consumers, the presence of modern markets provides an attractive alternative to shopping. Not only offers the

convenience and good quality products, but also offers competitive prices, it is even cheaper than the traditional market (Tambunan et al., 2004). On the other hand, these circumstances make small retailers feel worried. Some small retailers were experienced the impact of the presence of modern retailer, such as hypermarket, and supermarket and minimart.

Minimart is a self-service outlet. It is like the supermarket, sells fast moving consumer goods and basic household necessities, except it has only one or two cashier machines only (Tambunan et al., 2004). According to Ministry of Commerce (2007), the size of the minimart is not too large, approximately not more than 400 m², and sells 3,000-4,000 units of product. Minimarts were one of the modern markets that growing rapidly. Minimart offers a convenience stores or outlets because of its location close to consumers in the residential housing.

Table 2.8 Number of Minimart in Indonesia in 2004-2010

Minimarts	2004	2005	2006	2007	2008	2009	2010	Growth (%)
Indomaret	1,001	1,420	1,857	2,425	3,093	3,312	3,892	25.40
Alfamart	973	1,263	1,629	2,361	2,736	2,896	3,422	23.32
Yomart	25	66	110	146	162	177	220	43.69
Star Mart	44	52	64	87	116	122	124	18.85
Alfa Midi	-	-	-	-	60	71	109	34.78*

Remark: The data only show the five biggest retail chains in minimart)

: * growth in 2008 to 2010

Source: Compiled from Nielsen AC., 2004–2010

The minimart players who dominate the market are Indomaret and Alfamart (Table 2.8). Indomaret is the pioneer of the minimart in Indonesia. In 1997, Indomaret decided to use a franchise concept in their development of their outlets. With this method, the number of Indomaret increasingly scattered in small towns. In

2004, Indomaret already had more than 1000 outlets spread across Jakarta, Bogor, Tangerang, Bekasi, Bandung, Surabaya, and Yogyakarta. Currently, Indomaret is growing rapidly and spread over the country.

Alfamart is the second largest player in the minimart. Alfamart started minimart business in 1999 with a brand of 'Alfa Minimart' by Alfa Mitramart Utama Company. In 2002, the company already had 141 outlets Alfa Minimart, and since then started expanding exponentially with the new name of 'Alfamart'. Despite the global economic crisis in late 2008, the company achieved significant growth regarding market coverage, supported by the growing number of outlets amounted to 21.4% or 2,779 outlets in 2008 to 3,373 outlets in 2009.

From 2004 to 2010, the growth of Yomart was the highest (36.44%). Most of Yomart are only in a big city. The second was Indomaret (21.41%), and the third is Alfamart (19.68%). Looking at the rapid development of minimarts, it becomes the most rapid progress in the retail business. Minimart players, when built their businesses, will build new outlets close to residential areas. They will provide low prices to customers; they also offer a variety of promotional and discount programs, making it very attractive to buyer.

2.3 Theoretical Background

2.3.1 Retail Changes

There have been dramatically changes in the retail environment of the western country since the 1970s (Trail, 2004; Bromley and Thomas, 2003). Shopping becomes an essential part of social interaction. The concepts of shopping as a recreation based activity have been gain widespread acceptance as an important

aspect of modern culture. Retail change has occurred in the subject of wide-ranging socio-economic trends. The first is the increasing affluence associated with a rise in car ownership and much greater mobility. The second trend from the retail changes is in the spatial redistribution and composition of the population. The third is the changes in the socio-economic pattern as a result of the changing in the labor force. The last is the changes in the social-political attitudes.

The revolution of the technological changes in the retail business in the past few decades have been transformed the retail business operation. There is a shift in the services system, from counter service to self-service, an enormous growth in the size of many types of retail business, particularly in groceries. The retail business organization has been dramatically changed. The small shop has a decline as the result of the massive retail business growth. The owners of the modern retail business can quickly recognize the commercial advantage of the satisfying changing consumer by developing large, easily accessible retail outlets on out-of-centre sites. The emergence of out-of-center has transformed the retail structure of most cities in Europe (Dawson, 2010) and America (Weitz and Whitfield, 2010) and Asia (Minten, 2008; Reardon, 2008; Paddison, 2005; Samiee, 2005; Savitt, 2005; Larke, 2004). It will also happen in Indonesia.

There are three main categories of theory; The Cyclical Theory, The Environmental Theory, and The Conflict Theory (Ferne et.al, 2003). Cyclical theories are the earliest and the most popular theory of retail change. The Environmental theory relies on the interplay between the external environment and organizational environment. The Conflict theory gives an explanation of what happens when the innovation or new format challenge the status quo in a retail sector.

1) The Cyclical Theories

The cyclical theories consist of three primary theories:

- (1) Wheel of Retailing,
- (2) Retail Life Cycle,
- (3) Retail Accordion.

The Wheels of Retailing theory was developed by Professor Malcolm P. Nair in 1950s. It was to establish the understanding of the rapid growth and development of retailers after The World War II in western nations. Figure 2.5 show The Wheels of Retail in a simple explanation

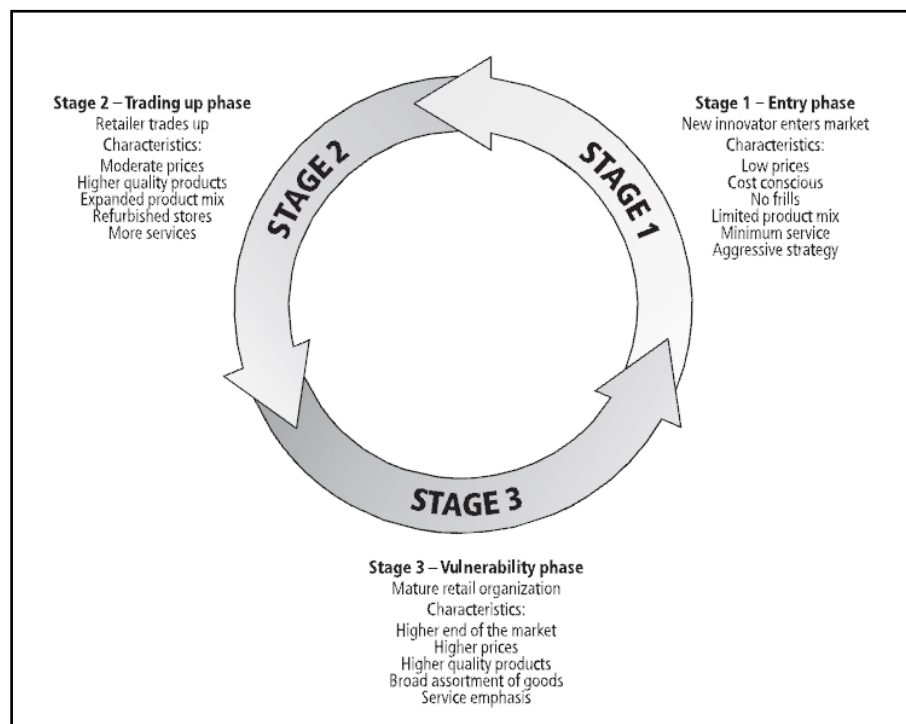


Figure 2.5 Wheels of Retailing

Source: Fernie et.al., 2003

The theory hypothesize that new types of retailer typically enter the market as low-status, low-margin, low-price operators (stage 1). Gradually they gain

more elaborate establishment and conveniences, with improvement in investments and high operating costs (stage 2). At last, they full-grown as high cost, high-price merchants, open to newer types who, in turn, go all the way through the same pattern (Stage 3).

Retail life cycle theory assumes that retail organization and retail format will move through all four processes. The first process, a new retail format will spend a short time, only a few years, in the innovation stage of the life cycle. The successful innovators will move to the second stage –the growth stage- by taking advantage of a lack of direct competitors to grow sales rapidly and develop retail outlet number, while the non-successful innovators will not enter the next stage. During the growth stage the number of outlet will expanding rapidly. The growth phase normally last for several years before the retail format is mature. The third stage is maturity; as long as the retailer is consumer and competition oriented the maturity will last indefinitely. In this stage, the mature format will have many competitors. The rate of sales growth slows together with the level of profitability. The last stage is the decline process. When the growth becomes negative and profitability is very slow, it can be last indefinitely. The declining format fill have fewer direct competitors and more competitors that are indirect in the growth and maturity phases of the life cycle.

The third cyclical theory is the retail accordion. It is US-based theory that rooted in its historical pattern of retail development. The theory is relates retail development overtime to merchandise range. Based on the theory, there is a tendency for retail organization to move alternately towards specialization and diversification over time. The earliest outlet was general stores, delivering a wide range of merchandise, narrow depth of category to small, disperse communities. The next

development is making the outlet becomes department store. It offering a wide range of merchandise and depth of category. The last development on the accordion theory is bringing more concentration of merchandise on the outlet.

2) The Environmental Theories

The Environmental Theories are focusing on the interplay between the external environment and organizational environment. There are various external environments –legal, political, demography and socio-cultural, economics and technology– influencing on the retailing changes. This change may take place sooner or later. Only organizations that can respond quickly and deal with the change is what will grow, survive, and thrive. There are two dominant environmental theories of retail change (Fernie et.al, 2003); Evolution Theory and Institution Theory.

Retail evolution is naturally having a link to the theory of evolution by Charles Darwin. In the retail business, retailer who properly manages their business to survive and make changes in order to adapt to the changes, they will succeed. The changes in the environmental will cause changes in retail business and the structure of retailing in time as a result of all previous retail management decisions, political, social, economic and technological environment within which the retailers operate.

Institutional theory identify that the organization is an organic part of its environment (see Figure2.6). There is a degree of interdependence between them. Decisions and actions reflect the retail business economic norms, and cultural norms that exist in the environment in which they are located. Norma is on the task and the specific institutional level. At the level of the task, the retailer responds to environmental conditions through actions aimed at the performance of the retailer. At the institutional level, the action of retailer restricted and limited to cultural norms and

social norms that will affect both the culture of the organization and role in the community in which they exist.

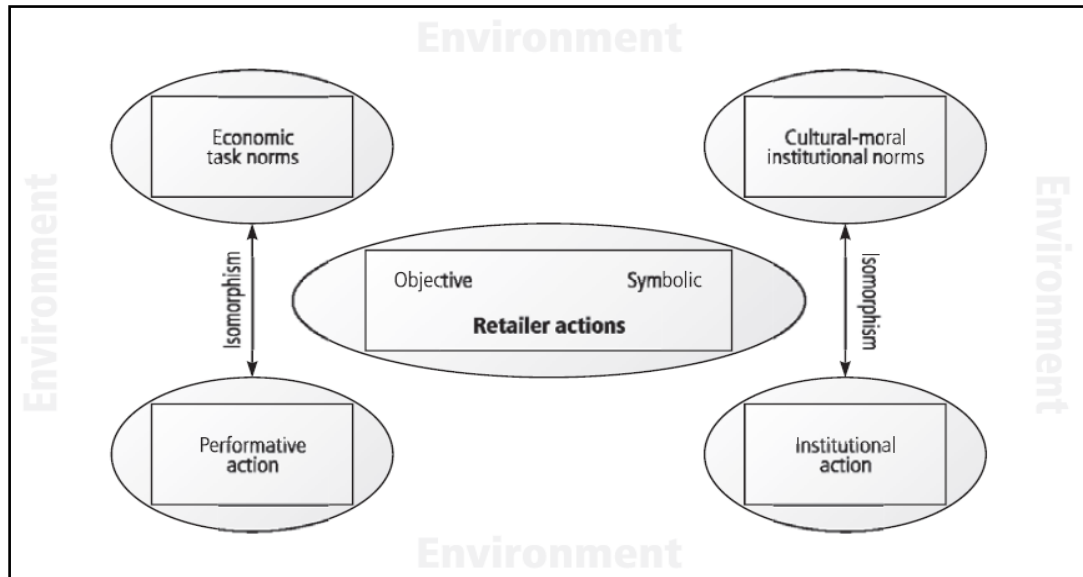


Figure 2.6 Institutional – Environmental Interactions in Retailing

Source: Fernie et.al., 2003

In the retail business, institutional and environmental factor gives significant effect to the retail performance. From the picture, economic task norms is the economic environment in which the organization operates and within which it frames its performance objectives and actions. Cultural-moral institutional norms refers to the organization's stakeholders create an institutional environment with cultural and moral requirements which reflect the norms of social conduct in the external socio-cultural environment. Performative action is performance levels and actions taken by the organization, e.g. pricing strategy, merchandising decisions. Institutional Action: non-performance actions taken by the organization, e.g. community involvement, environmental policies. A symbolic action is use of symbols

such as slogans, signs and promotional literature, which relate to the organization's actions to its social and economic environment. An objective action is an action taken to compete successfully within the economic task environment.

3) The Conflict Theory

This theory refers to what happens when there is innovation or new formats present and challenge the status quo (the old player/ old ruling). Retail business will adapt to each other in terms of competition, novelty or innovation services, and different forms of retail business. The constant of the format change is deriving from the dialectical process comprising of the action - reaction - synthesis. When there is a successful innovators enter the retail market as it has a competitive advantage (action) the existing incumbents will design and perform a variety of actions to minimize the competitive advantages (reaction). It is usually encourage them to modify their way of business. Meanwhile, new business innovations will also have to adapt to changes that made its competitors in order to survive in the market. Ongoing adaptation will provide two different types / kinds; trading closer and closer together to the point where there is virtual indistinguishable (synthesis).

Initially, retailers are hostile to the threat to their established role in the industry and distribution channels (Fernie et.al, 2003). Company size, solidarity merchants, organizations and political rigidity, all channels can promote hostility towards 'smugglers' new-comers-. In phase 2, the retail organization that has been established will ignore or downplay the possible effects of innovation. As threats become more sustainable innovation and severe, there may be a movement to block the progress of innovation in phase 3. If unsuccessful, will give way to the final stage, the adaptation

4) The Combined Theory

This theory combines the theories that have been there before-cyclical Theories, environmental theories, and Conflict Theory-. See Figure 2.71. The image pattern looks like a ring that signifies the cycle. This is because each of them has its phases each one separately. In the central figure, is the customers –customers need, wants, and desires– who encourage all three parts of the model. This occurs because a retail organization in an attempt to make it to a higher level, which is absorbed into the existing retail system, it must operate in a way that is acceptable and attractive to customers.

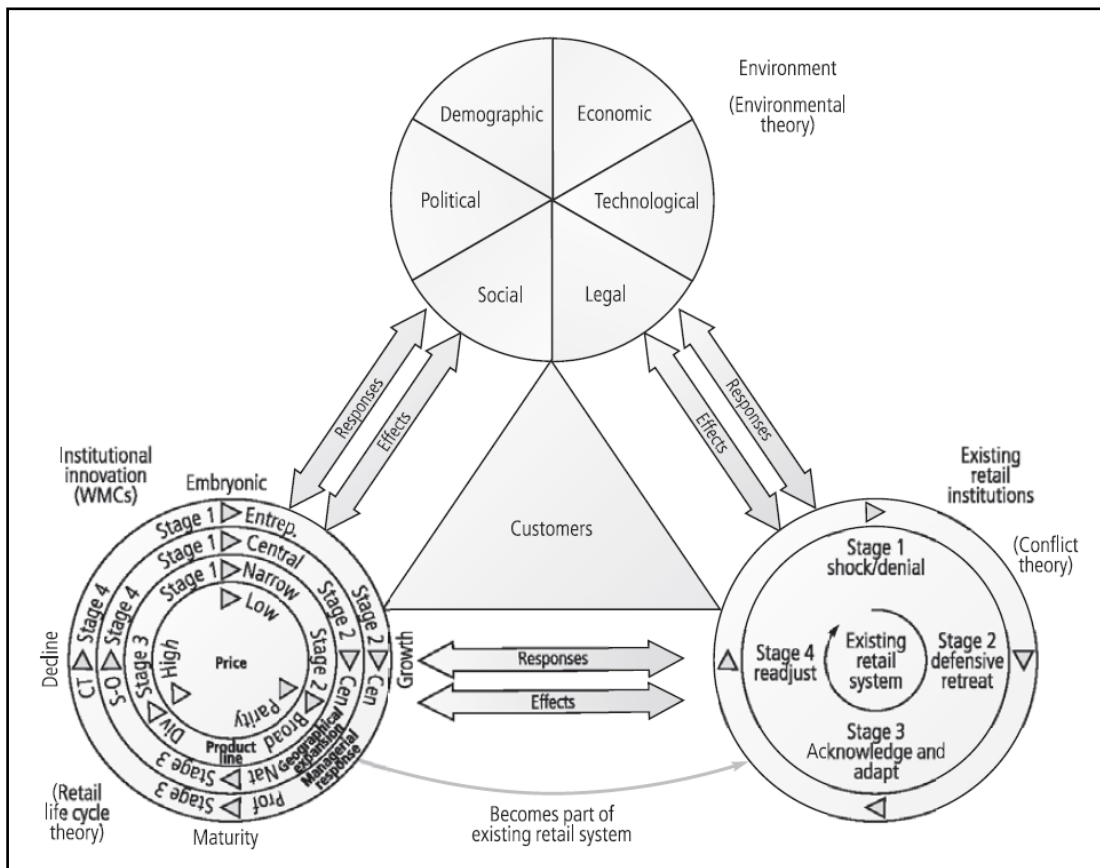


Figure 2.7 Descriptive Models of the Evolution of New Retail Forms

Source: Fernie et.al., 2003

2.3.2 Impact Evaluation and its Analysis

A thorough evaluation can be defined as an evaluation that includes monitoring, evaluation process, the evaluation of cost-benefit, and impact evaluation. “Impact” refers to “net project impact” which means “total observed change” minus “change which should be attributed to other factors not related to the project” (White and Bamberger, 2008). Evaluation is a selective exercise that attempts to systematically and objectively assess progress towards and the achievement of an outcome (UNDP, 2002). Impact evaluation allows evaluators to assess whether the observed changes can be attributed to the impact of the project and the extent to which projects, programs and policies have produced their intended impact and benefit the intended target population. The impact can be positive or negative and are intended or unintended. Positive, the net impact is theoretically intended to indicate that the program is legally and accurately explain how to and extent to which the project contributed to the observed changes in the target population. Impact evaluation can also be useful for assessing the validity of the theory of a program and to test some of the critical assumptions and hypotheses underlying.

There are several designs and methods in the evaluation of the impact; true experimental design or experimental design, quasi-experimental designs, qualitative methods, and integrating quantitative and qualitative methods (ADB, 2006). The selection of the design and methods of impact evaluation is base on the object of evaluation.

Experimental design, also known as randomization, generally considered the most powerful of the evaluation methodology. By randomly allocating the intervention among eligible beneficiaries, the task itself creates comparable

treatment and control groups, which were statistically equivalent to each other, given the sample size accordingly. It is a very strong result. In theory, the control group gained through random selection serves as a perfect counterfactual, free from the problem of selection bias that exists in all evaluations (Baker, 2000).

Pure experimental design used in fields such as medicine, animal behavior and educational research studies conducted in laboratory conditions carefully controlled. In the simplest design, subjects were randomly assigned as the experimental group group, who will receive treatment (for example, a new drug, or a reward / punishment used in animal research or school programs), and Control are not receiving treatment. A test applied to the two groups in Period Time 1 (T1) before the trial began to measure behavioral, physiological reactions or other variables of treatment intended to affect. Repeated measurements in Time 2 (T2) following the application of an experimental treatment. Measurements at T1 and T2 is defined as E1 and E2 for the experimental group and the C1 and C2 for the control group.

On the other hand, when evaluating the impact of development projects (water, roads, micro-credit, training of teachers, provision of instructional materials, etc.), it is almost impossible to approach the level of correct design as a control. As a result, a series of quasi-experimental design have been developed to estimate as closely as possible with a pure experimental design. Quasi-experimental (nonrandom) methods can be used to evaluate if it is not possible to construct treatment and comparison groups through experimental design. This technique produces a comparison group that resembles the treatment group, at least in the observable characteristics using an econometric methodology, which includes methods of matching scores, the method of double difference, instrumental variable

methods, and the reflexive comparison. When this technique is used, the treatment and comparison groups are usually chosen after the intervention using a nonrandom method.

2.4 Related Research

Although there are many studies on the impact analysis, only some focus and discuss the impact of minimart on traditional shop. Most of the research investigated the impact of the presence of modern markets such as supermarkets and hypermarkets to the traditional markets. These studies used a qualitative approach and a quantitative approach.

Priyono and Ekapuri (2008) used cost-benefit analysis method describe the effect of wholesaler to retailer, supplier, customer, government and society in Indonesian. The results showed that wholesaler not only give a negative effect on retailer but also give a positive effect on customer and supplier. The positive effect appears from social effect. Overall, wholesaler has a positive effect to business environment. The effect of wholesaler to retailer –reduce revenue- is just 4% because of distribution effect.

Farhangmehr et.al. (2001) used two questionnaires –one for consumers and the other for traditional retailers–, wanted to understand the impact of hypermarket in Braga, Portugal. Using a case study approach, and comparative analysis, the research conclude that the hypermarket was the preferred kind of retail outlet by consumers, even though the consumer buy several establishments and not exclusively in the hypermarkets, which indicate that there is no “single loyalty”. In Hypermarket, consumer buy essential convenience goods, with a low level of risk, in

traditional retail, they buy essential products of more involvement, which requires a more complex buying behavior. The research shows that consumers evoke price and convenience for not buying certain goods in traditional retailers which reveals an attempt to optimize their time and money. The research also shows that almost all of the concerning retailers feel negatively affected by hypermarkets.

Traill (2006) concluded that the rate of spread of supermarkets, in developing countries is an issue of topical interest. It has potentially important impact on farming, food businesses, other retailers, trade in processed food products and diets. He quantitatively estimates the relationship between the shares of supermarkets in the retail food sector for a cross-section of 42 countries, and the accepted main drivers of change: income and its distribution, urbanization, female participation in the labor force and openness to foreign competition through foreign direct investment.

Yustika (2008) used quantitative and qualitative approaches to determine the economic impact of the presence of hypermarkets on traditional retailers. Difference in difference methods was used to analyze the economic impact of hypermarkets. The research concluded: 1) the presence of hypermarkets had no impact on several indicators of the performance in traditional markets. 2) The presence of hypermarkets significantly produces a negative impact on the number of buyers.

Suryadarma et.al. (2007) analyzed the impact of supermarkets on traditional markets and traditional retailers in Indonesia's urban centre. Using difference in difference method: "Impact = (T2 - T1) - (C2 - C1)" where T1 and T2 are the condition of the traders in traditional markets before and after the arrival of a supermarket near the traditional market respectively, and C1 and C2 are the condition

of the traders in traditional markets where there is no supermarket nearby for the same period as the treatment group. If the impact is significantly different from zero, then supermarket indeed impact traditional markets, to analyzing the impact to traditional market's performance, the result shows that supermarkets only gives a negative impact on the number of employee in traditional markets.

Reardon and Gulati (2008) focused on the emergence of modern retailing with respect on food, and what implication it can have for various stakeholders in the food supply chain. They conclude by surmising what lessons other countries' experienced in the supermarket revolution have for India that is on the threshold of a major structural change in retailing. The expectations and concerns are high. They give a suggestion that India must form its own model of retail development to meet its priorities, learn from challenges that others have faced, and successful examples of strategies for "competitiveness with inclusiveness" among traditional retailers, wholesaler, and farmers. If they want to enter an era of rapid retail transformation and concomitant food system change.

Joseph et.al. (2008) reported their research results using descriptive analysis. In order to find out the impact of organized retailer on unorganized retailer, they use the term "catchment area" to determine the unorganized retail market nearby, and far away from organized retailer (see Table 2.9).

Table 2.9 Distances of Unorganized Retail Outlets from Organized Retail Outlets

Format Type	"Nearby" Outlets	"Far- away" Outlets
Supermarkets/ discount stores	≤ 0.5 km.	> 0.5-1.0 km.
Hypermarkets	≤ 5 km.	> 5-10 km.
Department stores	≤ 5 km.	> 5-10 km.

Remark: Distance in radius of organized outlets.

Source: Joseph, Soundararajan, Gupta, & Sahu, 2008

Martadisastra (2010) used literature study on the previous research, secondary data, and used qualitative descriptive analysis to analyze the impact of modern retailer on traditional retailer. The study concludes that: 1) the presence of modern retail business helping people and goods easily affordable and able to absorb labor. On the other hand, the presence of modern retailer would turn off traditional small retail businesses. 2) The presence of modern retail business provides negative impact on traditional retailer. Traditional retailers located near the modern retail experience worse effects than those located further away. 3) Regulations are adequate, but the implementation of monitoring and control is not running. Violation occurred because of lack of government control.

CHAPTER 3

Research Methodology

This chapter consists of two sections. The first sections is data and data collection and the second sections is data analysis.

3.1 Data and Data Collection

This research used both secondary and primary data. Details are in the following sub-sections.

3.1.1 Secondary Data

Secondary data were gathered from various sources. Secondary data in this study consist of all information related to retail business development in Indonesia, theory of retail change, impact analysis, and related research. Secondary data were collected from archives of Ministry of Commerce Republic of Indonesia, local office of industry and commerce in Malang, public document, book, journal, article, and statistical agency.

3.1.2 Primary Data

Primary data of this research were gathered from the traditional shop. Details are as follow:

1) Study Area

Malang City consists of five districts. Three districts were purposively chosen as research sites. First is Klojen, a district with the highest population density,

and it has a lot of supermarket and minimart. Second is Lowokwaru, a district with high population density, and the highest number of minimart among the five districts. Third is Kedungkandang, a district with low population density, and it was less number of minimarts.

2) Population and Sample

Population of this study is the traditional shop in the study area. The shop was operated before minimart established in Malang, at least it opened in 2006 or before. The size is not less than 15 m². There was no exact data that can be traced on how many traditional shops in Malang. Each person or family can run traditional shop without having permission from the authorities.

The sampling was pulled out using accidental sampling. To analyze the impact of minimart on traditional shop, this research need to use two-sample group (near and away) in two different periods (after and before). It is why the sampling method using accidental sampling. The accidental sampling based on the distance from the minimart and the year when the shop was opened, it was 2006. The near group consists of traditional shops that are close to minimart, the distance from minimart is less than 500m. The away group consists of traditional shops that far from minimart, the distance from minimart is at least 500m. The determination of the distance from minimart based on the minimart market range. Minimart has an effective market range less than 500m. Another determination of the range adapted from Joseph et.al, (2008). The distance consideration was required to determine whether the presence of minimart given significant impact on the performance of traditional shop. The year 2006 was the year when the first minimart presence in Malang. It was used to determine that traditional shop was opened at no minimart in

the vicinity. It is important to find out whether there is an impact between before and after the minimart presence.

This research requires the use of data from two groups of traditional shops; near and away groups. Because of the determination of the sample is based on the category of the group. Therefore, the determination of the number of samples should be based on category. Thus, the determination of the number of samples in this study was using the formula suggested by Cochran (1977). The equation is as follow:

$$n_0 = \frac{(t)^2 * (p)(q)}{(d)^2}$$

Where:

n_0 = the sample size

t = the abscissa of the normal curve that cuts off an area α at the tails.

The value for t is in the statistical tables that contain an area under the normal curve.

d = the acceptable margin of error

p = the estimated proportion of an attribute that is present in the population,
(maximum possible proportion =0.5)

q = 1-p

$(p)(q)$ = estimated variance = 0.25

By using Cochran formula, with α at 0.05 ($t=1.96$) in each tail, with the acceptable margin of error 7.5%, and the estimated proportion of traditional shop affected by the minimart (p) was 0.5, the minimum sample size (n_0) of 170.74 traditional shops was obtained. Eighty sixes traditional shops for each group of sample were used

for analysis. The numbers of samples from each district are on the table 3.1. The sample were collected during June to October 2011

Table 3.1 Number of Samples

No	Districts	Near Group	Away Group	Total
1	Kedungkandang	35	35	70
2	Klojen	24	24	48
3	Lowokwaru	27	27	54
Total		86	86	172

3) Research Tool

Structured questionnaire was used to collect information from the traditional shop. Questionnaire was divided into seven sections. The first section is general information of the shop. The second section is shop owner's profile. The third section is outlet type. The fourth section is the employee and the customer profile. The fifth is revenue and profit. The sixth is shop facility and services. The last section is the impact of minimart. The questionnaire is in Appendix.

3.2 Data Analysis

This research used non-experimental method or quasi-experimental design. It used to carry out an evaluation when it is not possible to construct treatment and comparison group through experimental design (Baker, 2000). Non-experimental method was used when the program or intervention is non-randomly placed (Ravallion, 2008). This method generates comparison group that is resemble to the treatment group in observable characteristics. Using this method, this study selects the near group as the treatment group and selects the away group as the control group

after the intervention by using non-random method. The intervention in this research is the presence of minimart.

To answer the objective of the research, three analytical methods were used. The first method was descriptive analysis, the second tool was quantitative analysis using t-test and the third method was quantitative analysis using difference-in-difference (DiD) estimator.

3.2.1 Descriptive Analysis

The descriptive statistic such as frequency distribution, mean and percentages was used to describe the minimart development and the characteristics of the traditional shop in the research area. Descriptive statistic was also used to describe the strategy undertaken by traditional shop to survive in order to survive in retail business

3.2.2 Quantitative Analysis: t-test

Two types of t-test were used in this study. Independent sample t-test was used to test the mean difference between the sample groups and paired sample t-test was used to test the mean difference between periods before and after the presence of minimart.

1) Independent sample t-test

Independent sample t-test was used to test :

- (1) The difference of the characteristics of traditional shop between near and away group in 2011, The characteristics of the traditional shop in 2011 are owner age, owner experience, shop age, distance from

minimart, shop size, number of worker, working hour, number of buyer, percentage of frequent buyer, revenue, and profit.

- (2) The difference of the performance of traditional shop between near and away groups in 2006, performance of traditional shop between near, and away groups in 2011. The performances are number of buyer, revenue, and profit.
- (3) The difference changes in the performance of traditional shop between near and away group. The performances are the changes in number of worker and the changes in working hour, the changes in number of buyer and the changes in percentage of frequent buyer, the changes in revenue and the changes profit.

The steps of independent sample t-test are as follow:

- (1) State the Hypothesis:

$$H_0: \mu_{near} = \mu_{away} \quad (\mu_{near} - \mu_{away} = 0)$$

$$H_1: \mu_{near} \neq \mu_{away} \quad (\mu_{near} - \mu_{away} \neq 0)$$

This is a two-tailed test, there are no direction were predicted

- (2) State the Criterion:

$$\alpha = 0.05$$

$$df = n_{near} + n_{away} - 2 = 86 + 86 - 2 = 170 =$$

Critical value of the test, $df = 170$, and $\alpha = 0.05$ is 1.974

- (3) Collect sample data, calculate mean (\bar{x}) and standard error (\tilde{s}):
- (4) Compute the t-statistic, the formula by Sheskin (2003) is as follow:

$$t_{\text{statistic}} = \frac{\bar{X}_{\text{near}} - \bar{X}_{\text{away}}}{\sqrt{\left[\frac{(n_{\text{near}} - 1)\tilde{s}_{\text{near}}^2 + (n_{\text{away}} - 1)\tilde{s}_{\text{away}}^2}{n_{\text{near}} + n_{\text{away}} - 2} \right] \left[\frac{1}{n_{\text{near}}} + \frac{1}{n_{\text{away}}} \right]}}$$

Where:

\bar{x} = mean

\tilde{s} = standard error of mean

n = number of sample

(5) Make a decision about the hypotheses

If $-t_{\text{table}} < t_{\text{statistic}} < t_{\text{table}}$, accept H_0 , there are no difference

If $t_{\text{statistic}} < -t_{\text{table}} < t_{\text{table}}$ or $-t_{\text{table}} < t_{\text{table}} < t_{\text{statistic}}$, reject H_0 , there are difference

If $p_{\text{value}} > 0.05$, accept H_0 , there are no difference

If $p_{\text{value}} \leq 0.05$, reject H_0 , there are difference

2) Paired sample t-test

Paired sample t-test used to test the different of the performance of traditional shop before and after minimart from each group of sample.

The steps of paired sample t-test (Sheskin, 2003) are as follow:

(1) State the Hypothesis:

$$H_0: \mu_{2006} = \mu_{2011} \quad (\mu_{2006} - \mu_{2011} = 0)$$

$$H_1: \mu_{2006} \neq \mu_{2011} \quad (\mu_{2006} - \mu_{2011} \neq 0)$$

This is a two-tailed test, there are no direction were predicted

(2) State the Criterion:

$$\alpha = 0.05$$

$$df = n - 1 = 86 - 1 = 85$$

Critical value of the test, $df = 85$, and $\alpha = 0.05$ is 1.988

(3) Collect sample data, calculate mean difference (\bar{D}) and standard error of mean difference ($S_{\bar{D}}$):

(4) Compute the t-statistic, the formula by Sheskin (2003) is as follow:

$$t_{statistic} = \frac{\bar{D}}{S_{\bar{D}}}$$

Where:

\bar{D} = mean of the difference scores

$S_{\bar{D}}$ = standard error of the mean difference

(5) Make a decision about the hypotheses

If $-t_{table} < t_{statistic} < t_{table}$, accept H_0 , there are no difference

If $t_{statistic} < -t_{table} < t_{table}$ OR $-t_{table} < t_{table} < t_{statistic}$, reject H_0 , there are difference

If $p_{value} > 0.05$, accept H_0 , there are no difference

If $p_{value} \leq 0.05$, reject H_0 , there are difference

3.2.3 Quantitative Analysis: Difference-in-Difference (DiD)

DiD estimator used to estimate the impact of minimart on traditional shop. DiD was used to compares samples in the near group and the away group before and after minimart presence. This method calculated the difference between the before and after values of the mean outcomes for each of the near and away groups. The difference between these two mean differences was the impact estimator.

Using DiD estimation, the characteristics of near groups and away groups should be similar. The steps in doing DiD estimation (Baker, 2006; Ravallion, 2008) are as follow:

1) Defining the Outcome Variables

The outcome in this research is performance of traditional shop. There are three outcome variables, average number of daily buyer, an average daily revenue and an average daily profit.

2) Defining the Time Dimension

There are two-time dimension, before and after the presence of minimart. This study used 2006 data as the initial data or baseline data before the minimart presence. The reasons underlying is the presence of minimart into Malang and started to spread up since 2006. The period after minimart was presence for some years, which was 2011 data.

3) Calculate the Double Differences

The basic of the DiD analysis is to calculate the average of the two groups from two different periods. The formula of the average variable was described as follow (Bluman, 2012):

$$\bar{x}_{group}^{time} = \frac{\sum_{i=1}^{n_{group}} xi}{n_{group}}$$

Where :

\bar{x}_{group}^{time} = mean in group ($N=near, A=away$) at a time ($b=before; a=after$)

n_{group} = number of sample in group ($n_{near} = n_{away} = 86$)

The calculation result will produce two differences, the difference between groups and difference between periods. The “difference-in-difference” shows in the rightmost column in the bottom row. It is the impact (see Table 3.2). In this

step, there are three variables used, an average number of daily buyer, an average of daily revenue and an average of daily profit.

Table 3.2 Simple DiD Estimation

Daily average performance (\bar{x})	Period		Difference in period
	2011	2006	
Near	\bar{x}_N^a	\bar{x}_N^b	$\bar{x}_N^a - \bar{x}_N^b$
Away	\bar{x}_A^a	\bar{x}_A^b	$\bar{x}_A^a - \bar{x}_A^b$
Difference in group	$\bar{x}_N^a - \bar{x}_A^a$	$\bar{x}_N^b - \bar{x}_A^b$	$(\bar{x}_N^a - \bar{x}_N^b) - (\bar{x}_A^a - \bar{x}_A^b)$

$$\text{Impact} = (\bar{x}_N^a - \bar{x}_N^b) - (\bar{x}_A^a - \bar{x}_A^b) \quad (1)$$

Where:

\bar{x}_N^a : Daily Average performance in near (N) group after (a) minimart presence (2011)

\bar{x}_N^b : Daily Average performance in near (N) group before (b) minimart presence (2006)

\bar{x}_A^a : Daily Average performance in away (A) group after (a) minimart presence (2011)

\bar{x}_A^b : Daily Average Performance in away (A) group before (b) minimart presence (2006)

Paired sample t-test was used to test the different performance before and after minimart established. Independent sample t-test was used to test the different performance between near groups and away group. It was also used to test the impact of minimart on traditional shop. If the different changes between the groups are equal to zero, there is no impact. If the different changes between the group are not equal to zero, there are an impact. The description for t-test was describe in subsection 3.2.2.

4) Use Regression to Replicate the DiD Results

Ordinary Least Square (OLS) multiple regression technique was used to determine the relationship between the performance of traditional shop and the presence of minimart.

(1) Model Specifications

The econometrics model DiD model was used to measure the impact of minimart on traditional shop. There were two measurements in this model, log revenue and log profit. The econometrics DiD model are as follow:

$$Y_{it} = \alpha + \beta G_{NearMart} + \gamma t_{2011} + \delta G_{NearMart} * T_{2011} + \varepsilon_i \quad (2)$$

$$Y_{it} = \alpha + \beta G_{NearMart} + \gamma t_{2011} + \delta G_{NearMart} * T_{2011} + \tau X_{it} + \varepsilon_i \quad (3)$$

Where

$$i = 1, \dots, 172; t = 2006, 2011$$

Y_{it} is the dependent variable, the traditional shop performance (log revenue and log profit) i in period t .

$G_{NearMart}$ is a dummy variable of group (group dummy); = 1 if traditional shop near to minimart; = 0 if away.

T_{2011} is a dummy variable of time (time dummy); = 1 indicating “after” minimart presence; = 0 indicating “before” minimart presence.

$G_{NearMart} * T_{2011}$ is an interaction term between group and time (minimart dummy); = 1 only in the traditional shop near to minimart in the “after” period.

X_i is a vector of observed characteristics as control variables; there are shop size, the number of workers, and working hour.

$\alpha, \beta, \gamma, \delta,$ and τ are the regression parameters, δ identify the impact.

ε_i is an error term of the regression

To find out if other factors played a role in changing the traditional shop performance observed characteristics were added to Eq. (2) as control variables. Control variable in Eq. (3) was to describe how the average impact of the minimart varies with the changes in observed characteristic (Abadie, 2005).

(2) Model Estimation

OLS multiple regression technique was used to determine the relationship between the presence of minimart and the traditional shop performance. Some tests were conducted on the model, which are:

(2.1) Coefficient of determination (R^2)

Coefficient of determination was used to measure of the goodness of fit of a regression line. The R Square (R^2) gives the proportion or percentage of the total variation in the dependent variable Y explained by the (single) explanatory variable X (Gujarati, 2004). R^2 measured by the following equation:

$$R^2 = \frac{ESS}{TSS} \quad (4)$$

Where

R^2 = Coefficient of determination

ESS = Explained sum of squares

TSS = Total sum of squares

R^2 limits are $0 \leq R^2 \leq 1$. An R^2 of 1 means a perfect fit, that is, $\hat{Y}_i = Y_i$ for each i . On the other hand, an R^2 of zero means that there is no relationship between the regressand and the regressor.

(2.2) Testing the assumption of ordinary least square

To fulfill the BLUE (Best Linear Unbiased Estimator) criteria in the regression model, the classical assumption test needs to be done.

(2.1.1) Normality

The Kolmogorov-Smirnov test was used to measure the normality of residual. The linear regression assumes that any residual from regression model has spread to follow the normal distribution.

(2.1.2) Heteroskedasticity

Heteroskedasticity test aims to test whether the regression model occurred residual inequality variance from one observation to another observation. A good regression model is a homoskedasticity or not heteroskedasticity. Detection of heteroskedasticity in this study conducted using with test methods Glejser.

(2.1.3) Multicollinearity

In regression models, there should no perfect linear relationships among the explanatory variables. Multicollinearity detected by looking at the value of tolerance and the value of Variance Inflation Factor (VIF) (Hair et.al, 2009). Multicollinearity happened if the variable is said to have a smaller tolerance value of 0.1 or VIF greater than 10.

(3) Testing Hypotheses

(3.1) F test

The F test is a measure of the overall significance of the estimated regression, is also a test of significance of R^2 (Gujarati, 2004).

Testing the overall significance of a regression in terms of R^2 . To test the hypothesis :

$$H_0: \beta_2 = \beta_3 = \dots = \beta_k = 0$$

(i.e., all slope coefficients are simultaneously zero) versus

H_1 : Not all slope coefficients are simultaneously zero

$$F = \frac{R^2/(k-1)}{(1-R^2)/(n-k)} \quad (5)$$

Where

R^2 = Coefficient of determination

k = the total number of variables

n = Number of samples

If $F > F_{\alpha(k-1, n-k)}$, reject H_0 ; otherwise accept H_0 where $F_{\alpha(k-1, n-k)}$ is the critical F value at the α level of significance and $(k - 1)$ numerator df and $(n - k)$ denominator df. Alternatively, if the p value of F obtained is sufficiently low, reject H_0 .

(3.2) Student (t) test

This test was used to measure the relationship between the independent variables. The t test was used to test the significance of the effect of each independent variable on the dependent variable.

Formula for the t test is as follows:

$$t_{statistic} = \frac{b_i}{s_e * b_i} \quad (6)$$

Where

b_i = Value of regression coefficient

S_e = Standard error of regression coefficient

The criteria for determining the most feasible econometric models used in this study were based on the highest R^2 value and the highest $F_{statistic}$ value.

CHAPTER 4

Results and Discussions

This chapter is divided into five sections. First section describes minimart development in Malang city. In the second section, the characteristics of traditional shops are summarized. The third explains the changes in traditional shop performance after minimart presence. The fourth section is the economic impact of the minimart on the traditional shop. The last section presents the strategies of the traditional shop to survive in retail business.

4.1 Minimart Development in Malang City

The number of minimart in Malang increased rapidly during 2006 - 2011 (see Table 4.1). Started in 2006, there are only one outlet in Klojen and one outlet in Lowokwaru. In 2011, it became 144 outlets located in all five districts. In six years, the minimart growth reached 135.22%. In 2011 the highest number of minimart was in Lowokwaru (49 outlets), and the lowest was in Kedungkandang (9 outlets). The highest growth in number of minimart was is in Sukun (139.68%).

Table 4.1 Number of Minimart based on District in Malang in 2006 - 2011

No	District	2006	2007	2008	2009	2010	2011	Growth (%)*
1	Blimbing	-	-	4	10	17	27	88.99
2	Sukun	-	1	4	14	27	33	139.68
3	Klojen	1	3	6	10	20	26	91.86
4	Kedungkandang	-	1	2	5	7	9	73.21
5	Lowokwaru	1	2	7	20	37	49	117.79
	Malang City	2	7	23	59	108	144	135.22

Remark: * from the first time of minimart presence in the district.

Sources: Office of Industry and Commerce, Malang

Lowokwaru is the district with the highest number of minimart (34.03%) because it has a large area and densely populated. In this district, there are several universities and most students live in the area. Hence, it is very promising for the minimart executives, i.e., to increase the number of outlets. In contrary, the area with the least amount of minimarts is Kedungkandang (6.25%). Kedungkandang is quite broad, but the population is small. Thus, the minimart owners are reluctant to expand in this area.

There are four major minimart brands in Malang City, Indomaret, Alfamart, Alfamidi, and Alfaexpres. Alfamart is the first minimart in Malang (see Table 4.2). In 2006, Alfamart started to build two outlets in Klojen and Lowokwaru. In order to keep its market share, Indomaret then built three outlets, and Alfamart built two more outlets in 2007. Within in six years, the number of Indomaret and Alfamart rose to 75 and 54 outlets, respectively. Indomaret had the highest growth (123.61%), followed by Alfamart (93.31%).

Table 4.2 Number of Minimart by brand in Malang in 2006 - 2011

No	Brand	2006	2007	2008	2009	2010	2011	Growth (%)*
1	Indomaret	-	3	9	29	55	75	123.61
2	Alfamart	2	4	14	26	39	54	93.32
3	Alfamidi	-	-	-	4	11	12	73.21
4	Alfaexpres	-	-	-	-	3	3	0.00
	All Brand	2	7	23	59	108	144	135.22

Remark: * from the first time of minimart brand presence.

Sources: Office of Industry and Commerce, Malang

By brand, Indomaret is dominating the market in Malang by 49.13% (see table 4.3). Indomaret dominates in four of five districts, only in Kedungkandang

that is not dominated by Indomaret, but Alfamart. Alfamart is the second brand that dominates the market. In Indonesia, Indomaret and Alfamart are the two brands that compete in small modern retail business. In Table 4.2, it is seen that the number of Alfamart in 2008 is more than Indomaret. To compete with Alfamart, Indomaret increased the number of outlets, to 29 outlets in 2009; it was more than the number of Alfamart, until 2011, Indomaret still dominates the market.

Table 4.3 Percentage of Minimart by Brand and District in Malang in 2011

Minimart	Blimbing	Sukun	Klojen*	Kedung-kandang*	Lowok-waru*	Minimart by brand (%)
Indomaret	51.85	51.52	53.85	33.33	55.10	49.13
Alfamart	37.04	36.36	30.77	55.56	38.78	39.70
Alfamidi	7.41	12.12	11.54	11.11	4.08	9.25
Alfaexpres	3.70	-	3.85	-	2.04	1.92
Minimart by district (%)	18.75	22.92	18.06	6.25	34.03	100.00

Remark: * Research site

Sources: Office of Industry and Commerce, Malang

4.2 Characteristics of the Traditional Shops

There are two sub-sections of the characteristics of the traditional shop; the owner's characteristics and the shop characteristics. The owner characteristics are based on gender, age, source of family income, education level, and experience in managing the shop. The shop characteristics compose of shop location, distance from minimart, shop size, shop age, warehouse ownership, the number of workers, working hour, the number of buyers, the percentage of frequent buyers, revenue, and profit.

4.2.1 Characteristics of the Owner

1) Gender, Age, and Source of Family Income

Table 4.4 shows most of the shop owners are (64.53%) male . Both in near and away group are dominated by male, by 63.95% and 59.30%. By age, more than 27% of the shop owners are 40-50 years old. Most of the shop owner are in the productive age, the average are 46.41 years old. The average age of the owner in the near group (47.12 years) is higher than the away group (45.70 years). Table shows there are no statistically significant difference in average ages between the two groups.

Table 4.4 Gender, Age, and Main Source of Family Income in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Gender			
- Male	65.12	63.95	64.53
- Female	34.88	36.05	35.47
Age (years)			
- <31	8.14	1.16	4.65
- 31 – 40	25.58	30.23	27.91
- 41 – 50	26.74	47.67	37.21
- 51 – 60	26.74	11.63	19.19
- > 60	12.79	9.30	11.05
Mean	47.12	45.70	46.41
	t-statistic (<i>p</i> -value) 0.915 ^{NS} (0.362)		
Source of family income			
- Trader (shop owner)	80.23	62.78	71.51
- Entrepreneur	8.14	10.47	9.30
- Government employee	3.49	13.95	8.72
- Private employee	4.65	6.98	5.81
- Unskilled labor	3.49	5.81	4.65

Remark: NS = statistically non-significant at $\alpha = 0.05$

The high ownership by male shows that the existence of the shop is the main source of family income (Table 4.4) It is not a supplementary income that is usually done by women to help increase their family income. The table revealed that most of the owners (71.51%) depend on their family income from trading activity in their shops. In the near group, the percentage of shop owner who rely on their family income from the shop is higher than the away group, 80.23% compared to 62.78%. The rests are entrepreneurs (non-trader), government employees, private employees, and unskilled labor. The sources of family income confirmed that they essentially rely on family income from their shops.

2) Education Level, and Experience

Overall, (37.79%) of the shop owners have a secondary school education level. Table 4.5 shows that in the near group 39.53% of the shop owners have an elementary school education, whereas in the away group 43.02% of them have junior high school education.

Table 4.5 Owners Education and Experience in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Education level			
- Elementary School	39.53	17.44	28.49
- Junior High School	32.56	43.02	37.79
- Senior High School	20.93	29.07	25.00
- Under Graduate	6.98	10.47	8.72
Experience (years)			
- <11	15.12	23.26	19.19
- 11 – 20	69.77	70.93	70.35
- >20	15.12	5.81	10.47
Mean	17.97	15.53	16.75
t-statistic (<i>p</i> -value) 1.662 ^{NS} (0.098)			

Remark: NS = statistically non-significant at $\alpha = 0.05$

The average experiences of the owners are 16.75 years. Most of the owners (70.35%) have experiences in retail business for 11 - 20 years. Between the groups, the table shows there are differences in the average experience, which are 17.97 years compare to 15.53 years. However, the t-test shows that there are no statistically significant differences in the experience between the two groups.

4.2.2 Characteristics of the Shops

1) The person who Start the Shop and Age of the Shop

Based on who started the business or opened a shop, Table 4.6 shows that more than 70% of shops opened by the current owners while the rest was started by the parents. These characteristics commonly found in the old shops. Judging from the sample, the away group that opened the shop itself has a larger percentage when compared to the near group. The traditional shop in the near group usually is located at a strategic location. The old shops that started and managed by the first generation of the owner, then continued by the current generation.

Table 4.6 Person who Start the Shop and Age of the Shop in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Person start the shop			
- Self	66.28	75.58	70.93
- Parent	33.72	24.42	29.07
Shop age (years)			
- < 11	12.79	26.74	19.77
- 11 – 20	45.35	34.88	40.12
- 21 – 30	22.09	29.07	25.58
- >30	19.77	9.30	14.53
Mean	20.62	17.90	19.26
	t-statistic (<i>p-value</i>)		
	1.693 ^{NS} (0.092)		

Remark: NS = statistically non-significant at $\alpha = 0.05$

Overall, 40.12% of traditional shops, have been in operation for 10 - 20 years. The traditional shops have been in operated for 19.26 years on average. Table 4.6 shows that there are more shops (19.77%) that have been run for more than 30 years in the near group than in away group. In contrast, there are more shops (26.74%) that have been established for not more than ten years in the away group. On average, the shops in the near group (20.62 years) had been established longer than the shops in the away group (17.90 years). However, there is no statistically significant difference between the two groups

2) The Location and the Distance from Minimart

For the location, 54.10% of traditional shops are on the main street, while the rest, 45.90% traditional shop located in a residential area (see Table 4.7). Presidential decree (PP No. 12 of 2005) allows a minimart to be established in almost all regions and on all roads. The regulation provides a tough challenge for the traditional shop located on the main road because most of the minimart on the main roadside. One minimart is designed to meet the needs of approximately 2,000 people who live around the outlet. Besides, a minimart is designed to serve the consumers with a radius up to 500m. In other words, the challenges of the traditional shop that is on the main roadside, and close to the minimart become greater.

Overall, the distance between traditional shop and minimart is 466.83 m on average. More than 54% of traditional shops in the near group are on radius of 100 – 299 m from the minimart. Nearly 30% of the shops are located around 300 – 499 m far from the minimart. As for the rest, it is quite close to the minimart, which is located less than 100 m from minimart (see Table 4.7). The average distance of traditional shops to minimart in the near group is 194.13 m.

Table 4.7 Traditional Shop Location and the Distance from Minimart in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Locations			
- Residential Area	45.30	46.50	45.90
- Main Roadside	54.70	53.50	54.10
Distance from minimart (m)			
- <100	16.28	-	8.14
- 100 – 299	54.65	-	27.33
- 300 – 499	29.07	-	14.53
- 500 – 699	-	53.49	26.74
- 700 – 999	-	23.26	11.63
- > 999	-	23.26	11.63
Mean	194.13	739.53	466.83
	t-statistic (<i>p-value</i>)		
		-16.095** (0.000)	

Remark: ** = statistically significant at $\alpha = 0.01$

In away group, approximately 53% of the shops are between 500–699 m from the minimart. Approximately 23% of shops are located between 700 – 999 m, and 23% are located more than 900 m. In the away group, the average distance of traditional shop to minimart is 739.53 m. Thus, there are statistically significant differences ($p\text{-value} = 0.000$) in the distance from traditional shop to the minimart in the near group and away group.

3) Size and Warehouse

Traditional shop in Malang has a relatively small size. Overall, an average size of traditional shop is 42.34 m². Table 4.8 shows that 30.81% of traditional shops in Malang have less than 26 m², 44.77% have 26 – 50 m². The rest of the shops have size at least 51 m². In the the near group the size is 40.95 m² on average, while in away group it is 43.73 m². There is no statistically significant difference in the shop size between the near group and away group.

Table 4.8 Traditional Shop Size and Warehouse in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Size of the shop (m ²)			
- < 26	29.07	32.56	30.81
- 26 – 50	43.02	46.51	44.77
- 51 – 75	17.44	10.47	13.95
- 76 – 100	8.14	6.98	7.56
- > 100	2.33	3.49	2.91
Mean	43.73	40.95	42.34
	t-statistic (<i>p-value</i>) -1.624 ^{NS} (0.117)		
Warehouse			
- Yes	22.09	9.30	15.70
- No	77.91	90.70	84.30

Remark: NS = statistically non-significant at $\alpha = 0.05$

Not all traditional shop have a place to keep the inventory. Table 4.8 shows that most of the shop (84.30%) do not have a warehouse, the rest, 15.70% have a warehouse. Based on a sample group, 77.91% of the traditional shop in the near group and 90.70% of the traditional shop in the away group did not have a warehouse.

4) Number of Worker and Working Hour

Table 4.9 shows that 75% of traditional shops do not employ workers, while the rest hire additional worker. Around 80% of traditional shops have less than three workers, the rest have at least three workers. Most of the traditional shops in Malang employ family members, usually the owner himself, his wife or her husband, and children or relatives. The average numbers of workers are two people. There is no statistically significant difference in number of workers in the near and away groups.

As for working hours, 74.42% of traditional shops operate 12-15 hours a day, 8.73% operate more than 15 hours a day, and the rest are less than 12 hours a day. Average working hours of the traditional shop are 13,04 hours a day. There is a slight difference in the average of working hours in both sample groups; 13.17 hours a

day compare to 12.90 hours a day. However, there is no significant difference in working hours between the groups.

Table 4.9 Number of Worker and Working Hours in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Hire Worker			
- Yes	25.58	24.42	25.00
- No	74.42	75.58	75.00
Number of Worker (person)			
- <3	81.40	82.56	81.98
- 3 - 5	18.60	16.28	17.44
- >5	0.00	1.16	0.58
Mean	1.92	1.92	1.92
	t-statistic (p-value)	0.000 ^{NS} (1.000)	
Working Hours (hours a day)			
- <12	17.44	16.28	16.86
- 12 – 15	68.60	80.23	74.42
- >15	13.95	3.49	8.72
Mean	13.17	12.90	13.04
	t- statistic (p-value)	1.008 ^{NS} (0.315)	

Remark: NS = statistically non-significant at $\alpha = 0.05$

5) Number of Buyer and, Percentage of Frequent Buyer

Table 4.10 shows the daily number of buyers and the percentages of frequent buyer in 2011. Overall, 26-50 buyers visited most of the traditional shops (59.88%). The average numbers of buyers are 49 people. Between the near group and the away group the average number of buyer are 49.88 people and 47.50 people, respectively. There is no statistically significant difference in the number of buyer between the groups.

Table 4.10 Number of Buyer and Percentage of Frequent Buyer in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Number of buyer (people)			
- <26	5.81	15.12	10.47
- 26 - 50	62.79	56.98	59.88
- 51 - 75	13.95	18.60	16.28
- 76 - 100	17.44	8.14	12.79
- >100	-	1.16	0.58
Mean	49.88	47.50	48.69
	t-statistic(p-value)	0.790 ^{NS} (0.431)	
Frequent buyer (%)			
- <26	10.47	15.12	12.79
- 26 - 50	56.98	56.98	56.98
- 51 - 75	27.91	24.42	26.16
- >75	4.65	3.49	4.07
Mean	48.37	47.03	47.70
	t- statistic (p-value)	0.496 ^{NS} (0.621)	

Remark: NS = statistically non-significant at $\alpha = 0.05$

Frequent buyer is the buyer who often comes to the shop to do shopping. Overall, the average percentage of frequent buyers is less than 48% of the total buyers. 26-50 percent of buyers visited the traditional shops (59.88%) frequently. The average of frequent buyers is 47.70%. The average frequent buyer in near group is 48.37% and in away group is 47.03%. There is no statistically significant difference in the frequent buyer between the groups.

6) Revenue, and Profit

Most of the traditional shops (57.56%), had revenue between IDR 500,000 – 1,499,999 per day. The average revenue of traditional shop is IDR 1,320,988 per day. By the group, the averages of revenue in the near and away groups are IDR 1,325,813.95 per day and IDR 1,316,162.79 per day, respectively.

Overall, most of the traditional shops (53.49%) gain the daily profit between IDR 50.000 - 149.999 per day. The average profit is IDR 145,803.34 per day.

The average profit in near group IDR 146,222.09 per day, whereas in the away group is IDR 145,384.59 per day.

Table 4.11 Traditional Shop Revenue and Profit in 2011

Item	Sample Group		Total (%)
	Near (%)	Away (%)	
Revenue (IDR per day)			
- <500,000	2.33	11.63	6.98
- 500,000 – 999,999	33.72	25.58	29.65
- 1,000,000 – 1,499,999	26.74	29.07	27.91
- 1,500,000 – 1,999,999	17.44	15.12	16.28
- 2,000,000 – 2,499,999	8.14	6.98	7.56
- >2,499,999	11.63	11.63	11.63
Mean (IDR)	1,325,813.95	1,316,162.79	1,320,988.37
	t-statistic (<i>p-value</i>)	0.077 ^{NS} (0.938)	
Profit (IDR per day)			
- <50,000	0.00	8.14	4.07
- 50,000 - 99,999	30.23	22.09	26.16
- 100,000 - 149,999	26.74	27.91	27.33
- 150,000 - 199,999	18.60	16.28	17.44
- 200,000 - 249,999	11.63	12.79	12.21
- >249,999	12.79	12.79	12.79
Mean (IDR)	146,222.09	145,384.59	145,803.34
	t- statistic (<i>p-value</i>)	0.063 ^{NS} (0.950)	

Remark: NS = statistically non-significant at $\alpha = 0.05$

Table 4.11 shows there are no statistically significant different in revenue and profit between the two groups. The condition happen due to the traditional shop in the near group have been adjusted their strategy, such as adding more product line and adding more brand, manage their product display (better display), and adapt self service system.

4.3 Changes in Traditional Shop after the Presence of Minimart

This section describes the changes experienced by traditional shop after the presence of minimart.

4.3.1 Changes in Number of Worker and Working Hour

Figure 4.1 shows that most of the traditional shop (80.23%) did not change in number of worker, 15.70% of shop were decreased, while the rest (4.07 %) were increased. Overall, there was -0.16 worker decrease in the number of workers.

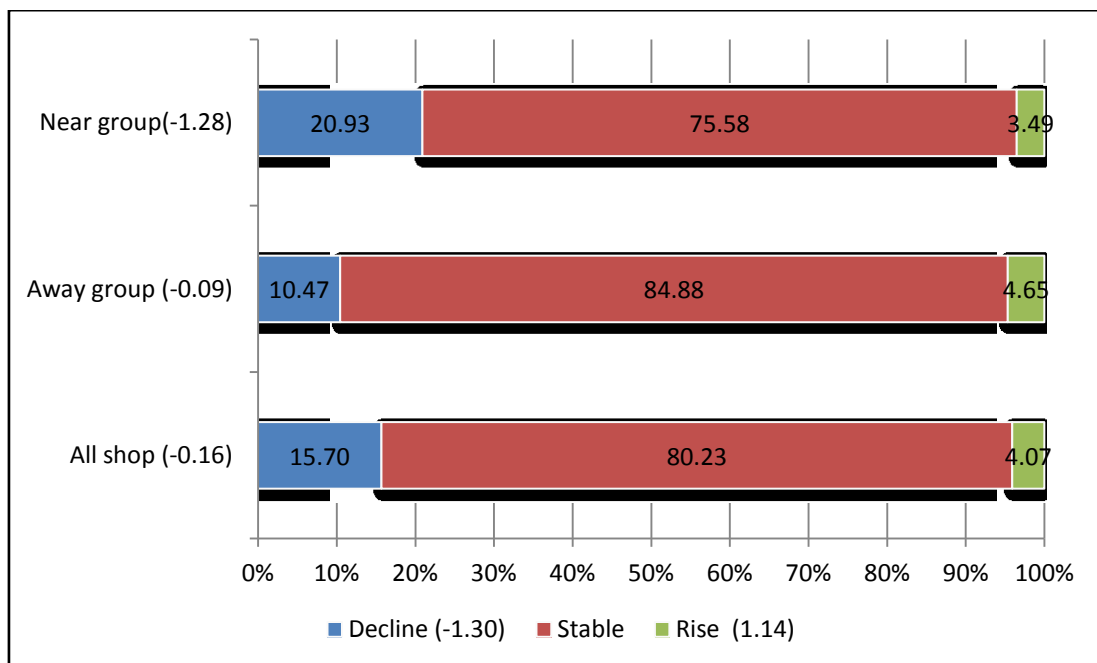


Figure 4.1 Changes in Number of Worker

Remark: average changes in parenthesis.

Comparing the groups, more traditional shop in near group were experienced decreasing in number of worker. The average changes in near and away groups are -0.75 and -0.26 respectively. There is no statistically significant difference

($\alpha = 0.05$; t-statistic = -1.435 and p-value = 0.153) in the changes in the number of worker between the groups.

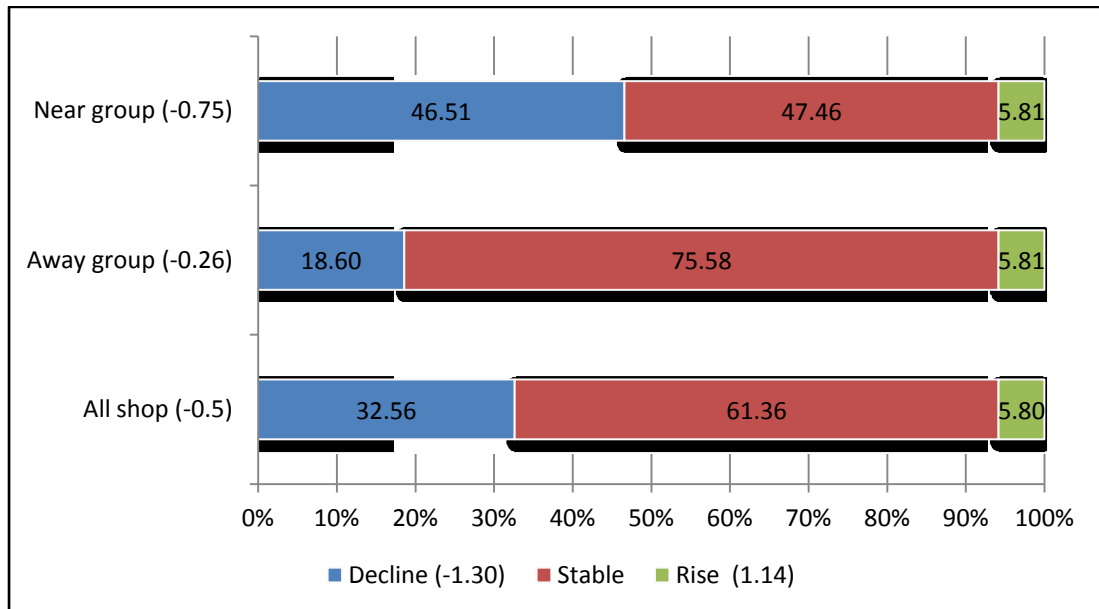


Figure 4.2 Changes in Working Hour

Remark: average changes in parenthesis

In working hours, most of the traditional shops (61.63%) tend to stable. However, there is traditional shop reduce their working hour (32.56%), and traditional shop gain their working hour (5.80%). Overall, the average change was -0.5 hours. Comparing the groups, 46.51 % of a traditional shop in the near group are experienced the drop in working hours, while in away group are 18.60%. In average, the changes in the near group are higher than the away group, -0.75 hours compare to 0.26 hours. The t-test result shows the statistically significant different in the changes in working hours at $\alpha = 0.01$ (t-statistic = -2.834 and p-value = 0.005). In other word, Traditional shops that are close to the minimart had a greater reduction in working

hour. Thus, minimart gives a negative impact on the working hour of traditional shop in Malang.

4.3.2 Changes in Number of Buyer and Percentage of Frequent Buyer

Overall, traditional shops in Malang were experienced declining in the number of buyer (see Figure 4.3). 69.19% of traditional shops were decreased, 11.05 % were increased, and the rest were stable. The average decline are -18.74 buyers.

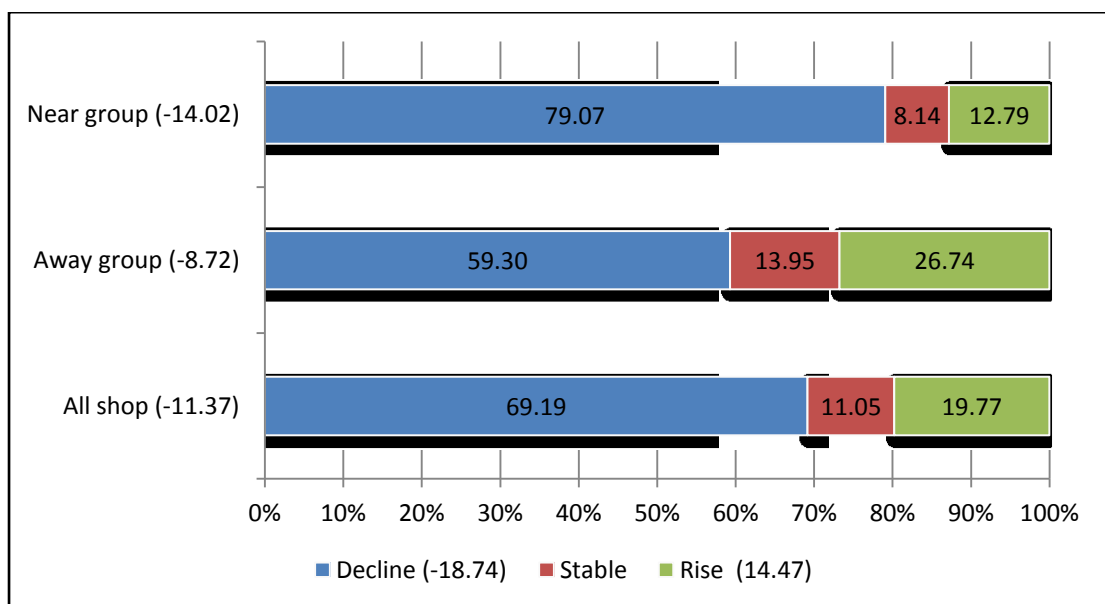


Figure 4.3 Changes in Number of Buyer

Remark: average changes in parentheses

The figure shows the percentage of traditional shops that drop in number of buyers in the near group (79.07) was higher than the away group (59.30). The average of the changes in near group (-14.02) was also higher than the away group. Comparing the average change in the number of buyers in both groups, t-test

result shows that there is a statistically significant difference in the changes in the number of buyer at $\alpha = 0.05$ (t-statistic = -2.498 and p-value = 0.013) Thus, the traditional shop located near the minimart more affected in the number of buyers when compared to traditional shop located far from minimart. Furthermore, the presence of minimart gives a negative impact in the number of buyers at traditional shops that close to the minimart.

On the frequent buyer, 47.67% of traditional shop were decreased, 48.84% were stable, and the 3.49% were increase (see Figure 4.4). The average changes in frequent buyer were -6.42%.

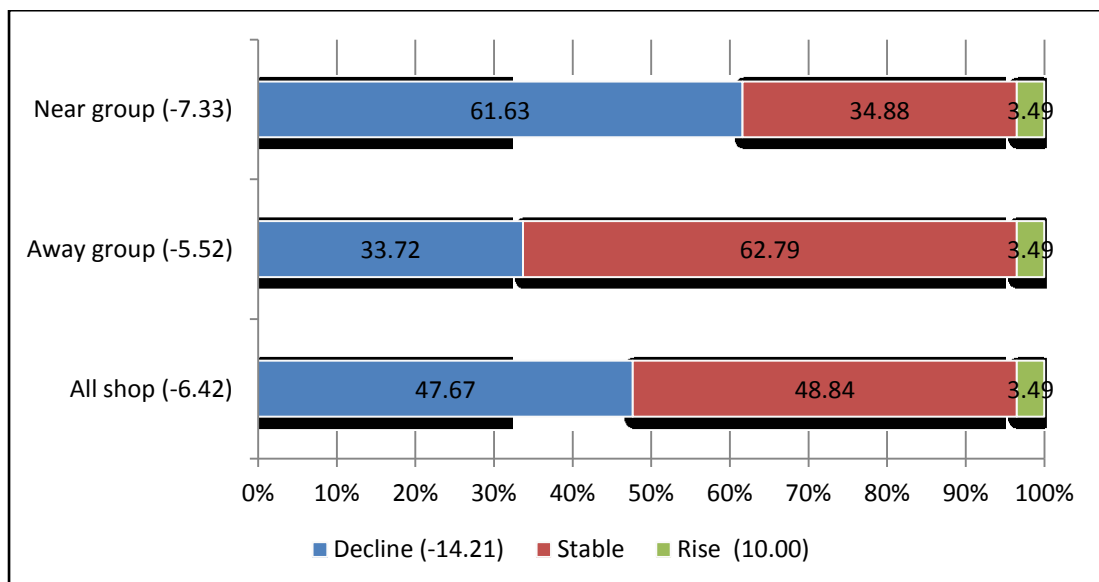


Figure 4.4 Changes in Percentage of Frequent Buyer

Remark: average changes in parentheses

In the near group, the percentage of traditional shops that decreased in frequent buyer (61.63%) was larger than in the away group (33.72%). Nevertheless, the difference in the average changes in the near and away was -7.33 compare to -5.52

respectively. T-test result shows there is statistically non-significant difference in the changes of frequent buyer at $\alpha = 0.05$ (t-statistic = -1.289 and p-value = 0.312) in the changes of frequent buyer between the groups. Thus, minimart had no impact on percentage of frequent buyer of traditional shops.

4.3.3 Changes in Revenue and Profit

Not only number of buyers and percentage of frequent buyer experienced lessen, but also revenue and profit. In general, most of traditional shop (68%) were decreased in revenue by IDR -253,895.35 per day, 22.67 % of traditional shops were increased, and the rest, 8.72 % were stable.

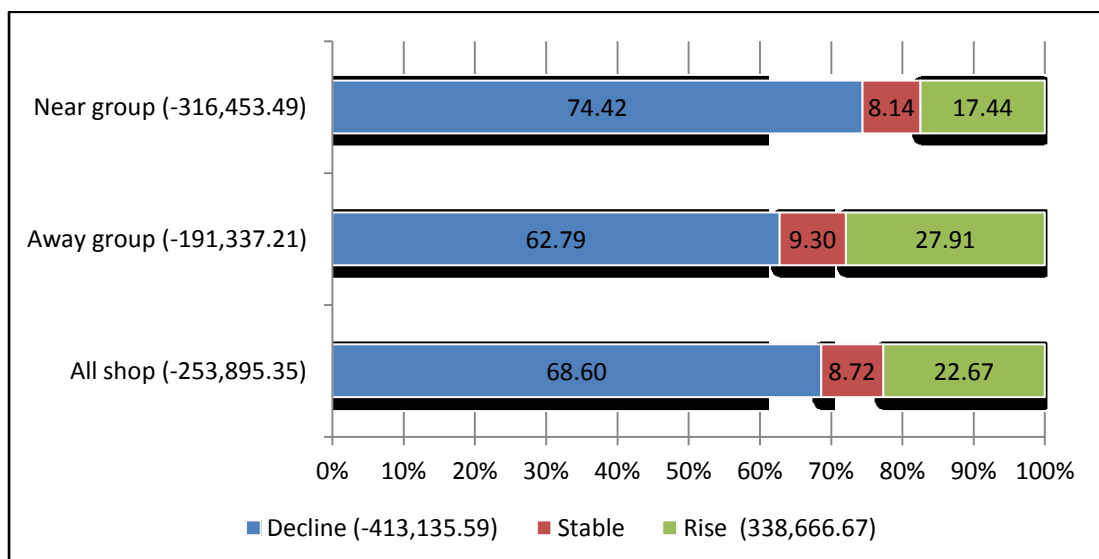


Figure 4.5 Changes in Revenue

Remark: average changes in parenthesis.

Figure 4.5 shows that compare to away group (62.79%), there are more traditional shops in near group (74.42%) were decrease in revenue. The changes in

revenue of near and away groups are IDR -316,453.49 per day and IDR -191,337.21 per day on average, respectively. T-test result shows that there is statistically non-significant at $\alpha = 0.05$ (t-statistic = -1.925 and p-value = 0.056) in the changes between revenue in near group and revenue in away group. Therefore, minimart has no impact on traditional shop revenue in Malang.

Traditional shops in Malang were not only experienced reduce in the revenue, but also reduce in the profit. Most traditional shops (72.09%) diminish in profit. Although most of the shops has decreased, there are 8.72% shop have increased. In average the decrease in profit is IDR -34,937.21 per day (see Figure 4.6).

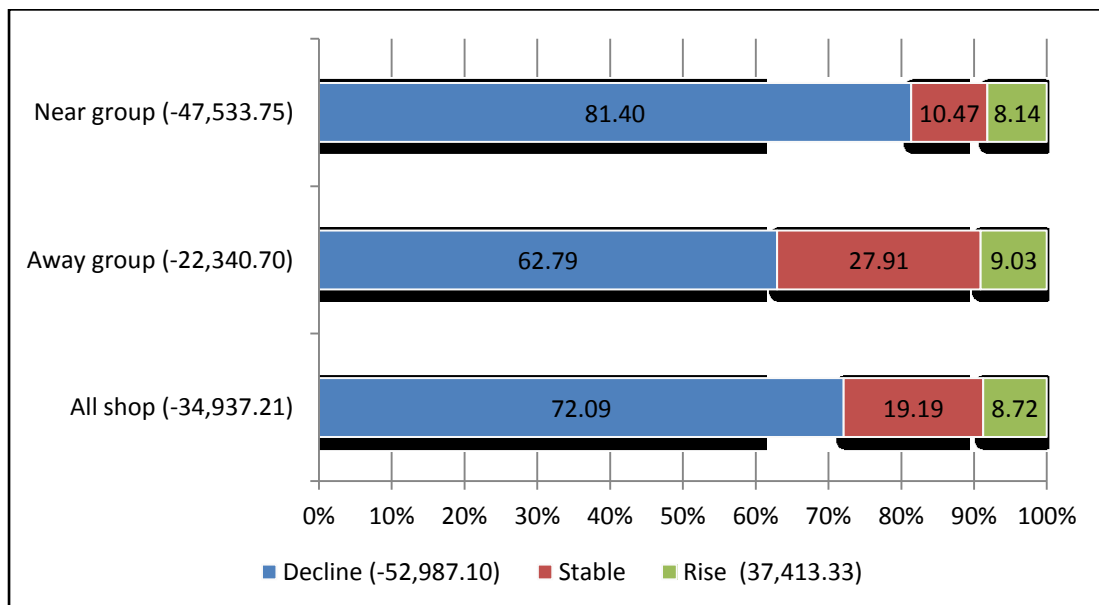


Figure 4.6 Change in Profit

Remark: average changes in parenthesis

Comparing the groups, the figure show considerable differences, namely 81.40 % compare to 62.79 %. The average of the profit decline in the near

group (IDR -47,533.75 per day) was greater than in the away group (IDR -22,340.70 per day). T-test result explain that the different changes in profit between the groups was statistically significant at $\alpha = 0.01$ (t-statistic = 3.102 and p-value = 0.007). Thus, minimart gives significant impact in traditional shop profit in Malang

From the 22.67% of traditional shop that experience increase in revenue (see Figure 4.5), and the 8.72% of the shop that increase in profit (see Figure (4.6), the interview revealed some reason. First, the traditional shop focus on the frequent buyer around the shop. The shop owners have tried to meet the needs of frequent buyer, so that they do not have to go far to shop elsewhere. Second, the shop owner gives a little more flexibility to the frequent buyer to defer payment so that they can still pay the bills every week or every month when they have money. Third, when minimart was doing a promotion or gives a discount on such an items, traditional shop owners near minimart choose to buy the products. Therefore, that traditional shop gets a very low price. After the promotion or discount ends the traditional shop are selling the product at a low price much different from the minimarket.

4.4 The Economic Impact of Minimart on Traditional Shop

This section describe the impact of the presence of minimart towards traditional shop based on the simple difference in difference analysis. There are two differences that appear in the table. First, the distinction based on the period between 2006 before and 2011 after the presence of minimart. Second, the difference between sample groups, the difference between the traditional shop near the minimart and traditional shop away from minimart. The impact used in this study was measured by

the difference between the change in both sample groups before and after the present of minimart. The parameters used to determine the economic impact of the presence of minimart in this study are revenue, and profits.

4.4.1 The Simple Model of Difference in Difference (DiD)

Table 4.12 shows the average daily revenue over time and group. In the before minimart period, the average revenue of traditional shop in near group (IDR 1,642,267.44 per day) was higher than the away group (IDR 1,507,500.00). As well as the after minimart period, the average revenue of traditional shop in near group (IDR 1,325,813.95) was higher than the away group (IDR 1,316,162.79). Both of t-test results in before (t-statistic = 0.912; p-value = 0.363) and after (t-statistic = 0.077; p-value = 0.938) periods indicates that there are no statistically significant difference at $\alpha = 0.05$ in traditional shop revenue between traditional shop in near and away groups.

Table 4.12 also shows the difference between revenue before and after the presence of minimart from each group of sample. In the near group, the average revenue of traditional shop before (IDR 1,642,267.44) and after (IDR 1,325,813.95) minimart presence was statistically significant difference in $\alpha = 0.01$ (t-statistics = -5.650; p-value = 0.000). As well as the near group, the average revenue of traditional shop in away group before (IDR 1,507,500.00) and after (IDR 1,316,162.79) minimart presence was statistically significant difference in $\alpha = 0.01$ (t-statistics = -5.482; p-value = 0.000).

Table 4.12 Impact of Minimart on Traditional Shop Revenue: Simple Model

Daily Revenue (IDR)	Period		Diff. in period	t-statistic (<i>p-value</i>)
	After Minimart	Before Minimart		
Near	1,325,813.95	1,642,267.44	-316,453.49**	-5.650 (0.000)
Away	1,316,162.79	1,507,500.00	-191,337.21**	-5.482 (0.000)
Diff. in group	9,651.16 ^{NS}	134,767.44 ^{NS}	-125,116.28 ^{NS}	1.925 (0.056)
t-statistic (<i>p-value</i>)	0.077 (0.938)	0.912 (0.363)		

Remark: NS = non-significant at $\alpha = 0.05$; **, statistically significant at $\alpha = 0.01$;
\$1 = IDR 13,500

The paired sample t-test result shows the declining revenue before and after minimart presence in both groups was statistically significant. The changes in the traditional shop that near the minimart (IDR -316,453.49 per day) was higher than the changes in the traditional shop that away from minimart (IDR -191,337.21 per day). The simple DiD estimation shows that the different changes in revenue between the near group and away group was IDR -125,116.28 per day. T-test indicates that the different changes in revenue between the groups was statistically not significant at $\alpha = 0.05$ (t-statistic = 1.925; p-value = 0.056). In other words, the presence of minimart has no impact on traditional shop revenue that close to the minimart.

In profits, both groups were also experienced the drop. Table 4.13 shows the average profit over time and group. In the before minimart period, the average profit of traditional shop in near group (IDR 193,755.81 per day) was higher than the away group (IDR 167,725.29). In addition to the after minimart period, the average profit in near group (IDR 146,222.09) was also higher than the away group (IDR 145,384.59). Both of t-test results in before (t-statistic = 1.373; p-value = 0.172)

and after (t-statistic = 0.065; p-value = 0.950) periods indicates that there are no statistically significant difference at $\alpha = 0.05$ in traditional shop profit between traditional shop in near and away groups.

Table 4.13 also indicates the difference between revenue before and after the presence of minimart from each group of sample. In the near group, the average revenue of traditional shop before (IDR 193,755.81) and after (IDR 146,222.09) minimart presence was statistically significant difference in $\alpha = 0.01$ (t-statistics = -6.317; p-value = 0.000). Similar with the near group, the average revenue of traditional shop in away group before (IDR 167,725.29) and after (IDR 145,384.59) minimart presence was statistically significant difference in $\alpha = 0.01$ (t-statistics = -4.490; p-value = 0.000).

Table 4.13 Impact of Minimart on Traditional Shop Profit: Simple Model

Daily Profit (IDR)	Period		Diff. in period	t-statistic (p-value)
	After Minimart	Before Minimart		
Near	146,222.09	193,755.81	-47,533.75**	-6.317 (0.000)
Away	145,384.59	167,725.29	-22,340.70**	-4.490 (0.000)
Diff. in group	837.50 ^{NS}	26,030.52 ^{NS}	-25,193.02**	2.741 (0.007)
t-statistic (p-value)	0.065 (0.950)	1.373(0.172)		

Remark: NS = non-significant at $\alpha = 0.05$; ** = statistically significant at $\alpha = 0.01$;
\$1 = IDR 13,500

Previously, the t-test result shows the lessen profit before and after minimart presence in both groups was statistically significant. The profit changes in the traditional shop that near the minimart (IDR -47,533.75 per day) was higher than the changes in the traditional shop that away from minimart (IDR -22,340.70 per day).

The simple DiD estimation denotes that the different changes in revenue between the near group and away group was IDR -25,193.02 per day. T-test indicates that the different changes in profit between the groups was statistically significant at α 0.01 (t-statistic=2.741; p-value=0.007). Hence, the presence of minimart has an impact on traditional shop profit that closes to the minimart.

4.4.2 The Econometric Model of Difference in Difference

Moving into the DiD Econometric Model, Table 4.14 and Table 4.15 shows the regression result. Table 4.14 provide the estimated effect of minimart on traditional shop in term of revenue, while table 4.15 provide the estimated effect of minimart on traditional shop in term of profit. The first column in Table 4.14 measures the impact of minimart based on Eq. (2) or without control variable; the second column measures the impact of minimart based on Eq. (3) or with the control variable. The first column shows that the estimated coefficient of minimart dummy is -0.027. Thus, the minimart gives an impact by -2.7% on traditional shop revenue.

The second column shows that the estimated coefficient of minimart dummy is -0.018, it means the minimart gives an impact by -1.8% on traditional shop revenue. However, the coefficients of minimart in the column one and column two are not significant. From the result, it can be inferred that the minimart gives no significant impact on the traditional shop revenue that near to the minimart.

The second column in table 4.14 shows that some coefficients in the model are significant, that are time dummy, shop size, number of workers, and working hours. The time dummy gives significant effect on traditional shop revenue by -7.5% per day. In the 2006 to 2011, of all traditional shop revenue in Malang was

decline by 7.5%. The shop size gives significant effect in traditional shop revenue by 0.3 %, the increase in 1 m² of size will increase the revenue by 0.3% ceteris paribus. Increasing in the number of worker will gives significant effect on revenue. Increasing one worker will increase the revenue by 4.1%, ceteris paribus. The last is working hours; the increasing in one hour will increase the revenue by 1.7%, ceteris paribus. The table shows that the revenue was significantly affected by shop size, number of worker, and working hour.

Table 4.14 Impact of Minimart on Traditional Shop Revenue; Econometric Model

	Dependent Variable: Log Revenue			
	(1)		(2)	
	Coefficient	P-value	Coefficient	P-value
Constant	6.100** (0.027)	0.000	5.671** (0.098)	0.000
Group dummy ($G_{NearMart}$)	0.055 (0.038)	0.150	0.033 (0.035)	0.350
Time dummy (T_{2011})	-0.065 (0.038)	0.086	-0.075* (0.035)	0.032
Minimart dummy ($G_{NearMart} * T_{2011}$)	-0.027 (0.054)	0.621	-0.018 (0.049)	0.706
Size of Shops	No		0.003** (0.001)	0.000
Number of worker	No		0.041** (0.016)	0.009
Working hour	No		0.017** (0.007)	0.009
R ²	0.032		0.210	
Adjusted R ²	0.023		0.196	
F statistic	3.740*	0.011	14.807**	0.000
Number of observation	344		344	

Remark: * = significant at $\alpha = 0.05$; ** = significant at $\alpha = 0.01$; standard error are in parentheses

Table 4.15 shows that both columns are significant at 1% level of significant. The estimated coefficient of the impact of the minimart in column one is - 0.055. It means the minimart gives negative effects as much as 5.5% on traditional

shop profit. The estimated coefficient of the impact of the minimart in column two is -0.051, minimart gives negative effects by 5.1% on traditional shop profit. Furthermore, the minimart reduces the traditional shop profit by 5.1%. However, the coefficient is not significant. Thus, the minimart has no significant impact on the traditional shop profit that closes to the minimart.

Table 4.15 Impact of Minimart on Traditional Shop Profit; Econometric model

	Dependent Variable: Log Profit			
	(1)		(2)	
	Coefficient	P-value	Coefficient	P-value
Constant	5.137** (0.026)	0.000	4.822** (0.096)	0.000
Group dummy ($G_{NearMart}$)	0.080* (0.037)	0.032	0.065 (0.034)	0.060
Time dummy (T_{2011})	-0.058 (0.037)	0.123	-0.070* (0.034)	0.043
Minimart dummy ($G_{NearMart} * T_{2011}$)	-0.055 (0.053)	0.298	-0.051 (0.048)	0.292
Size of shops	No		0.003** (0.000)	0.000
Number of worker	No		0.042** (0.015)	0.007
Working hour	No		0.009 (0.007)	0.165
R ²	0.044		0.211	
Adjusted R ²	0.035		0.197	
F statistic	5.179**	0.002	14.992**	0.000
Number of observation	344		344	

Remark: * = significant at $\alpha = 0.05$; ** = significant at $\alpha = 0.01$; standard error are in parentheses

The second column in table 4.15 shows that some coefficients in the model are significant, that are time dummy, shop size, and number of workers,. The time dummy gives significant effect on traditional shop revenue by -7% per day. it means that during 2006 to 2011, of all traditional shop revenue in Malang was decline by 7%. The shop size gives significant effect in traditional shop revenue by 0.3 %, the

increase in 1 m² of size will increase the revenue by 0.3% ceteris paribus. Increasing in the number of worker will gives significant effect on revenue. Increasing one worker will increase the revenue by 4.2%, ceteris paribus. The table shows that shop size and number of worker are significantly affecting the profit

Furthermore, column two in Table 4.14 and Table 4.15 show that the addition of control variables in the model resulting in an increase in the R² value. Adding the control variable also inflict the $F_{statistics}$ becomes more significant. In contrast to the $F_{statistics}$, adding control variables in the model were reducing the coefficient of minimart impact estimators. Thus, the revenue and profit of traditional shop were significantly influenced by the control variable; shop size, the number of workers and working hour.

According to Gujarati (2006) to obtain a regression model that is not biased or that the regression model BLUE (Best Linear Unbiased Estimator) it is necessary to test the classical assumption. Classic assumption test is statistical requirements that must be met in the multiple linear regression analysis based on ordinary least squares (OLS).

A good regression model is to have a residual value that is normally distributed. For the model used in this study, the model with the dependent variable revenue log, test for normality with the Kolmogorov-Smirnov Test obtained for 1.022 and Asymp.Sig 0.120 greater than 0.05. For models with the dependent variable log profit, test for normality with the Kolmogorov-Smirnov Test obtained for 0.474 and Asymp.Sig 0.978 greater than 0.05. Thus, both of regression models have a residual data that normally distributed.

A good regression model is that homoskedasticity or that did not heteroskedasticity. The test results with Glejser method shows that the Sig $> \alpha$ for all the independent variables in both model, which means none of the independent variables statistically significant influence dependent variable. It can be concluded that the regression model does not contain any heteroskedasticity.

A good regression models were not occur correlations among the independent variables. If the independent variables are correlated, then these variables are not orthogonal. Orthogonal variable is the independent variable that the correlation between independent variables sesame equal to zero. Detection of multicollinearity is to look at the value of tolerance and the value of variance inflation factor (VIF). The variable is having a multicollinearity problem if the value of tolerance is less than 0.1 or greater VIF from 10. The test result shows that the values of tolerance are 0.500 and 0.933 for both model, and VIF are 3.000 and 3.013 for both model. Therefore, the models have no multicollinearity problem.

The declining in revenue and profit were in line with Suryadarma (2007) and Poesoro (2008). The presence of modern outlets gives negative impact on the performance of traditional shop; however, the impact is not significant. The results of interviews indicate that there are several causes of declining revenue and profit. That is the declining in the number of buyers at the traditional shops. The owner complained that their shop increasingly deserted buyers.

The Traditional shop is a business with a small range of coverage area. It is different with minimart. The number of daily buyers at traditional shops is smaller than minimart. Most of the buyers of traditional shops are neighbors who live around the shop. The coverage area of the traditional shop is narrower when

compared to minimart. Minimart with average area reaches 200 m² can effectively reach out to a radius of at least 500m from the minimart. The size and coverage area of the traditional shop distinguishes the traditional shop and minimart. Traditional shops only have an average area of less than 50 m². The data shows that less than 50% of buyers at traditional shops are neighbors who become repeated customers who frequently shop at traditional shops in their neighborhood.

Interviews showed that the traditional shop owners feel the presence of minimart inflict a decrease in the number of buyers. From year to year, the number of buyers has decreased. The traditional shop owner revealed that the factors causing the decline in revenue and profit were the reduction in the number of buyers. Furthermore, the owner of the shop found the cause of a decrease in the number of buyers is happening because of the minimart near their shops. The owner felt that the presence of minimart was inflicting less crowded shop. The decline in the number of buyers that occurs continuously over time was lead to a decrease in revenue and profit.

Table 4.16 shows that the two groups of traditional shops decreased a significant number of buyers. Before the minimart establishes, the average number of daily buyers were more than 50 buyers. In the shop that in the near minimart group, the number of buyers before the minimart established were more than 60 buyers. After the minimart came, the number of buyers has decreased. Both of the group has decreased. However, the shop near minimart has larger in decline, -14.02 people compare to 8.72 people in average. The table indicates that despite the discrepancy in the decrease in the number of buyers were 5.29 people, but the decrease was statistically significant at $\alpha = 0.05$ (t-statistic=-2.498; p-value=0.013)

The minimart was not directly affecting the revenue but the direct impact was on the decline in the profit and in the number of buyers. The traditional shop near minimart experienced the larger decline. Thus, the presence of minimart has not impact on the revenue, but on the profit and the number of buyers.

Table 4.16 Changes in Number of Buyers before and after the Presence of Minimart

Daily Buyer	Period		Diff. in period	t-statistic (<i>p-value</i>)
	After Minimart	Before Minimart		
Near	49.88	63.90	-14.02**	-9.415 (0.000)
Away	47.50	56.22	-8.72**	-5.789 (0.000)
Diff. in group	2.38 ^{NS}	7.67*	-5.29*	-2.498 (0.013)
t-statistic (<i>p-value</i>)	0.790 (0.431)	2.177 (0.031)		

Remark: NS = non-significant at $\alpha = 0.05$; * = statistically significant at $\alpha = 0.05$;
** = statistically significant at $\alpha = 0.01$

Furthermore, the cause of reduced in the number of the buyer was due to many emerging new "traditional" shop. They emerge with several innovations to attract the attention of buyers. There are several innovations made by the new traditional shops. Based on observations on some of the many new shops popping up, some innovation is carried out as follows: The First is doing a partnership with the tobacco (cigarette) companies. The company will beautify the look of the exterior and interior of the shop. Tobacco companies will use the shop as a place of branding their products. The second is the changes in the arrangement of merchandise based on certain categories such as in the minimarts. The goods become tidier and easily selected by the buyer. The third is the implementation of self-service services such as

minimart. The self-service makes the buyer can easily choose their items and then pay at the cashier.

4.5 Strategy of Traditional Shop to Survive in Retail Business

The presence of minimart and the new traditional shops have sprung up forcing the old traditional shops to innovate to survive in the increasingly fierce competition. Table 4.17 shows the strategies carried out by traditional shops in Malang. The strategies that most traditional do is diversify products, better display, and adding new brands. Additionally, lower prices and self-service also choices made by traditional shops to compete with other shops and minimart. These strategies are in line with Iffah (2011).

Table 4.17 Strategy Undertaken by Traditional Shop

Strategy	Sample Group		Total (%)
	Near (%)	Away (%)	
Diversify Produce	46.51	41.86	44.19
Better Display	39.53	40.47	40.12
Add New Brand	41.85	34.88	38.37
Reduce Prices	25.58	38.37	31.98
Self-Services	22.09	17.44	19.77
Discontinue Product	18.60	11.63	15.12
Reduce Expense	13.95	11.63	12.79
Home Delivery	10.47	3.49	6.98

Retail business is a business that is highly dynamic and evolving all the time. In the retail change theory (Fernie, et.al, 2003), the development of a new retail format followed the principles established by the wheel, life cycle and conflict theories. To enter and become part of the existing retail business, retailers must consider the environment in their business. Also, the new shop must also consider the

retail, price, product range, geographical expansion, and management style. Retailers that have matured in the business have to deal with the new competitor; adapt and innovate are necessary to survive. To be able to survive and successfully absorbed into existing retail business, the new shop should operate in a manner that is acceptable and attractive to customers. Adaptation and innovation should be done by the new and old traditional shop to survive in the business.

CHAPTER 5

Conclusions and Recommendations

This section consists of two parts. The first part is the conclusions; it summarizes the results of the analysis and observations from research. The second part is the recommendations. Recommendations are based on the research findings.

5.1 Conclusions

This study aims to: (1) study the minimart development in Malang; (2) examine the socio-economic characteristics of traditional shops; (3) describe the changes in traditional shops after the minimart presence; (4) measure the economic impact of minimart presence on traditional shops; and (5) investigate the strategies employed by traditional shops to survive in retail business. Data were collected from 172 traditional shops (86 shops each located near and away from the minimart) during June - October 2011. Analyses were based on descriptive statistics, t-test and the difference-in-difference estimator. Results are concluded as follows:

5.1.1 Minimart Development in Malang City

The number of minimarts in Malang increased rapidly during 2006-2011. The number rose from 2 outlets in 2006 to 144 outlets in 2011, expanded by 103.96%. There are four major brands of minimart, namely Indomaret, Alfamart, Alfamidi, and Alfaexpress. In 2011, Indomaret has the largest market share (49.1%) in Malang, followed by Alfamart (39.7%). In the city of Malang, the consumers can access to minimart easily.

5.1.2 Characteristics of the Traditional Shops

More than 70% of traditional shops were started by the current owners while the rest established by their parents. The shops have been operated for 19 years on average, 21 and 18 years for the near and away groups respectively. Around 54% of the shops are located on the main road. The average distances of the shops to minimart in the near and away groups are about 194m and 467m, respectively. The average size of the shop is about 42m². Most of the shops (84%) do not have warehouses. Three-fourth of the shops are operated by their family labors. The average workers are two people. The shops are opened 13 hours daily. The average buyers are 50 and 48 person/day for the shops in the near and away groups, respectively. The shop in near group earns average daily revenue and profit of IDR 1,325,813 and IDR 146,222 correspondingly. Whilst, the shop in an away group obtains average daily revenue and profit of IDR 1,316,162 and IDR 145,384 respectively.

5.1.3 Changes in Traditional Shop after the Presence of Minimart

After the presence of minimart, overall there are some major changes in the shops performances, namely number of buyers, frequent buyers, revenue and profit. The number of daily buyers decreased by 11.37 people. The frequent buyers fallen by 6.42%. Daily revenue and profit diminished IDR 253,895 and IDR 34,937 correspondingly.

5.1.4 The Economic Impact of Minimart on Traditional Shop

Using the simple model of DiD estimator, the presence of minimart adversely affects the daily number of buyers and profit with statistical significance at $\alpha = 0.05$ and 0.01 respectively. The number of buyers decreased 5.3 people daily. The profit dropped IDR 25,193.02 per day.

5.1.5 Strategy of Traditional Shop to Survive in Retail Business

Several strategies have been made by traditional shops to survive in the competitive retail business. Those are diversify the product, better display, adding new brands, reduce the prices and implementing self-service. The shop owners believe that the efforts could attract many buyers.

5.2 Recommendations

Based on the results, some recommendations to the traditional shops and the government are listed as follow:

5.2.1 Recommendations to the Traditional Shops

The presence of minimart in Malang gives negative impacts on number of buyers, and profit. In order to minimize the impact of minimart, some efforts should be considered by the traditional shops are as follow:

- 1) Diversify products and brands to meet the needs of the buyers especially the frequent buyers, better display, reduce prices and self-services. To diversify the products, especially the traditional shops close to minimart,

the shops can choose the products that are unique or different to the minimart. These will attract more buyers.

- 2) Decorate the shop by changing the appearance and atmosphere of the shop. This will make the buyers feel more comfortable during their shopping.
- 3) Increase or change working hours. These strategies will prevent the buyers going to the minimart and attract more buyers to the shops.
- 4) Manage and maintain the frequent buyers or loyal customers by offering the products and the brands that are essential for them. It will make the frequent buyer to do shopping regularly.
- 5) Improve shop management by recording each transaction. If it is possible, modern payment system using a computer could be used to record all of the transaction. It is useful to monitor products that are most in demand, and that are not. Furthermore, it can be used to adjust inventory strategy.
- 6) Be efficient in shop operation especially product purchasing and procurement.

In the fierce competition of retail business, the changes cannot be avoided. The traditional shop must be able to adapt to the changes that are increasingly stringent. An old shop and a new shop should operate in a manner that is acceptable and attractive to the customers. To survive in retail business, imitate the shop strategies that have been successful is necessary to be done.

5.2.2 Recommendations to the Government

Minimart gives negative impact on performance of traditional shop. Government should ensure the existence of traditional shops to avoid getting out of

the retail business. Government should be assertive in implementing the rules of competition between modern stores and traditional shop. The government can do some actions:

- 1) Limiting the number of franchised minimart
- 2) Limiting the working hour of the franchised minimart
- 3) Tightening the implementation of local regulations on minimart, by:
 - (1) Set the distance between franchised minimart
 - (2) Set the distance between minimart and traditional shop
 - (3) Closes the minimart, which is not in accordance with local regulations
 - (4) Tighten the construction permit of franchised minimart
 - (5) Tighten the license of operational extension of franchised minimart, minimart that do not meet the rules are not granted an extension permit

5.3 Limitation of the Study

This study was focused only in the impact of minimart on traditional shop performances. The performances are number of worker, working hour, number of buyer, percentage of frequent buyer, revenue and profit.

5.4 Recommendations for Further Study

Further study is needed to clarify the main factors affect the decline in the performance of a traditional shop, not only the competition among the traditional shops and competition between traditional shops with minimart, but also competition between traditional shops with modern retailers such as supermarket and hypermarket. Additionally, further research regarding the influence of consumer

behavior in shopping and purchasing power also required to clarify the factor that make the turn down in the traditional shop performance.

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APPENDIX

QUESTIONNAIRE

The Economic Impact of Minimart on Traditional Shop in Malang, Indonesia

The objectives of this research are:

- 1) To study the minimart development in Malang city.
- 2) To study the characteristic of traditional shop in the study area.
- 3) To describe the changes in traditional shop after the minimart presence.
- 4) To measure the economic impact of minimart on traditional shop in Malang.
- 5) To investigate the strategy of traditional shop in order to survive in competing with minimart.

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This questionnaire is a tool for collecting data used for thesis research. The Questionnaire divided into seven sections as follow:

Section 1 General Information of the Shop

Section 2 Owner's Profile

Section 3 Outlet Type

Section 4 Employee and Customer Profile

Section 5 Revenue and Profit

Section 6 Facilities and Services

Section 7 The Impact of Minimarket

QUESTIONNAIRE

The Economic Impact of Minimart on Traditional Shop in Malang, Indonesia (Dampak Ekonomi Minimarket terhadap Toko Tradisional di Malang, Indonesia)

Group of Sample : Near Away
 Number of Respondent :

T	R			
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Section 1. General Information of the Shop Bagian 1. Informasi Umum Toko			
Q. No	Questions		
1.1	Shop name (Nama Toko)		
1.2	Address Alamat	District (<i>Kecamatan</i>)	
		Village (<i>Kelurahan</i>)	
		Neighborhood (<i>RT/RW</i>)	
		Street and no. (<i>Jalan & No.</i>)	
		Post Code (<i>Kode Pos</i>)	
		Phone Number (<i>No Telp</i>)	
1.3	When the shop was open? Kapan toko ini mulai buka/ berjualan		Year Month
1.4.1	The distance from minimart (now) Jarak dari minimarket terdekat (sekarang)	 m
	Name of Minimart Nearby (now) Nama minimarket terdekat (sekarang)		<input type="checkbox"/> Indomaret <input type="checkbox"/> Alfamart
	When the minimart was open Kapan minimarket tersebut mulai buka		Year (<i>tahun</i>) Month (<i>bulan</i>)
1.4.2	The distance from minimart (in 2006) Jarak dari minimarket terdekat (tahun 2006)	 m
	Name of Minimart Nearby (in 2006) Nama minimarket terdekat (tahun 2006)		<input type="checkbox"/> Indomaret <input type="checkbox"/> Alfamart
	When the minimart was open Kapan minimarket tersebut mulai buka		Year (<i>tahun</i>) Month (<i>bulan</i>)
1.5	Respondent Name/ Shop Owner (Nama Responden/ Pemilik Toko)		

Section 2. Owner's Profile Bagian 2. Profil Pemilik		
Q. No	Questions	
2.1	Main Occupation (Pekerjaan utama)	
2.2	Age (usia) years old
2.3	Highest education Level completed (pendidikan terakhir)	<input type="checkbox"/> Elementary School (SD) <input type="checkbox"/> Junior High School (SMP) <input type="checkbox"/> Senior High School (SMA) <input type="checkbox"/> Diploma (diploma) <input type="checkbox"/> Under graduate/ Graduate (Sarjana)
2.4	Please tell me how long you have been running this shop Sudah berapa lama anda menjalankan toko ini?years
Section 3. Shop Type Bagian 3. Tipe toko		
Q. No	Questions	
3.1	Type of Location/ Place (Lokasi/ tempat)	<input type="checkbox"/> House/ Residential Area (Rumah/ pemukiman/ perumahan) <input type="checkbox"/> Store house at the main road side (Ruko di tepi jalan besar)
3.2	Size of the shop (Ukuran toko)	m ²
	Size of the storage (Ukuran Gudang)	m ²
3.4	Please tell me who started this shop? Siapa yang memulai/ membuka toko ini?	<input type="checkbox"/> Self (saya sendiri) <input type="checkbox"/> Parents (orang tua) <input type="checkbox"/> Acquisition/ Partnership (akuisisi/ mitra) <input type="checkbox"/> Any other (lainnya):
3.5	Please tell me how long this shop have been running Sudah berapa lama toko ini beroperasi?year
3.6	What are the product categories that you deal in (the most) Produk apa yang menjadi produk utama/ andalan toko ini?	<input type="checkbox"/> food : rice, flours, cooking oil, sugar, egg (makanan: beras, tepung, minyak goreng, gula, telur) <input type="checkbox"/> milk, bread (susu, roti) <input type="checkbox"/> other package food (makanan kemasan lainnya) <input type="checkbox"/> snack (makanan ringan) <input type="checkbox"/> toiletries/ cosmetic (produk kosmetik: sabun mandi, pasta gigi, deterjen, dll) <input type="checkbox"/> any others: _____

Section 4. Employee and Customer Profile			
Bagian 4. Pekerja dan Pembeli			
Q. No	Questions		
4.1	Number of personnel working in this shop Berapa jumlah tenaga kerja di toko ini?	Now (sekarang)	Hired person (buruh)
			Family members (anggota keluarga)
			Total (total)
		In 2006 (pada 2006)	Hired person (buruh)
			Family members (anggota keluarga)
			Total (total)
If decreased, give main reason/s? (Jika berkurang, berikan alasan) :			
4.2	How many daily customers generally visit your shop on an average on a weekday Berapa jumlah rata-rata pembeli di toko ini setiap harinya pada hari senin – jumat)?	Now (sekarang)	
		In 2006 (pada 2006)	
		If decreased, give main reason/s? (Jika berkurang, berikan alasan)	
4.3	How many daily customers generally visit your shop on an average on a weekend Berapa jumlah rata-rata pembeli di toko anda setiap harinya pada akhir pekan?	Now (sekarang)	
		In 2006 (pada 2006)	
		If decreased, give main reason/s? (Jika berkurang, berikan alasan) :	
4.5	How many percent of your customers are frequent or repeated customers? Berapa persen pembeli di toko anda yang merupakan pelanggan tetap (langganan)?	Now (sekarang)%
		In 2006 (pada 2006)%
4.6	What is the socio-economic profile of most of your customers Sebagian besar pelanggan anda adalah?	Now (sekarang)	<input type="checkbox"/> Upper Class (atas)
			<input type="checkbox"/> Middle Class (menengah)
			<input type="checkbox"/> Low Class (bawah)
			<input type="checkbox"/> Mixed (campuran)
		In 2006 (pada 2006)	<input type="checkbox"/> Upper Class (atas)
			<input type="checkbox"/> Middle Class (menengah)
			<input type="checkbox"/> Low Class (bawah)
			<input type="checkbox"/> Mixed (campuran)

Section 5. Revenue and Profit			
Bagian 5. Penerimaan dan Keuntungan			
Q. No	Question		
5.1	How much daily revenue do you earn on average?	Now (sekarang)	Rp.
	Berapa rata-rata pendapatan dari toko anda setiap harinya	In 2006 (pada 2006)	Rp.
	If decrease, give main reason/s? (Jika berkurang, berikan alasan):		
5.2	How much daily profit do you earn on an average?	Now (sekarang)	Rp.
	Berapa rata-rata keuntungan dari toko anda setiap harinya?	In 2006 (pada 2006)	Rp.
	If Decrease, give main reason/s? Jika berkurang, berikan alasan:		
5.3	Has your business increased / decreased over the last 5 years? Apakah bisnis toko anda mengalami peningkatan/ penurunan dalam 5 tahun terakhir ini?	<input type="checkbox"/> Increase (meningkat) <input type="checkbox"/> Menurun (menurun) <input type="checkbox"/> Remain Same (tetap)	
	If increased, by what per cent? Jika meningkat, berapa persen peningkatannya?	_____ %	
	If decreased, by what per cent? Jika menurun, berapa persen penurunannya?	_____ %	
	Give reason (berikan alasan):		
5.4	Do you think your business will grow in the next 5 years? Menurut pemikiran anda, apakah bisnis toko anda akan berkembang dalam 5 tahun kedepan?	<input type="checkbox"/> Increase (meningkat) <input type="checkbox"/> Menurun (menurun) <input type="checkbox"/> Remain Same (tetap)	
	If increased, by what per cent? Jika meningkat, berapa persen peningkatannya?	_____ %	
	If decreased, by what per cent? Jika menurun, berapa persen penurunannya?	_____ %	
	Give reason (berikan alasan):		

Section 6. Facilities and Services Bagian 6. Fasilitas dan Layanan			
Q. No	Question		
6.1	Every day, when your shop was open? Setiap hari, jam berapa toko anda buka?	Now (sekarang)	
		In 2006 (pada 2006)	
	Every day, when your shop was close? Setiap hari, jam berapa toko anda tutup?	Now (sekarang)	
		In 2006 (pada 2006)	
6.2	Do you give cash credit to your customers? Apakah anda memberikan kredit kepada pelanggan anda?		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Give a reason (Apa alasan anda?)		
6.3	Do you give home delivery? (Apakah anda memberikan layanan antar?)		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Give a reason (Apa alasan anda?)		
6.4	In your opinion, what are facilities and services that required by your costumers? Fasilitas dan layanan apa yang menurut anda paling diinginkan oleh konsumen anda?		
	Do you provide that facilities and services? Apakah anda memberikan/ menyediakan fasilitas dan layanan tersebut?		<input type="checkbox"/> Yes <input type="checkbox"/> No
	Why, give reason/s? (mengapa, berikan alasan?):		

Section 7. The Impact of Minimarket Bagian 7. Dampak Minimarket				
7.1	Give me your opinion about minimart? (Berikan opini/ pendapat anda tentang minimarket)			
7.2	Has there been any change in your business after the nearby minimarket presence? Apakah ada perubahan pada bisnis anda setelah kehadiran minimarket terdekat?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
	If yes, please describe (jika Iya, jelaskan)			
7.3	Some small retailers have done a few things to compete with the minimarket. (Beberapa pedagang telah melakukan sedikit usaha untuk berkompetisi dengan minimarket) Have you done any of these in the last five years (after the minimarket started operations in the area)? Apakah anda melakukan beberapa hal berikut dalam lima tahun terakhir (setelah aa minimarket beroperasi di area/ wilayah ini)?			
	A	Reduced prices (menurunkan harga)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	B	Reduced expenses (mengurangi pengeluaran)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	C	Reduced staff (mengurangi jumlah staf)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	B	Added new product lines (menambah jenis barang)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	E	Discontinued some product lines (menghentikan beberapa jenis barang)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	F	Increased number of brands (menambah merk)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	G	Better display (perbaiki tampilan)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	H	Introduced self-service (menggunakan metode pelayanan swalayan)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	I	Done up the shop (merapikan toko)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	J	Improved home delivery (peningkatan layanan antar)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	K	Increased shop space (memperluas toko)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
	L	Increased price for some consumers (meningkatkan harga untuk beberapa konsumen)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
M	Any other, describe: (lainnya, jelaskan)			

7.4	Are you willing to become a franchisee of minimarket? (Apakah anda berkeinginan melakukan franchise minimarket)	<input type="checkbox"/> Yes <input type="checkbox"/> No
	Give the reason: (berikan alasan)	
7.5	Are you personally aware of any traditional shop (of similar nature like yours) that has been closed in the vicinity in the last five years? Apakah secara personal, anda mengetahui beberapa toko (yang sejenis dengan toko anda) di wilayah sekitar anda yang telah menutup usahanya dalam lima tahun terakhir ini?	<input type="checkbox"/> Yes <input type="checkbox"/> No
	How many small retail shop have closed down? Berapa banyak toko yang telah tutup? outlet
	Can you please name these shops? (sebutkan)	
	What is/ are the main reason/s for the closure of these shops? Apa alasan utama penutupan toko-toko tersebut?	
7.6	What should the government do to address the rapid growth of minimarket in your area? Apa yang seharusnya pemerintah lakukan terkait dengan pertumbuhan minimarket yang sangat cepat di wilayah anda?	
7.7	Give me your opinion about the impact of minimarket on your society Berikan pendapat anda tentang dampak minimarket terhadap lingkungan sekitar anda:	

Thank to the respondent and close the interview

Date of Interview	Time of Interview	Place of Interview
Interviewer Name		Signature
.....	

VITAE

Name Bayu Adi Kusuma

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Educational Attainment

Degree	Name of Institution	Year of Graduation
Bachelor of Science in Agricultural Extension and Communication	Brawijaya University, Indonesia	2004

Scholarship Awards during Enrolment

1. Graduate Education Scholarship from Directorate General of Higher Education, Minister of Education and Culture, Republic of Indonesia

Work – Position and Address

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List of Publication

Kusuma, B.A., Kiatpathomchai, S., Hanani, N. (2016). The Economic Impact of Minimart on Traditional Shop in Malang, East Java, Indonesia. Russian Journal of Agriculture and Socio-Economic Sciences, No 1 (49) / 2016.