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# Indonesian traditional market flexibility amidst state promoted market competition

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**Abstract:** The penetration of modern supermarkets is believed to be the cause of the declining role of traditional markets and street vendors in Indonesia. But the competition between state-promoted markets and traditional markets is rarely discussed. This investigation focuses on traditional markets as social institutions, which continuously have developed a variety of strategies in order to remain competitive in the midst of intense rivalry. Firstly, we will outline a theoretical understanding of the traditional markets positioning along the concepts of flexibility and market devices. Secondly, we empirically reflect the strategies of four traditional vegetable markets in the District of Malang, East Java Province, as case studies. We show that the traditional markets build flexibility without governmental support by: (1) specifying commodities, (2) segmenting customers, (3) managing the load time, (4) modifying transportation to operate more efficiently, and (5) minimizing transaction costs by leveraging social capital. We argue that traditional vegetable markets institutionally reduce the potential of transaction costs to be competitive and avoid problems of coordination by building social capital through networks. All in all, market institutions supported by market devices are flexibly capable of adapting to the pressures of both selfishness among actors and competition with other markets.

**Keywords:** *Traditional market, state promoted market, coordination problems, market device, market flexibility, and adaptation*

## 1. Introduction

Studies on the market these days focus on the problem of stability of market regularity/market order (Chowdhry & Nanda, 1998; Fligstein, 2002; Beckert, 2009). Whilst markets as social institutions change over time, these changes have received little attention so far (Jackson, 2003; Çalışkan & Callon, 2009; Overdevest, 2011). The discourse about traditional market transformation in developing countries, including Indonesia, focuses rather on the competition between traditional markets and supermarkets or street vendors, whereas the competition between markets, particularly between traditional and modern markets pioneered by the State, is rarely discussed (Roslin & Melewar, 2008; Suryadarma, 2010; Toiba, 2015; Prabowo & Rahadi, 2015). There is very little attention paid towards so-called wet markets in developing countries. A wet market is a traditional market place that is initiated by local society without institutional support. Wet markets mostly sell daily necessities such as vegetables, rice, groceries and spices, and in some cases bargaining still occurs. In fact, vegetable markets in Indonesia have experienced significant growth for last ten years, in line with an increase of vegetables consumption per capita and natural

population growth (Shepherd, 2004; Wright & Ranghuti, 2016). According to the 2015 data from the Department of Agriculture, an average Indonesian consumes only 34.55 kg of fruits and 40.35 kg of vegetables annually. At the same time, the Food and Agriculture Organization (FAO) has recommended that each individual should consume at least 73 kg of fruits and 91.25 kg of vegetables every year (CBS, 2017). With that goal in mind and a population approaching 250 million people, Indonesia is a huge market that will continue to grow (CBS, 2017).

The increased consumption of vegetables can be seen from the emergence of new vegetable markets, mainly initiated by the government as a competitor to traditional vegetable markets. The new market appears at the provincial level called "Center of agribusiness and at the district level called "sub-center agribusiness". In Indonesia, a province is a state-level government in charge of districts where each district has an average population of two-hundred thousand inhabitants with some exceptions. The district of Malang city, for example, has a population of more than 900 thousand inhabitants. Not only do TA and STA simplify the integration of the supply chain, but they also develop new markets as substitutes for the existing traditional wet markets. By 2015, Sub-Terminal Agribusiness had been established within almost all districts in Indonesia, especially in areas of major vegetable production. The government subsidizes these markets directly and indirectly, which will threaten the existence of traditional markets (Anugrah, 2004).

The reference for the Indonesian government's market-strategy is a model developed in Thailand, which purpose is to strengthen institutional market capacity in order to boost exports (Nainggolan, 2003, 2017). Instead of providing an alternative supply chain for modern markets and exports, the state-promoted markets have become new competition for traditional markets since they cater for the same costumers. Although facing quite tough competition, some traditional markets in Indonesia have actually increased their transaction volume amid the emergence of new markets. They are able to compete, despite the fact that the government favored the markets it has formed. Taking a sample of four major traditional markets around the District of Malang, this article captures how they withstand and adapt to the new government-driven market dynamics in order to remain competitive.

Markets are not just an economic mechanism for the allocation of goods, but are social institutions, inseparably interwoven with the political, social, and cultural environments in which they operate (Lie, 1997; Smelser & Swedberg, 2005; Beckert, 2007; Fourcade, 2007). Markets are a social structure for the exchange of rights, which enables people, firms and products to be evaluated and priced (Swedberg, 2015). Market actors develop social structures to mediate the problems they encounter with regard to exchange, competition, and production (Callon, 1999). Hence, as a social institution, markets can be seen as a living entity with an actor arena for mutual exchange, where the sustainability of the market highly depends on its ability to facilitate the exchange processes (Beckert, 1996; Araujo, 2007; Çalışkan & Callon, 2010). Therefore, market dynamics, its growth and development are also largely determined by socio-economic changes. Through socially structuring the markets, it can be argued that social relationships underlying the markets have effects on their efficiency (Mawejje & Terje Holden, 2014). Theoretically, efficiency is a prerequisite of market sustainability and will only occur when market actors are capable of completing three problems of market coordination; namely the problem of competition, the problem of valuation, and the problem of cooperation (Beckert, 2012).

Competition refers to the institutional and social structural devices in markets through which producers reduce uncertainties and secure profit opportunities. Market participants will look for the most efficient formula to keep acquiring maximum profit, often by taking the surplus of other actors which incites even more competition (Beckert, 2011, 2012; Beckert & Aspers, 2011a). Valuation refers to the creation of preferences in the markets and the classification of goods through firm and consumers. The basis for this is a process of classification and commensuration in which actors rank products according to their contribution to the fulfillment of a functional need within a certain status or order of goods (Aspers, 2009; Beckert, 2011; Beckert & Aspers, 2011b). The problem of cooperation refers to the social risks market actors face from the non-fulfillment of contracts due to defection of their trading partners. Because of this problem, actors often build good relationships with other market players, who sometimes have nothing to do with the actual transaction process binding partners in order not to withdraw from the deal. Sometimes traders offer loans or specific facilities to ensure that trading partners do not cancel the deal. In this process, trust becomes an important component to assure the cooperation's compliance (Batt, 2003; Brooks, Leaver, & Spence, 2017; Kwon, Ik-Whan G and Suh, 2004).

The concept of market flexibility can be used to explain how markets overcome coordination problems. "Flexibility" is understood as a way to analyze markets using a more realistic approach to eliminate external exposure through accommodate it rather than refuse (Jackson, 2015). Furthermore, the concept of flexibility can complement the analysis of social dynamics of the market within the concept of market coordination problems. Flexibility is the ability of a market as a social institution to transform and adapt to internal and external pressure related to changes in the behavior of actors as well as values, so that market remains.

Competition victory is not only the ability to improve transaction efficiency alone, but also its capability to change values, consumer segmentation, commodity changes, social interaction changes, among others. For an in-depth analysis, the notion of the market devices concept is used, where markets are not only analyzed as pricing models but also as accumulative processes involving actors directly related to the market, technology and science. Market devices are no longer considered as mere tools, but play a crucial role in the formation and deformation of economic configurations (Muniesa, Millo, & Callon, 2007). Market devices are able to accelerate change by facilitating mobility of goods and information, resulting in increasing market efficiency while improving the quality of goods. As an example, a mobile phone serves as an effective device to get information about market prices, stock availability, and demand.

This article will specifically test the capability of traditional market actors to resolve coordination problems under the increasing pressure from other markets. Social interaction of actors to form a unique social network will also be described to determine the pattern of social relations in the market and to illustrate the process of encountering better market efficiency. At the same time, the market device and market flexibility concepts are applied to analyze how the concepts facilitate the social processes within markets to develop a one-of-a-kind adaptation method in order to solve potential issues. Once these issues are minimized, markets can carry out their function as social institutions and withstand amidst competition.

## 2. Results

### 2.1. Adaptation of the Market System

#### 2.1.1. Specializing Commodities

The process of institutional adaptation is not only related to interactional changes between actors but also to agrarian dynamics in the region and to government policies which “deliberately” weaken the presence of wet markets in Malang. The first adaptation performed by the traditional vegetable markets is by specializing in certain commodities. At Kedungboto market, for example, the main commodities nowadays are spinach, kale and collards while in the 1990s, this market still sold a variety of vegetables and even kitchen utensils and groceries. From FGD with old traders, commodity specialization occurs naturally. At first, traders bought spinach, kale, and collards only as a complement to other wholesale goods. They stopped by at the Kedungboto market to complete the shopping in other main wholesale markets such as the Blimbing market and the Gadang market. At the beginning; spinach, collards, and kale were second-class vegetables after highland vegetables such as cabbage and carrots, so the price was relatively cheaper. Over time, the demand for spinach, collards, and kale continued to increase and traders started to buy them from Kedungboto market in large numbers starting from the year of 2000.

Some traders revealed that consumers liked collards, spinach and kale because the prices were relatively cheap compared with other types of vegetables. Besides, these vegetables are not seasonal and the price is relatively stable throughout the year. The combination of availability and affordability has stabilized the demand and even tends to increase it. Almost all pitchman sell spinach, collards and kale as those are usually requested by the customers in higher amounts than other types of vegetables. Pak Tomo, a customer who had been shopping in Kedungboto market regularly over the past 20 years, revealed that “More people go shopping in this market since it started selling only spinach, kale and mustard and the price became more affordable than at the other markets. Starting from the year of 2000, customers come not only from Malang but also from Surabaya and Bali.”

Commodity specialization also has a very close relationship with ecological farming areas around the Kedungboto. Within a radius of 10 kilometers around the market the area is very suitable for growing spinach, collards and kale and farmers can plant and harvest six to eight times during the year. Since the market is located closer to the farming areas, the vegetables are always fresh and the transport from the farms to the market causes little damage to them. The alluvial soil and the availability of adequate irrigation techniques as well as the lifelong experience of the farmers have provided sufficient capital for the development of the commodity. Hence, specialization is not only driven by consumers’ demand of certain vegetables, but also supported by agro-ecological advantages of the surroundings. State-promoted markets, on the other hand, sell types of vegetables that are not locally grown and therefore, are more expensive.

#### 2.1.2. Changing Modes of Transportation

The mode of transportation is adjusted by the traders to the harvest volume, limited road infrastructure, and fuel efficiency. With a harvest volume of only around two or three hundred kilos per farmer, transport by pick up car becomes inefficient. A motorcycle on the other hand can only transport up to one quintal (100kg) and thus is inefficient, as well. Therefore, traders modify the motorbikes in such a way that they are able to carry up to three quintals of vegetables in one trip..

Some traders also work as farmers. They sell their own rice yields or buy from neighboring farmers accordingly to the transport capacity towards the market place. The vegetables are tied together into bundles of fifteen to twenty kilograms, which maintains the quality of the vegetables and ensures a smooth transport across the narrow roads of the countryside. With such small-scale production, the most efficient means of transportation is a modified motorcycle.

Modified motorcycles are also an efficient mode of transport with regard to their capability to reach the lands that do not have adequate road access compare with pick up car. Rural infrastructure in third world countries can be relatively poor which makes it difficult for heavy vehicles to pass through. With motorsbikes, goods can be bought directly from the field (standing crop purchase) and be delivered freshly to the markets. Suwarno, a 45-year-old vegetable seller, said that *“people started using modified motorcycles in 1995 when the farmers planted their vegetables in small plots and the yield was decreasing gradually.”* As an addition, the damaged and muddy road made it difficult for Suwarno to access the plantation/ rice field. Even though he owns a pick-up truck, Suwarno keeps using the modified motorcycle because it is more efficient on fuel and he can arrive faster at the required locations. With regard to the small scale productions, limited road infrastructure and fuel efficiency, modified motorcycles become the most effective means of transportation.

#### 2.1.3. Managing Market Operating Hours

Another adaptation mechanism traditional markets use to increase their competitiveness is to reevaluate their operating hours.. Markets serving the wholesalers are open in the afternoon between 14 PM until 18 PM so that in the evening the buyers have time to sell to the markets serving the street vendors. Meanwhile, markets that serve restaurants and food stalls are open in the evening between 18 PM until 21 PM. In addition, markets which serve to pitchmen are open from 1 AM until 5 AM in order to keep the vegetables fresh to be sold since they are taken around the residential areas.

Kedung Boto market, for example, is open between 2 p.m. and 3 p.m., since it sells to the wholesaler who needs some time to re-pack the vegetables to meet the requirements of the end-users. The wholesalers usually pack the vegetables into a 10 to 20-kilogram pack of vegetables and deliver them to retailers in smaller wet markets. Meanwhile, Karangploso market is open from 2 p.m. to 6 p.m. because it sells to small retailers who resell the vegetables in the morning to people living in residential areas.

Lawang market opens at night and early in the morning because they sell directly to the retailers as well as restaurant owners who prepare food for sale in the afternoon or in the evening. These deliberate operating hours allow sellers to sell their produce in different markets. The short distances between the markets also make it easy for the sellers to go from one market to another in one day. Thus, the differences in operating hours of the markets give an opportunity for someone to shop in one market then resell the product in other markets. Since the operating hours for the state-promoted market are mostly limited to the morning and afternoon, the traditional market helps both sellers and customers to adjust their shopping time to their personal schedule.

#### 2.1.4. Reducing Transaction Cost

The efficiency of transaction costs is carried out by minimizing expenses in the transaction process such as loan interest, labor, and the cost of the scales. Transaction costs such as parking fees, scales



fee, and security costs are relatively inexpensive compared to the state-promoted market fees. The only fee is the regular payment to the village administration to be paid by the wholesalers. The small cost of the transactions has become one of the traditional market advantages compared with a state-promoted market which has sets of charges for traders.

Wholesalers provide loans to traders without taking the slightest interest. The debt is one of the instruments used to maintain the loyalty of the collector. Traders take risks by providing loans without collateral and without interest. Mr. Samino, a 63-year old seller who has been selling produce for more than 15 years revealed that *"loan is a common practice in this market. No collateral is needed because you trust people whom you lend money to. Everyone has to keep each other's trust so that this practice shall continue. There are sometimes one or two people who do not pay their loan."*

The small costs issued by market participants could not be separated from the business scale of traders. By selling only two to three quintals of goods, they do not release the cost of labor. Collectors harvest their own crops in the fields with the help of farmers. Even traders can pay back to farmers so that they are not burdened with capital adequacy. Farmers give two to three days after harvesting without collateral. Wholesalers themselves directly pay cash on vegetables they sell.

Other costs such as porters do not apply as well, while it exists in the market made by the government. On the market initiated by the government, traders should need to hire carriers and scales even though they are only selling one quintal of vegetables. Traders raise their own goods and wholesalers are allowed to use their own scales in the transaction. In state promoted markets, sellers have to hire a scale that is usually monopolized by the manager of the market, thereby increasing transaction costs. Therefore, synergistically, markets create efficient transaction mechanisms so that the profits are not eroded by the costs of additional transactions (Carey, Bell, Duff, Sheridan, & Shields, 2011). It is different from the state promoted market in which prices become the major incentive; the traditional market emphasizes on developing a social network.

## 2.2. Overcoming Coordination Problems

### 2.2.1. Overcoming Competition Problems

If the above discussion deals with the markets' performance, the problem of coordination focuses more on social interaction problems of actors within the market. One determinant of the sustainability of the market in maintaining its existence is the active role of the actors to resolve issues of coordination, namely the problems of competition, valuation, and cooperation issues (Beckert, 2012). To overcome the problem of competition, traders actively build social relationships with the suppliers by utilizing local traditions, such as attending weddings, circumcisions, or other traditional feasts. If they cannot make an appearance at the party, they will leave it to other traders so that the relationship is maintained. By building social relationships, the traders can reduce the level of competition because transactions do not solely rely on economic considerations but also happen for sociological and emotional reasons.

Besides, the wholesalers often visit the suppliers if they, or their families, are sick. They also actively exchange greetings or ask for news about fellow traders. Text messages and social media become important communication tools to strengthen the relationships between wholesalers with the suppliers. Some wholesalers even give presents to the suppliers every year on the day of Eid Al-Fitr, such as food parcels, shirts, and cash.

The closeness of their social relationships maintains their loyalty. Although the prices in other markets increase, the traders still send goods because of their friendships. They are often compromised by selling goods to other markets with better prices, but still sell goods to traditional markets to maintain social relationships. Despite a declining volume, the market will still get a steady supply of goods even when the supply or production of vegetables from farmers is low. If there are traders who do not sell goods to wholesalers for a long time, the issue will be discussed among fellow traders. This pattern is effective to keep the loyalty of traders as well as to recognize the character of their customers. A bond of debts is also used as instrument for wholesalers to tie customers' loyalty. If they had debts, it would appear a shame if they would not sell goods on a regular basis. With such social ties developed among actors, the market will still get supply of vegetables even though the purchase price is cheap. The flexibility thereby improves the durability of the market. Even with quite extreme price disparities, traditional vegetable markets still get supplied with goods. If the condition of the market starts to become unstable and fewer goods enter the market, a new price will normally be created. Social capital and its synergy with adaptation strategies of other markets is proven to be an important factor for the sustainability of the market.

#### 2.2.2. *Overcoming Valuation Problems*

The sustainability of the market is also determined by the ability of the actors in agreeing on the prices of goods so that a transaction can occur. The price must be competitive of course, so the transaction remains mutually beneficial and satisfies both, buyers and sellers. The price is basically an instrument to accommodate the interests of market participants (Fligstein, 1996; Dekker, 2016). In Kedungboto market, sellers prefer to take small profits with high volume instead of big profits with yet a small volume. This principle is proven very helpful to ease the price formation.

This principle is also very helpful to maintain price stability. Compared with the market established by the government, traditional markets are relatively more stable, hence the traders feel more secure when making transactions. According to traders, relatively stable prices allow them to set higher prices. So, traditional markets are able to facilitate the formation of the value of goods more easily and approach a more objective price according to the quality of goods because the sellers are willing to reduce their ego to get higher profits. Adaptation, trust and commitment are identified as key drivers for value creation (Walter & Ritter, 2003).

The ease of price formation has become the main condition of the transaction. The actors always compare prices in traditional markets with other markets that are more expensive. It resolves the valuation problem where price formation occurs based on an objective assessment process by comparing prices of the same goods. This classification may be based on standards that make it possible to objectively describe the quality of products in relation to other products of the same class (Beckert, 2007; Callon, 1998). This situation reflects Callon's (1998) idea that actors in the market are calculative agencies who have value, culture, rules and passions instead of sole "atomic" economic goals. These individuals are naturally formatted, framed and equipped with prostheses, which help them in their calculations, as well as agents who actively contribute to developing market configurations.

Not only the price, but also the availability and quality of goods, cause transactions in the traditional market in terms of valuation processes to be difficult. The traditional vegetable market lets the buyer classify in a flexible way and consider the commensuration of the prices, in which actors rank

products according to their contribution in the fulfillment of a functional need within a status or order of goods. According to the traders, they have many quality options to make it easier choosing the goods based on the tastes of their customers. With the price comparison between the sellers, the buyers will choose accordingly to the characteristics of their customers. If they sell the vegetables to a province's market (Surabaya or Porong), they can buy collards, kale, and spinach in all kinds of shapes. However, if they sell it to retail markets in Malang, the vegetables should be uniformed since they will be divided into small packs and sold as that.

### 2.2.3. *Overcoming Cooperation Problems*

Cooperation problems can occur, if one of the actors commits fraud; such as an incompatible price-quality condition that formerly had been promised. If this problem is not resolved, it may cause the valuation problem had not resolved that potentially upset market instability. Transactions occur only if the actors agree upon the value of the goods based on their quality. Buyers will engage in market exchange if they are confident that the seller will deliver a certain quality of goods made in accordance between cooperation partners in the market. In traditional markets, the buyers already have "reputation of partners" or a list of traders who cheat and those who do not show a certain moral standard for an individual (Fourcade & Healy, 2007; Pirson, Martin, & Parmar, 2017).

Sellers will provide actual information about the quality of goods such as its freshness, its age, and its level of damage to make buyers feel comfortable. This phenomenon is called "reputation effect" or the effort of actors to preserve their reputation in order to maintain social relationships (Podolny, 2010). The sellers very rarely manipulate the quality of their products by mixing vegetables grade A and grade B or tucking bad vegetables in the middle of a vegetable bond. Usually, the buyers check only briefly what they are actually buying. Therefore, a mutual trust among them is a prerequisite for the cooperation to continue (Podolny, 2010). In this regard, the buyers are confident that the goods are bought based on this social contract, where trust is the fundamental precondition of stable market relations (Jraisat, 2016; Pedroza-Gutiérrez & Hernández, 2017).

If price and quality are non-conformant, or there is the sellers that violates the agreement, the buyers usually speak satirically to the traders. Satire is usually responded by traders with apologies and the provision of technical reasons for the low quality, such as bad harvesting or damaged goods during transportation. To anticipate the possibility of fraud, there are social mechanisms such as the effective sanctioning of defectors. Sanctions are not done directly by disconnecting trading relations, but gradually based on the degree of guilt. If the buyers have a mayor complaint, then the seller will provide compensation in form of lower prices or hand out certain bonuses for future purchases. Sellers are interested in the maintenance of trade relations and see to it that those ties are not broken because of the violation.

### 3. Discussion

Flexibility in the given context refers to the ability of traditional markets to naturally develop strategies in order to overcome competition among traditional markets and increase their internal efficiency. Gadang market, for example, which used to deliver to major vegetable vendors and retail buyers in the Malang region, ceased to exist in 2017. Lawang market specifically supplies food stalls and restaurants as well as street vendors. Meanwhile, Buring market only supplies pitchman. Karangploso market only delivers to traders who will resell at traditional markets or vegetable stalls



in residential areas. Customer segmentation proved to be successful in maintaining the markets' existence and reducing competition among them. At the same time, by specializing in the sale of certain commodities new customers can be attracted, thus generating an increasing number of transactions in a market economy. Such conditions indicate that both, the actors and the traditional markets as social institutions, possess high flexibility rates in order to adjust to changes in consumer behavior.

Growth of technology and improvement in rural transportation system encourage the flexibility of actors as well as markets, allowing the traditional markets to survive within business competition. It shows that, besides infrastructure, market devices such as mobile phone and motorbike are another significant factor to determine social interaction in the markets (Muniesa et al., 2007). Spreading information about prices from other markets allows actors to identify competition and make quick adjustment. So, changing in means of transportation reduce the risk of damaging goods, reduce conveyance cost, and the goods reach their destination faster. Thus, a naturally developing flexibility is useful for markets as institution and supported by market devices.

Three methods used by markets to solve coordination problems are identified: Expand their social capital, make use of their ecological advantages and advance in information technology. Through a high social capital the customers' loyalty is increased, and dishonest behavior is prevented, thereby making the market more efficient. This is in line with Kananukul et.al (2015), who state that trust as a component of social capital plays an important role in facilitating efficiency amidst various information uncertainties so that transactions can continue. In a more detailed elaboration, competition problems are resolved by utilizing social relations; the formation of prices is determined by developing quite effective networks of information; and the cooperation problem is dealt with by building a system of punishment and reward based on informal mechanisms.

In comparison to e.g. farmers' markets in the USA, traditional markets in developing countries rely solely on internal efficiency, building social capital and making use of their ecological advantages. The traditional markets in Western countries depend on consumer perception towards goods they sell and ethics attached to certain commodities such as support of local farmers. The given examples in this paper provide new insight for customers that several markets did very little to adjust to changes in customer behavior certainly state promoted market. In the other hand, traditional market are very active and flexible in dealing with the competitive environment. Due to government campaigns that encourage people to shop in modern markets instead of traditional ones, studies from consumers' points of view will provide some insights on the changing face of traditional markets.

#### 4. Materials and Methods

The primary data has been generated through a field-based ethnographic study from January 2014 to June 2015. On that basis, observations were conducted to validate the data and identify latest trends in the traditional markets. The observations were carried out in September 2016, January 2017 and July 2017. Each observation lasted for one week. The study was realized in Malang region, with the region capital of the same name, the second largest city in East Java.. It is located south of Surabaya, the capital of East Java Province, Indonesia. Malang region is considered as an agricultural area characterized by rich water resources and fertile soils and flanked by three active

volcanoes namely Arjuno, Kelud and Semeru. The region's land is ideal for the cultivation of agricultural products such as rice, vegetables and fruit.

Malang region supplies major cities in Indonesia, such as Jakarta, Surabaya and Yogyakarta, and other cities outside Java with vegetables and fruits. Some processed fruit and vegetable products are also exported to Taiwan, Japan, Korea and the Middle East. Large supermarkets located in eastern parts of Indonesia such as Kalimantan, Sulawesi, and Papua also rely on Malang as a major supplier.

The same applies to the four markets examined in this study:; The Kedungboto market, the Karangploso market, the Gadang market and the Lawang market (Figure 1). They all belong to large wholesale markets because the buyers will resell to small traders and the retail market.

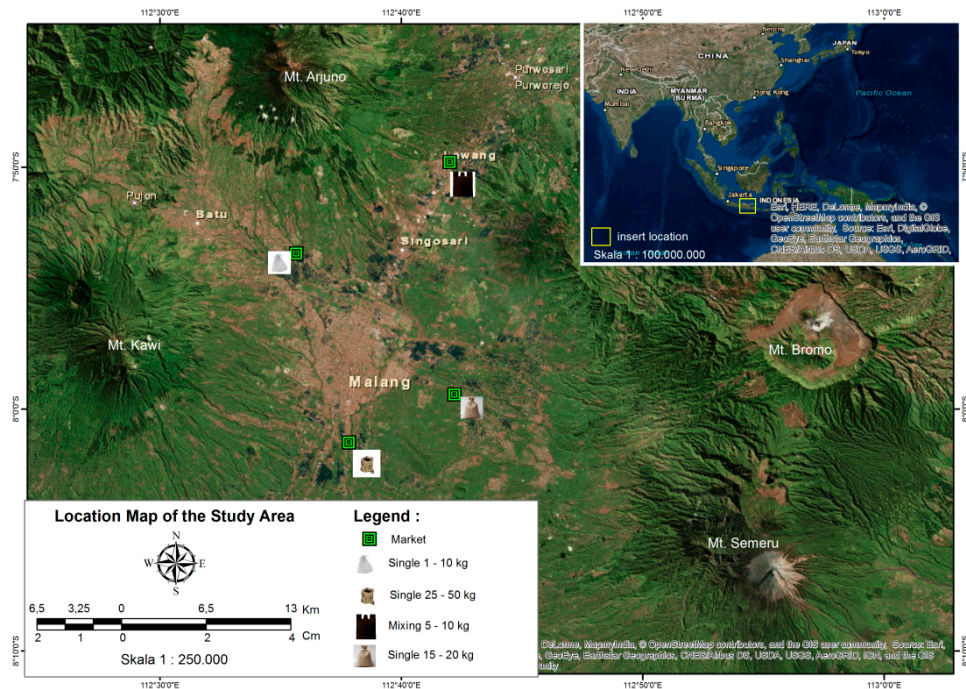


Figure 1 Research location of four traditional markets

The buyers in traditional markets are usually wholesalers who resell the vegetables to other traditional markets and retailers (street vendors) in and outside of Malang. Thus, the informants of this study consisted of 75 buyers, 20 distributors as well as managers of the examined markets as key informants and 15 old traders, who witnessed the growth and development of the markets throughout the years. During focus group discussions (FGD) the informants were asked to describe the development of the markets over time and helped to clarify the data obtained during field interviews. While exploring the market areas, five random elderly people were questioned and turned out to become the most important informants. Deep interviews were conducted to collect data about what strategies were used by buyers and sellers to keep transactions happening.

### 5. Conclusions

Facing competition with modern markets formed by the government, traditional markets in Malang, Indonesia, adapt well on an institutional level as well as individually with regard to the actors. Institutionally, commodity specialization is pursued to gain ecological benefits and to build a brand. Adaptation is also performed by using more appropriate forms of transportation in which considering the dynamic and precision of the vehicle becomes a more important aspect than speed

and the ability to transport larger volumes. Another way of adaptation is the reduction of transaction costs by providing free parking, security, and avoiding other expenses. Additionally, giving and taking loans is rarely burdened with interest charges. Giving a loan is interpreted by traders as a form of investment to maintain customer loyalty. Furthermore, costs for porters, scales, and warehouse fees are not included in the transactions. Simultaneously, the whole process of adaptation leaves an impact on the high efficiency of Indonesia's traditional markets. As stated by Jackson (2015), the market as an institution entails a certain flexibility in order to make adjustment when facing both internal and external problems.

Meanwhile, when dealing with coordination problems to uphold the sustainability of the market, actors in traditional markets fully exploit their social capital. A close relationship between sellers and buyers helps the formation of prices, reduces competition, and facilitates the coordination process. A high degree of trust towards the compliance with previous agreements encourages the actors to maintain these relationships. By doing so, the problem of competition with other markets can be overcome and value creation and cooperation as a prerequisite of market sustainability are based upon a mutual understanding. In summary, traditional wet markets in Indonesia apply two strategies to guarantee their sustainability both become more efficient on an institutional level and maintain an effective coordination between the actors (Shepherd, 2004). As an addition, consumers' characteristics, and habits of the local population, such as the daily purchase of fresh food, are simultaneously encouraging market sustainability.

**Author Contributions:** Mangku Purnomo and Heiko Faust conceived and designed the study; Fenna Otten and Mangku Purnomo performed the field visits, data collection, and analyzed the data and wrote the paper.

**Conflicts of Interest:** The authors declare no conflict of interest.

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