CREDIT AND TRUST:
FRUIT MARKETS IN THE MEKONG DELTA

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Foreword

Markets require clear rules and supporting institutions to function properly. Millions of business deals are made every day between complete strangers, and most of these transactions will not be repeated. If individuals and businesses come to believe that contracts cannot be enforced, the cost of doing business will rise for everyone. Cultural norms and social ties are effective means of controlling bad behaviour within small communities, but they are not much help when markets operate beyond the boundaries of the village or small town.

This paper reports results from a survey of 180 farmers and 47 traders in the Mekong Delta's pomelo fruit market. The authors found that contract enforcement remains a serious problem in the fruit trade. Since transactions are risky, costs are higher than they should be for both farmers and traders. The paper also considers the appropriate policy response to this situation. The best solution would be to guarantee easy and affordable access to a transparent and impartial legal system. But the authors are aware that legal system development will take some time. In the meantime, the creation of feedback mechanisms that facilitate the development of commercial reputations would represent a cost-effective alternative.

UNDP Policy Dialogue Papers contribute to key policy debates in Viet Nam through the analysis of critical development issues. Our aim is to stimulate informed discussion and debate through the presentation of information and evidence collected and presented in a clear and accessible manner.

While the ideas expressed in the paper do not necessarily reflect the official view of UNDP, we value the opportunity to contribute to policy discussions in Viet Nam. We thank the research team for their thorough investigation of this complex issue, and their constructive policy recommendations. We hope that this paper stimulates further research in this area and healthy debate on alternative policies to accelerate agricultural and rural development.

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Abstract

The economic literature suggests that in markets where legal institutions are weak, such as Viet Nam, parties will rely on private ordering to assure performance of complex transactions. This paper examines fruit markets in the Mekong Delta. While transactions in this market could be simple (spot market transactions), parties frequently make them more complex by adding a credit component. A survey of 180 farmers and 47 middlemen in the Mekong Delta's pomelo fruit market produces little evidence that private ordering mechanisms are playing a substantial role in assuring contractual performance in somewhat complex market transactions. As a result, in the absence of credible legal institutions and effective private ordering mechanisms, there are significant transaction costs built into the pomelo market. This paper recommends the creation of a simple reputation mechanism, not unlike those now employed in online auction markets, which, if implemented, can improve efficiencies in the market while lowering risks for both farmers and middlemen.

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Introduction

This paper presents findings and analysis from a survey examining the organization and structure of transactions in the Mekong Delta's pomelo fruit market. Notably, the pomelo market has developed notwithstanding an absence of both credible legal institutions and private ordering mechanisms to provide assurance of contract performance. Because buyers and sellers in this market do not, for the most part, repeat transactions with each other, the market is subject to relatively high transaction costs associated with potential opportunistic behavior by market participants. This paper recommends developing reputation mechanisms to bolster the robustness of market interactions through increased access to information about counterparties. In particular, by facilitating information about the past performance of market actors, a reputation mechanism can create a virtual second period interaction between parties and, as a result, constrain potential bad behavior. The result of creating this type of private ordering device for the pomelo market should be a reduction in transaction costs, evidenced by better prices for farmers and increased trade credit for middlemen. In Part 1, we describe the private ordering literature, and highlight the role of reputation and market intermediaries in providing assurance of contract performance in market's lacking strong legal institutions. In Part 2 we briefly describe Viet Nam's agricultural, economic and legal reform efforts in the past several decades. In Part 3 we explore the organization and structure of transactions in the Mekong Delta's pomelo market. In Part 4 we present findings and analysis from our survey of 180 pomelo farmers and 47 middlemen. Finally, in Part 5 we suggest several policies for improving the pomelo market's efficiency.

1. Private Ordering

There is now a large and growing literature on private ordering. It is generally considered true that parties have incentives to structure transactions so that to the degree possible, they are self-enforcing. Indeed, where legal systems are not functional, private ordering mechanisms (bilateral relationships, communal norms, or market intermediaries) are generally understood to be required to allow economic activity to occur on any significant scale.[1] This belief finds its basis in the applications of game theory. Specifically, in the absence of efficient and predictable legal institutions simple market transaction becomes a form of one-shot game. In a one shot game, where neither party can expect a second period interaction, parties to the transaction have an incentive to cheat. Sellers have an incentive to sell goods or services at less than the advertised quality, and likewise buyers have an incentive to avoid payment, if possible. As a consequence, market transactions, in these circumstances, are limited to spot transactions where quality is apparent to the buyer. A strong legal system creates a virtual second period relationship between otherwise anonymous buyers and sellers. With strong legal rights, parties to transactions can sue for specific performance or damages if they are cheated by counter-party in a transaction. Strong legal rights and institutions allow market actors to bargain in the shadow of law with anonymous counterparties at long distances with confidence that opportunistic behavior will be punished.

In the absence of strong legal rights, parties are inhibited in the type and character of dealings they can undertake. That is not to say, in the absence of strong legal rights that parties will not pursue market transactions. They will, but they will likely be limited in scope and scale. In these circumstances, parties gravitate toward private ordering mechanisms in which the incentive for continued cooperation is the prospect of future business.[2] Where the net present value of cooperation is greater than the net present value associated with opportunistic behavior, parties will find ways to cooperate. Strong legal rights create quasisecond period effects by ensuring that anonymous parties to a transaction have some post-contractual remedy in one-off settings. In the absence of those rights, private ordering can offer similar protections. Two basic approaches involve: first, long term, or relational, contracting between two parties; and second, the development of reputation intermediaries, or trust services, in order to enforce second period penalties on parties in one-off transactions.[3]

1 For a discussion of the role of private ordering in dysfunctional legal systems see McMillan and Woodruff, 2000.

2 Of course, this incentive is often present whether or not strong legal institutions exist.

3 Among others see Baird, Gertner and Picker 2000; Dixit 2004; and Klein 2000.

By converting the one-off, anonymous transaction into a series of repeated transactions between known players, parties can create a powerful self-enforcing mechanism.[4] The threat of withholding future business can be a powerful incentive not to act opportunistically. Where relational contracting is not possible because the market is fluid and relatively anonymous, parties can attempt to rely on proxies to send signals to prospective counterparties about their fitness as a business partner. These proxies act as signals and also act as virtual second periods. For example, one such relational proxy is reputation.[5] A good reputation sends signals to potential counterparties about one's willingness and ability to perform and at the same time, the ability of a counterparty to negatively impact on that reputation, and hence the future income generating ability, of the bad actor, creating a virtual second period.[6]

Alternatively, as suggested by Akerlof, parties can employ branding devices, franchising[7] or "trust services" (e.g. Underwriters Laboratories) as reputation proxies to convey otherwise private information and to generate a second period mechanism to constrain opportunism. Trust services can convert a one-off transaction into a multi-period transaction, and create information feed-back loops that act as a virtual second period in a spot transaction. A trust service allows anonymous market participants to punish bad market actors through withholding their business, thereby constraining opportunistic behavior. In certain settings, trust services can develop spontaneously. In others, trust services require at least some level of third-party sponsorship in order to get started.

2. Viet Nam in Transition

Viet Nam began its transition from central planning to a market economy in the mid-1980s and picked up steam following the withdrawal of Soviet assistance in the late 1980s. The Doi Moi, or Renovation, era has been characterized by increasing liberalization of the economic arena. By 1989, Viet Nam had substantially freed up agricultural production by almost completely privatizing the agricultural sector (Lipworth and Spitaller 1993). This was followed by across the board price liberalizations and a devaluation of the exchange rate, as well as a reduction in the subsidies to state enterprises (Leipziger 1992 and Le Dang Doanh et al 2002). By 1991, Viet Nam could be considered the foremost reforming transition economy in many important aspects. During the 1990s and as a result of successful implementation of the reform programme, Viet Nam enjoyed a period of rapid growth averaging between 8-9 percent per year (Dapice 2000).

Agriculture has been one of the most important beneficiaries of Viet Nam's economic reform programme and is an important part of the country's economic life. The economic liberalization of the late 1980's helped push a massive expansion in rice output, allowing Viet Nam to move from a net rice importer in 1988 to the world's third largest rice exporter in 1989. During the 1990s with the growth in the production of coffee, Viet Nam became the second largest coffee exporter in the world, behind only Brazil. Notwithstanding the success of the agricultural sector, Viet Nam remains a mostly poor, rural country with more than 73 percent of the population in rural areas though just over 20 percent of the country's GDP is generated by the agricultural sector.

Together with the rapid changes in the economy and economic management during this period, Viet Nam embarked on a legal reform agenda. Legal reform in Viet Nam can be characterized by the frenetic pace at which the country's legislature has passed a host of legislation over the past two decades aimed at modernizing the country's economic regulation. Notwithstanding the efforts that have gone into rebuilding a legal system appropriate for a market economy, confidence in formal legal institutions in Viet Nam remains low.

Viet Nam's legal system remains burdensome and unwieldy. According to the World Bank a simple contractual dispute requires an average of 295 days to be resolved by the courts. The cost of resolving such a dispute is equivalent to 31 percent of the contract's value, thus making resort to courts ineffective as a business matter.[8] Even if one were to get resolution through the courts, there is not much confidence in the result. According to

[4] Adam Smith called this the "discipline of continuous dealings." See Smith 2000.
[5] See Smith 2000, Greit 1993 and Fafchamps 1996.
[6] Reputation markets are highly dependent on good flows of information. If information is not readily available to market participants, the value of reputation as both a signal and a relational proxy is weakened.
[7] Akerlof 1970
[8] The World Bank, DOING BUSINESS SURVEY available at http: //www.doingbusiness.org.

a survey conducted by the UNDP, only 20 percent of respondents in rural areas stated that judgments of the courts are "just and fair" (UNDP 2004). There is a clear perception that the formal legal system is corrupt and unreliable; 74 percent of respondents indicated that the honesty of judges was important to the outcome a formal legal proceeding, while only 65 percent thought having the law and facts on one's side was important. The distrust of the formal system is shared by firms. According to a recent nation-wide survey of more than 6,000 firms conducted by the Viet Nam Chamber of Commerce and Industry (VCCI), 89 percent of firms choose to negotiate, compromise, or let the conflict resolve itself as the first response when conflict emerges. Less than one percent (0.8 percent) of firms in the survey seek court assistance; 1.6 percent of firms surveyed rely on intervention by local government while 1.9 percent get help from relatives or friends to resolve the conflict. Finally, only 0.05 percent of firms in the survey reported turning to business associations (like VCCI) for help in resolving contractual disputes (VCCI 2006).

Given the weakness of the formal legal system in Viet Nam, one would not expect parties to rely on formal legal rights when contracting. Formal written contracts in such an environment should have little value since the cost of procuring enforcement is prohibitively expensive. Rather, one would expect parties to adopt private ordering strategies (e.g. relational contracting or trust services) in order to ensure contract performance. This should be particularly true as the complexity of the transaction increases. Among other things, complex transactions may involve delayed payment or delayed closing.

3. The Study Area and Typical Transactions

3.1. Overview

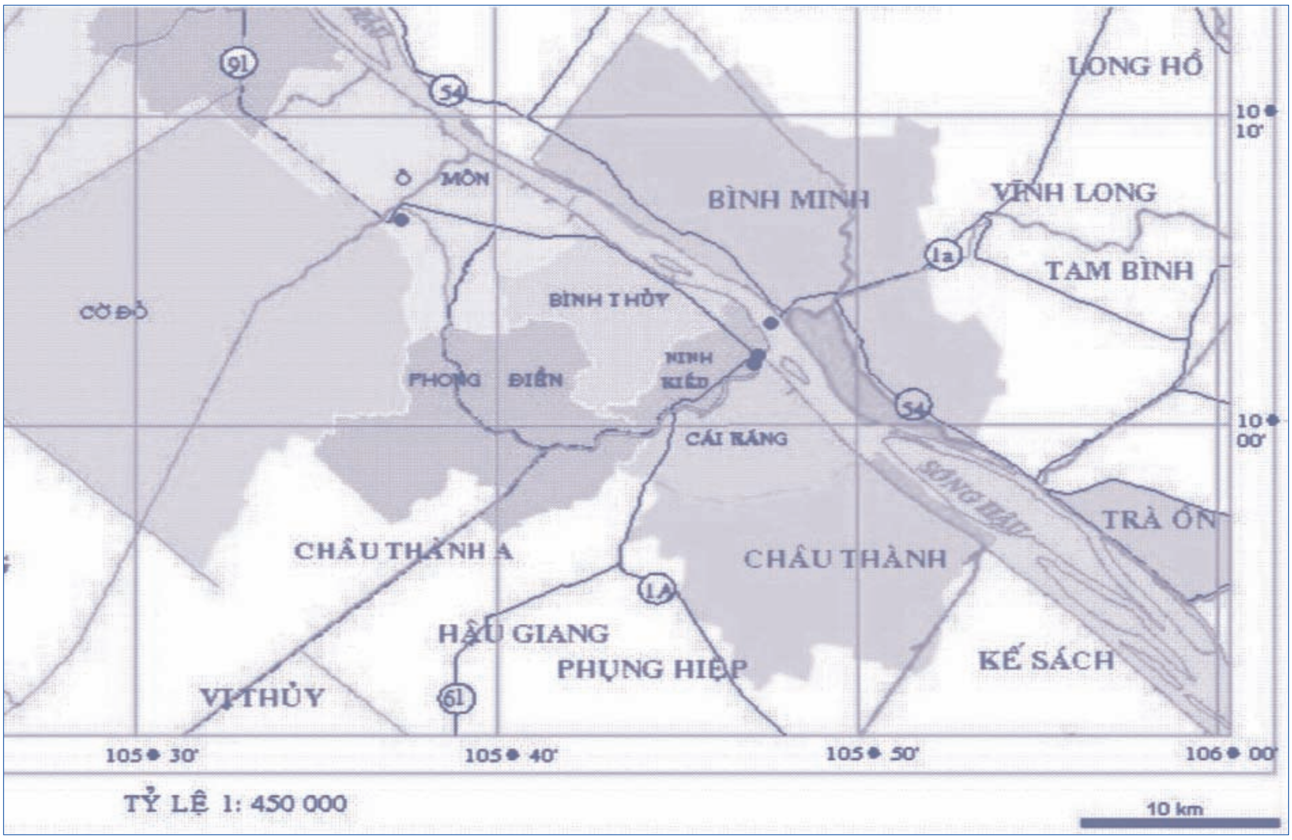
The study was conducted in three districts: Binh Minh and Tra On (in Vinh Long Province) and Chau Thanh (in Hau Giang Province). Vinh Long and Hau Giang lie in the center of fruit production in Viet Nam. Located just north of Can Tho, Viet Nam's fourth largest city, Binh Minh and Tra On districts of Vinh Long Province have relied on fruit production for much of their income for many years.[9] In 2005, 54.8 percent of Vinh Long's provincial income came from agriculture and fisheries, including approximately 14 percent from the production of varieties of fruit, including lychees, longans, rambutans, mangoes and pomelos. In 2005, an area of about 35,000 hectares in Vinh Long was reserved for growing a variety of fruits. The area for growing pomelos alone was about 5,300 hectares. Pomelos account for about 15 percent of fruit production in the province. Binh Minh District is known throughout the Mekong Delta for its Nam Roi pomelos where about 3,000 hectares are devoted to production of this variety.[10]

Although Nam Roi pomelos were first grown in Binh Minh, the variety is now also grown in neighboring districts and provinces. For instance, Phu Huu Commune in Chau Thanh District, Hau Giang Province has grown Nam Roi pomelos for a long time. Approximately 60 percent of the commune's total area of 2,000 hectares is used for growing pomelo. Its pomelo output reached 84,300 tons last year and is expected to increase because of the expansion of land devoted to pomelo.

[9] Vinh Long Statistical Yearbook 2005.

[10] Nam roi ("five sticks") pomelos receive their name from a local legend about a farmer who beat his children with five swats of a stick if they brought him low quality fruit. Today nam roi pomelos are known for their high quality.

Map 1 : Vinh Long Province [11]



3.2. Typical Transaction

The structure of the market for pomelos in the Mekong Delta is characterized by almost perfect competition. A few thousand pomelo farmers own small gardens, averaging less than a hectare in area. These gardens are typically located adjacent to canals and waterways making transportation by boat throughout the Mekong Delta simple and cheap. Rather than transport their produce to a market in an urban center, most farmers sell their pomelos through middlemen who float the canals and river-ways of the delta. There are some three hundred or so middlemen buying pomelos in the Mekong Delta. These middlemen move the crop to wholesale floating markets elsewhere in the Mekong Delta and to larger markets in Ho Chi Minh City (approximately 135 km to the north.)

Given the weakness of Viet Nam's legal system, one might expect transactions between farmers and middlemen to be structured as cash spot transactions between strangers. In the event that the market for pomelos is subject to asymmetric information one might expect the development of relational contracting or the active involvement of information (reputation) intermediaries in order to assure contract performance. While there is some evidence of relational contracting, the majority of farmers and middlemen approach the market as a series of one-off transactions with strangers.

3.3. Typical Farmer

Farmers engaged in growing fruit generally find it a profitable endeavor; 33 percent of farmers in the Mekong Delta report growing fruit. For the most part, these farmers grow fruit for commercial purposes with more than 91 percent of the fruit harvest marketed for cash (IFPRI 2002 and Vasavakul 2006). A survey we conducted in 2005 and 2006 with 180 pomelo farmers provides information about the typical pomelo farmer in Vinh Long Province and her market transactions. Pomelo farmers in the survey group grow pomelos on a plot averaging 6,900 sq. m in size and report average annual revenues from pomelo sales in the range of VND 30 million (or approximately USD 1,875) per year.

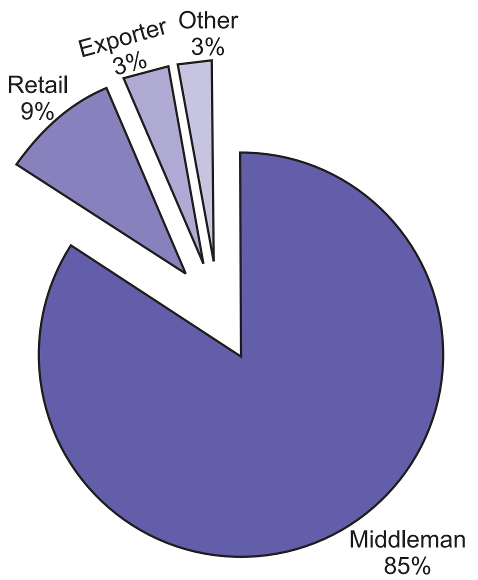
[11] Map Source: http://gis.chinhphu.vn/ShowmapGov.asp?pLayer=vinhlong−dis

Though distances in the Mekong Delta are small, many farmers are nevertheless relatively isolated. In 2001, only 34.3 percent of villages had paved roads that could support automobile transportation to the village center. Few farmers have access to market information; only two percent of 1,500 fruit and vegetables farmers surveyed had a phone, and not a single farmer in the 2000 survey possessed an e-mail address (IFPRI 2002).

Few farmers have access to credit. A survey by the Ministry of Agriculture and Rural Development (MARD) found that only 25 percent of farmers have access to any credit.[12] In fruit production, few, if any, farmers report receiving any credit from middlemen, fruit processors or farmers' associations.

Farmers with boats have the ability to sell at least a portion of their fruit on the local markets, floating markets in the Delta or to the wholesale markets in Ho Chi Minh City. However the large majority (80 percent) report that they sell their fruit to the market through a middleman.

Figure 1: Buyers of Fruit from Farmers



3.4. Typical Middleman

There are approximately 300 buyers who travel throughout the Mekong Delta buying pomelos from farmers and transporting them to floating and regional markets in the Mekong Delta, markets in Ho Chi Minh City, or to processors for export. A survey conducted by the authors in 2006 of 47 middlemen in Binh Minh, Tra On, and Chau Thanh specializing in buying and selling pomelos provides information about the typical middleman operating in Vinh Long and her market transactions. On average, these middlemen have been in the pomelo business for almost 11 years.

Barriers to entry and exit from the middleman business are relatively low, but are not insignificant. There are no special licensing requirements for middlemen nor are there any formal trade associations or informal ethnic associations that might limit participation in the market.[13] There are, however, three significant barriers. First, middlemen face the expense of a boat. The average sized boat is 43 tons and can cost approximately three to five thousand dollars. Only 55 percent of surveyed middlemen report owning their own boat; the others rent their boats.

The second barrier to entry is access to credit. Middlemen typically spend anywhere from 10-15 days collecting pomelos from farmers. During this period, they require capital to finance these transactions. Capital requirements for middlemen can be substantial. The average middleman collects fourteen tons of fruit per month. Assuming and average price of approximately 3,000 VND per kilogram, the middleman must be able

[12] IFPRI 2002. This survey was carried out on 1505 fruit and vegetable producers in October-November 2000 by the Ministry of Agriculture and Rural Development (MARD) and the International Research Institute for Fruit and Vegetables (IRIFV).

[13] That is not to say that ethnic groupings never existed in Viet Nam. Prior to 1979, for example, trade in rice was commonly understood to be monopolized by ethnic Chinese middlemen in the South. See Ungar 1988.

to finance VND 42 million (USD 2,600) for up to a month while she collects and then markets her fruit. Because most middlemen do business as sole proprietorships or without any business registration at all, they lack the ability to fund their own capital requirements through credit lines from banks. The capital requirements for middlemen get even more difficult for those who give credits to wholesalers. Interviews with wholesalers in Tam Binh, which is the main pomelo wholesale market in Thu Duc District in Ho Chi Minh City, reveal that the majority of wholesalers receive credits from middlemen, sometimes up to 100 percent.

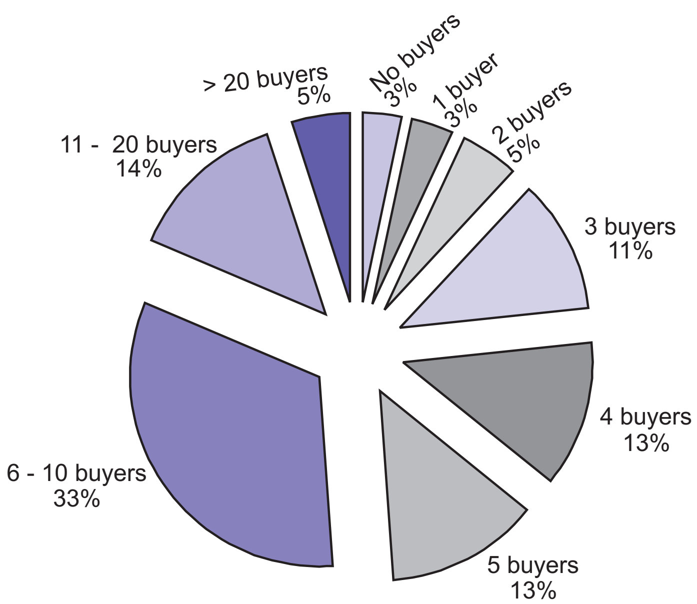
The third barrier to entry is access to the trading network in regional and wholesale markets in Ho Chi Minh City. Informal interviews by the authors with middlemen in the three biggest floating markets in the Mekong Delta, namely Cai Rang, Phong Dien, and Phung Hiep, reveal some of the middlemen cannot sell their pomelos to Ho Chi Minh City markets because they lack reliable partners. It appears that this problem can be solved with the passage of time. The longer a middleman has been in the business, the more likely she is to enjoy stable and mutually reliable relationships with several wholesalers in Tam Binh market.

Middlemen tend to specialize (97.8 percent of respondents report buying and selling only a single variety of pomelo). Many middlemen are also pomelo farmers themselves. As a result, they are very attuned to the market and quality. The appearance of the skin and the weight of the fruit are the most important indicators of quality that a middleman looks at. More than 95 percent of middlemen claim that they have a better sense of quality of the fruit they are buying than the farmers selling it. Middlemen are unanimous in their opinion that they have better market and price information than farmers.

3.5. Typical Farmer-Middleman Transaction

In transactions between farmers and middlemen, middlemen in boats approach farmers and fruit gardens along the ubiquitous canals of the Mekong Delta.[14] Farmers normally do not harvest fruit until they have found a buyer. Pomelos can be left on the tree for some time without fear of the fruit going bad, but at the expenses of the next year's productivity. This allows farmers to entertain offers from a number of potential buyers and wait for the best price. One might best characterize competition in this market as intense; 42 percent of buyers receive more than six approaches by middlemen in any given season. Nearly 20 percent of farmers report entertaining more than eleven middlemen approaches during a season. Only six percent of farmers receive an average of one or no approaches from middlemen. Clearly, the market for fruit at the level of the farmer and her garden is competitive. Farmers do not, as was the case in the past in rice production, face local monopoly buyers for their produce.

Figure 2: Middlemen Approaches to Farmers

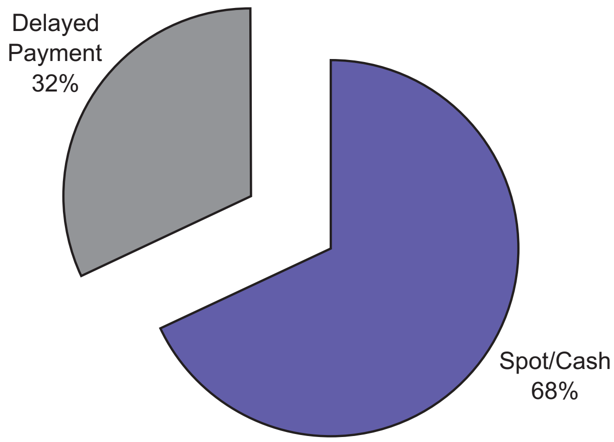


[14] Many places in the Mekong Delta are still not accessible by car and can only be reached by foot, motorcycle or boat.

Farmers have at least three ways of selling their crop, each with a corresponding pricing method. Farmers who sell their crop retail (mostly low-quality fruit) sell and price by the piece. Farmers can also sell their gardens by the kilo. This method is sometimes used. The typical purchase arrangement requires the middleman to buy a farmer's entire garden, not simply fruit of particular sizes or quality. One of the authors observed a middleman buying a garden. The middleman and the farmer walked around the garden together while the middleman quickly counted and evaluated the quality of fruit in the garden. They then agreed upon a price for the whole garden and the payment terms.

Payment terms and the middleman's obligations can differ. Typically, the middleman will leave a deposit (up to 30 percent) and promise to return in several days, or even weeks before the farmer harvests the entire garden under her observation. Generally, middlemen will make full payment when they collect the harvested pomelos. In some situations, where middlemen are unable to get access to working capital or when the market price remains unknown to the middlemen, farmers will agree to defer receiving payment from middlemen until after the middleman sells all of the fruit in the floating markets of the Mekong Delta or the wholesale markets in Ho Chi Minh City. The result is that for a significant number of farmers, what might otherwise be a cash spot transaction is transformed into a complex agreement with delayed performance by the buyer.

Figure 3: Payment Terms



The delayed nature of the transaction gives rise to an incentive for parties on both sides of the transaction to cheat. Farmers are providing credit to middlemen. Unless constrained by legal rights or other means, middlemen have an incentive to simply not complete their payment once they have taken the fruit. Absconding is a serious default since it means that the farmer will bear a substantial loss. The lack of an *ex post* settling up capability which strong legal rights or private ordering offer can create incentives for middlemen to oppotunistically avoid making final payment.

Farmers, on the other hand, also face an incentive to cheat on their agreements with middlemen. Since there is an active local market for high quality fruit and the period between contracting and delivery can be lengthy, farmers have an incentive to extract value from the fields before delivery to middlemen. During the harvesting, farmers can set aside the best quality fruit (or even just the better than average quality fruit) in order to sell on the local market. While a middleman might have assessed the general quality of the garden, it is likely that as memory fades, farmers can get away with a "lemons" sale. In addition, because of the delayed nature of the transaction and the lack of written contracts (only about 10 percent of transactions use written contracts), one can expect farmers to entertain subsequent higher offers from other sellers, resulting in hold-ups and renegotiation between buyers and sellers. In the circumstances described above one might readily expect the market for pomelos to collapse under the weight of potential opportunism (Akerlof 1970). However, notwithstanding the potential for opportunism, the market continues to develop and grow. How parties structure their transactions to mitigate or constrain the risk of opportunism is a valid inquiry. In the absence of strong legal rights one would expect that parties would gravitate towards long-term contracts with known entities or to seek the assistance of reputation intermediaries to generate sustainable agreements. There is little evidence, however, that this is happening in the Mekong Delta fruit gardens.

3.6. Floating Markets

Floating markets are a well-known feature of Mekong Delta life. These wholesale markets are normally located near cities and towns at the confluence of several rivers or canals. Some of the best known floating markets can be found at Cai Rang, Phong Dien, and Phung Hiep. But other smaller floating markets can be found throughout the Delta. These markets are, for the most part, informal affairs, without formal infrastructure. Although some floating markets are operated adjacent to retail markets on land (Phong Dien) and or wholesale markets (Cai Rang). The floating markets have no central management authority, nor do the provincial market regulators who typically oversee the operations of markets on land have a presence in these floating markets. That said, some market norms have developed with regard to product specialization. Some markets tend to offer more vegetables (Phung Hiep) while others tend to offer more fruit (Phong Dien).

These markets are typically spot markets with very little or no credit involved. This implies that transactions in this kind of market do not require either private ordering or legal rights. There is virtually no formal regulation in the floating markets. Participation in the markets is open to any and all comers, although participants must pay a small fee of several thousand VND. For the most part, participants in the floating markets are farmers or middlemen who come to sell their produce to other middlemen for resale in Ho Chi Minh City and other regional markets. The buyers at the floating markets can also be sellers serving local retail markets. Noticeably, export processors do not play any role in this market. The main reason is that the products for export markets are highly selective and standardized; exporters normally go directly to individuals gardens to select fruits meeting their customers' standards.

3.7. Ho Chi Minh City Wholesale Market and Export Market

Tam Binh Market in Thu Duc District is where most pomelo wholesale transactions occur in Ho Chi Minh City. In this market, middlemen sell pomelos to wholesalers who later sell on to retailers.There is no formal regulation in this market. The market opens to about 100 wholesalers who have normally been in the business for many years. Unlike floating markets, the wholesale market in Tam Binh is supported with much better infrastructure. The typical wholesaler rents a small shop of 10 sq.m for about 4.5 million VND (approximately USD 300.00) per month. She is provided with electricity, security and cleaning services that cost her about 750,000 VND USD 50.00) which are not included in the shop leasing contract. Every month, the wholesaler is supposed to pay a fixed amount of tax of 300,000 VND (USD 20.00).

An important difference between floating markets and Tam Binh Market is that transactions in the latter very much involve credit and private ordering. Typically, middlemen give credit to wholesalers, sometimes up to 100 percent, and come back to collect money only after the wholesalers have sold on to retailers. The relational contracting between the middlemen and wholesalers is therefore very important to facilitate their transactions. Our interviews with wholesalers in Tam Binh Market reveals that they deal with particular middlemen for a long time, and the longer the wholesalers stay in business the more likely they are to stick with regular partners.

Prices in the wholesale market are typically set by the middlemen. The middleman sometimes gives 100 percent credit to the wholesaler (who acts on behalf of the middleman for a commission), and the middleman provides the wholesaler with reference prices for different pomelo qualities. However, it is unclear whether the wholesaler is able to pocket the difference if the wholesaler sells pomelos at a price higher than the price referenced by the middleman.

4. Farmer and Middlemen Survey

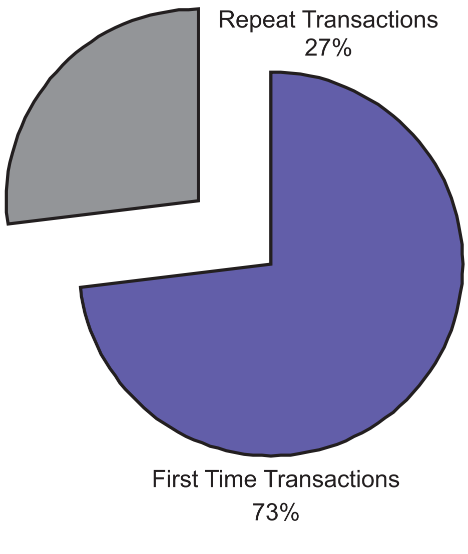
4.1. Initial Observations

A survey of farmers and middlemen undertaken by the authors between 2005 and 2006 provides empirical data regarding practices in the market for pomelos in the Mekong Delta. The survey of 180 farmers and 47 middlemen focuses on the structure of transactions between those two parties.

Given the weakness of legal rights in Viet Nam, it should be no surprise that parties do not rely on formal legal institutions to enforce agreements in the fruit market. More than 88 percent of farmers report that they do not rely on written contracts with middlemen when selling their fruit. Similarly, 85 percent of middlemen report not relying on written contracts when dealing with farmers. Few market participants appear willing to rely on formal legal institutions to resolve potential disputes that might arise.

Given the fact that the transactions between farmers and middlemen are complicated by the credit that the former often gives to the latter, it is surprising to see how little farmers and middlemen in the pomelo market rely on private ordering mechanisms in order to assure contract performance. In the authors' survey, 73 percent of farmers report selling to a different middleman for each of the previous three years. Middlemen for their part report that approximately 45 percent of the farmers from whom they buy were farmers from whom the middlemen had not purchased before. These results are counterintuitive since all indications are that, given the weakness of Viet Nam's formal legal structures, parties should rely on private ordering mechanisms. However, gravitation towards private ordering does not appear to be happening spontaneously in spite of the weakness of legal rights.

Figure 4: Farmer Transactions



This willingness to find a new business partner every year lowers the long-term value of each of these relationships, and as a result lowers the deterrent value of not acting opportunistically. More than 80 percent report that they would switch from one middleman to another in order to get a higher price. Defection in order to pursue a higher price is also the main type of contractual non-performance that middlemen report of farmers. Farmers report that they would be willing to move to a new middleman for a price increase of five to ten percent. If a farmer were to switch buyers subsequent to meeting an agreement with an initial buyer, that would likely lead to a dispute over performance obligations which implicates parties' legal rights. Given the informal nature of contracting the types of disputes and how parties resolve these disputes are informative.

4.2. Disputes

Disputes between farmers and middlemen, are not unexpected, and indeed 45 percent of middlemen report knowing about disputes in which a farmer broke an agreement with a middleman. Thirty-four percent of middlemen report having had problems with farmers themselves in the performance of a contract. Of the middlemen who report having performance problems with farmers, half report that farmers cancelled contracts in order to sell the contracted upon fruit to another buyer for a higher price.

Table 1: Middlemen Problems with Farmers

Farmer sells to other buyer	50.0%
Price problems (renegotiation)	18.8%
Poor quality fruit	18.8%
Other	12.5%

Farmers also report having trouble with middlemen, though in smaller numbers. Only ten percent of farmers report having had difficulties with middlemen in the previous five years. Of those, the biggest problem with middlemen by far is their failure to make complete payment for fruit that they take. However, 31 percent of all farmers in the survey report knowing someone who has been cheated by a middleman. As a result, though cheating by middlemen is not altogether common, it is not distant from the minds of many farmers.

Table 2: Farmer Problems with Middlemen

Middleman failed to pay	43.4%
Disagreements over quality	16.6%
Pricing Problems	11.1%
Other	16.6%

From both perspectives, middlemen and farmers face an *ex post* contracting risk. Middlemen risk farmers defecting or demanding renegotiations for small price increases. Farmers, on the other hand, risk middlemen taking fruit with a promise to complete payment at a later date and then absconding. With strong legal rights, these problems can be managed. In the absence of strong legal rights, one would expect to see gravitation amongst market actors toward private ordering in order to constrain potential opportunism.

4.3. Managing Disputes

With regard to potential disputes, market actors react in a manner that one might expect: 89 percent of middlemen would withhold future business from farmers who did not perform. Similarly, 95 percent of farmers would withhold future business from middlemen who they believed might have cheated them.

However, it is not clear how effective this sanction is in constraining opportunism by market actors. Since few farmers or middlemen appear to invest heavily in long-term relationships, these self-help sanctions may not carry any punitive impact on bad actors. In order for punitive retaliation of this sort to be an effective private ordering sanction, parties to the transaction must have something to lose by ending a business relationship. Without the prospect of future repeat business, there is little incentive for farmers or middlemen to constrain their own behavior. As a result, in an environment where one-off transactions are the norm, the threat of withholding future business is not an effective private ordering strategy. On the other hand, parties learn. Farmers in the survey who report having had trouble with middlemen in the past are more likely to engage in repeat transactions.

Given that parties tend to engage in one-off transactions, it is surprising that few farmers seek outside help to resolve disputes when they arise. Of those farmers who reported problems, 44 percent terminated their business relationship without resorting to any third party for assistance. The next most common response was to attempt to negotiate a solution with the middleman without third party assistance. Of those farmers who went to third parties, only a very small minority of farmers went to the formal dispute system (i.e. courts) for resolution.

Table 3: Dispute Resolution Methods (Farmers)

Forget it and move on	44.4%
Negotiate with middleman	27.8%
Go to court, local govt, police	22.2%
Other	5.6%

Middlemen appear to exhibit slightly different tendencies. While the majority of them seek to either negotiate or move on (58.2 percent), a larger proportion than among farmers seeks the intervention of some third party to settle contract disputes. This result is likely a function of the type of dispute that parties will encounter. Middlemen seeking performance of their contracts will likely be asking for specific performance or at least a return of a lost deposit so that they do not suffer a direct financial loss as a result of the farmer not performing. Farmers, on the other hand, are left holding a bill for an empty promise to pay. In such situations, the middleman is long-since gone, unlikely to return. In such a case, it is unlikely that a farmer will be able to track down a middleman and seek payment given the time and expense likely to be involved in such a search.

Table 4: Dispute Resolution Methods (Middlemen)

Forget it and move on	16.3%
Negotiate with farmers	41.9%
Go to police, court, local govt.	41.9%

Farmers' live-and-let-live approach has an interesting analytic impacts on the way they do business and make investments. Since farmers approach every transaction with the understanding that in the event of dispute (e.g. middleman avoiding payment) they will have no recourse, their enterprises are less profitable than it might otherwise be, leading to sub-optimal investment incentives. Analytically, the net present value of a farmer's interaction with a buyer is less than the stated price of the contract because the farmer knows that there is some probability that the middleman will renege on her agreement and seek to avoid payment. Since the implied probability of successfully collecting damages from a middleman in a dispute is very low (given the fact that almost half of farmers will not pursue resolution of a dispute), the present value for farmers of any one transaction is very low. Lower expected profitability could cause farmers to make sub-optimal investments in developing and/or maintaining their orchards. In addition, because each of the interactions with middlemen are low-payoff events, farmers do not have a strong incentive to invest in long-term relationships with middlemen, making it profitable for farmers to cherry-pick fruit and cheat buyers.

4.4. Reputation Intermediaries and Trust Services

Reputation can be an important trust service. If a reputation is well-known, it can play the role of a 'virtual' second period. Bad actors in one-off transactions who develop 'bad' reputations for dealing may find it hard to find new business partners willing to do business with them. Large numbers of farmers report that they would not do business with someone if they had heard that she had either not paid or had otherwise cheated another farmer (90 and 92.2 percent, respectively). Middlemen appear to show a similar respect for the power of a 'bad' reputation. Ninety percent of middlemen report that they would decline to buy fruit from farmers who had a reputation for 'bad' dealing.

The operative problem for both farmers and middlemen, however, is getting access to information about another's reputation. Reliable information about counter-parties' reputations does not exist, thus it is difficult for "reputation" to play any role in constraining behavior. More than three quarters of farmers report that they do not do repeat business with middlemen. For them, reputation turns out to be a relatively low priority. These farmers report that price is the most important factor with 81.8 percent reporting that price is the primary motivating factor for their decision to sell to a particular middleman; 54.9 percent of all farmers reported that they were willing to sell to a stranger.

It appears that there are only limited sources of information about the reputations and trustworthiness of potential business partners. Middlemen tend to be itinerant. They can range great distances in their buying and selling activities. They drop in and out of the business and do not benefit from natural monopolies. There are no administrative regulations that govern their practice, so there is no obvious signal to buyers other than the presence of a large capital investment in the business (a boat), though that is often leased.[15] Farmers report that they consider themselves good judges of the character of a potential business partner (68.9 percent). However, they appear to have very little direct information on which to reach such conclusions.

While there are a number of formal associations for farmers, there are no associations presently acting as reputation intermediaries. The Viet Nam Fruit Association, which is supposed to be the representative association for fruit farmers and the fruit industry, is not present in 80 percent of the areas where pomelo farmers operate. As a result, less than 20 percent of farmers report being members. Where it is present, it does not appear to be set up to coordinate information sharing of the type that would be of use to farmers or middlemen in assessing the quality of a potential trading partner. Certainly, farmers can get together informally and share information. Or, farmers could access information regarding middlemen through one of the local organizations. However, information gathered through local organizations and cooperatives has limited deterrent effect since farmers sharing information in this way suffer from a geographic limitation that is not shared by middlemen.

Table 5: What information do you get from local organizations?

Extension services	66.7%
Credit	9.5%
Market information	11.9%
Dispute resolution	11.9%

Informal reputation intermediaries in the Mekong Delta are hard to find. While rural communities are closeknit, they lack many of the attributes that make it possible to create a private reputation intermediary. In Bernstein's example of the diamond industry, the association controlled participation, and thus bad actors could be excluded from the market (Bernstein 1992). In Landa's example of ethnic Chinese merchants, they were tied together by common ethnicity and family ties (Landa 1999). In the Mekong Delta fruit markets, farmers and middlemen do not necessarily share any attributes other than time and place. Ethnic or family ties are not significant. Entry and exit into both the market to buy and sell fruit is low and not regulated. The fact that middlemen are mobile and not confined to particular geographic areas lowers switching costs on both sides of the transaction. In the absence of a quasi-regulatory body, then, it is difficult for farmers to develop useful information on potential counter-parties.

As a result, the effect of reputation and the role of a reputation intermediary on a seller's choice of buyer is indeterminate. This is so because even though most farmers report that they will refuse to do business with a "bad type" both farmers and middlemen report doing business with strangers. Most farmers do not appear to expect to remain in long-term relationships with middlemen anyway. Farmers set themselves up for a series of one-off transactions in a setting where information regarding the reputations of counter-parties is not very good. The threat that farmers might withhold future business from a bad counter-party is not credible because most middlemen will expect farmers not to be repeat suppliers in any event.

Farmers report that the most important reason for doing business, either as a repeat player or with a stranger, is high price. There do not appear to be significant cultural, social or ethnic ties between parties that do business together over time. Only about one quarter of farmers report doing business with the same middleman every year. These farmers do not appear to have significant familial, social or ethnic ties to bind the parties into a relationship with these middlemen. When asked why farmers continue to do business with

[15] 55.3 percent of middlemen do not own the boats that they use.

their middlemen of choice more than 50 percent responded that trust was the critical factor. While the evidence of this trust is clear - farmers grant credit to middlemen with whom they have not done business before, the source of this trust is not.

Middlemen appear to test the trustworthiness of new business partners. Middlemen report placing smaller average orders with farmers with whom they have not done previous business. Middlemen report a substantial difference in the size of the purchases in first time transactions than they do with repeated transactions. The average size of purchases from initial sellers is only 35-40 percent of the average size of purchases from repeat sellers. While it may be true that middlemen increase purchases in repeat transaction, the opposite may also be true. The survey data is ambiguous on this point. Because middlemen tend to buy whole gardens and not portions of gardens, it is just as likely that in response to an expectation of repeat business with a trust-worthy buyer farmers make investments, expand production and increase the size of their gardens.

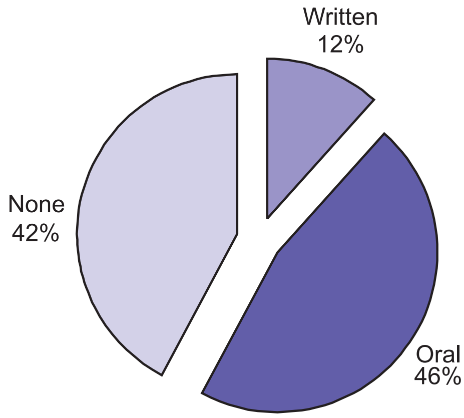
It is worth noting that there is no formal or informal association of middlemen. This implies that there is no information transmission mechanism. Unlike some other markets, middlemen in the pomelo wholesale markets do not have any "informal" association or, for instance, a popular coffee shop where they can swap information.

4.5. Credit as a Proxy for Trust

Where legal rights are weak, granting credit to counter-parties may signal a high degree of trust.[16] In that sense, the markets for fruit in the Mekong Delta appear to engender a relatively high degree of trust given the weakness of legal rights. Thirty-two percent of farmers report agreeing to receive delayed payment for their fruit. Taking delayed payment is the functional equivalent of granting credit to counter-party. In this case, nearly 30 percent of farmers report that they regularly grant credit to middlemen, generally people with whom they have no previous business or social relationship. Trust develops very quickly - indeed perhaps too quickly to be motivated by an economic rationale.

The form of contract used in the Mekong Delta is appropriate to the setting, informal. Only about 10 percent of farmers rely on written contracts. The vast majority of farmers rely on oral contracts (46.1 percent) or report having no agreement at all with buyers (42.2 percent) (the functional equivalent to an oral contract). Middlemen report a similar experience with 85 percent relying on oral contracts. Oral contracts are interesting because the delayed payment terms require a degree of trust in order to assure satisfactory completion. Though farmers will deal with only one middleman at a time, middlemen deal with multiple farmers. This gives rise to potential for disagreement as memories fade.

Figure 5: Types of Contracts



The time interval between delivery and final payment ranges from three days to three months.

[16] Woodruff and McMillan (1999) argue that where a party to a market transaction has high-switching costs, this may also motivate the granting of credit.

Table 6: Middlemen Delayed Payment Terms

Pay 3-4 days after receipt	32.6%
Pay 5-15 days after receipt	26.1%
Pay 1-2 months after receipt	10.3%
Pay in installments over three month period	17.3%
Other	13.0%

On the other hand, this credit relationship does not appear to be a two-way relationship. No middlemen in the survey report offering credit to farmers. Consistent with that, a large majority (86.2 percent) of farmers report receiving no credit from middlemen in the form of cash or extension services. This is consistent with an understanding that farmers and middlemen do not invest in long-term relationships, since the business cycle over which a farmer would require credit is much longer than that of a middleman. Since middlemen have a low expectation of doing repeat business with farmers, they have less incentive to provide farmers credit during the off season.

McMillan and Woodruff find a correlation between granting of credit and the degree of lock-in between business partners. They conclude that high switching costs and not necessarily trust, are the motivating factors for the granting of credit (Mc Millan and Woodruff 1999). Here, however, we do not find a correlation between the lack of competition (or high switching costs) and willingness of farmers to grant credit. More than 60 percent of middlemen report that the market to buy pomelos from farmers is moderately to very competitive. Farmers report a similar story; 64.2 percent of farmers report being approached by more than five middlemen every year, with 32.4 percent reporting being approached by between six and ten different middlemen every year. One would be correct to conclude that there is little "lock-in" in the pomelo market. Buyers are not geographically limited and parties need not make asset specific investments in relationships in order to enter the market.

Table 7: Middlemen Approaches to Farmers

0	3.4%
1	3.4%
2	5.1%
3	11.4%
4	12.5%
5	13.1%
6-10	32.4%
11-20	13.6%
>20	5.1%

Farmers appear to be willing to grant credit to middlemen with little regard to the degree of competition for their fruit. The proportion of farmers who report that they would allow a middleman to make delayed payments does not appear to be correlated in any significant way to the amount of competition or lock-in faced by farmers; 30-45 percent of farmers report that they would allow a middleman to make delayed payments.

The data provide an interesting fact about reliance on written versus oral contracts as it relates to the amount of competition in the market. Farmers who report moderate to no competition for their fruit (0-2 approaches per year), rely exclusively on oral contracts to document their sales to middlemen. Farmers who report competitive or extremely competitive markets, on the other hand, are more likely to rely on written contracts; 44.4 percent of farmers entertaining offers from more than twenty middlemen per year report relying on written contracts. This would lead one to conclude that middlemen facing competition for supply employ written contracts to create visible legal rights. Given the data on disputes and dispute resolution, it is not clear how strong the legal rights created by these written contracts are in the end.

4.6. Trust Puzzle

The presence of a high degree of trust in these complex transactions is puzzling. The fruit market is highly competitive with relatively low switching costs. As a result, one would expect to see the development of spot transactions between different buyers and sellers. However, almost one third of sellers report granting credit to buyers, most of these buyers represent new relationships. Given the large amounts of a farmer's annual income represented by the extension of credit, it is puzzling that a farmer would readily place it at risk in order to accommodate one of any number of potential buyers. If buyers require credit, one would expect sellers to gravitate toward long-term relationships with particular buyers in an attempt to constrain potential opportunistic behavior by middlemen. While this is occurring in isolated cases, it does not appear to occurring systematically. This result is also puzzling.

The trust that farmers exhibit is also surprisingly robust. Of those who reported having trouble with buyers in the past five years, two-thirds report that they would still do business with strangers. Indeed, the group of farmers with the best knowledge of how a stranger might act opportunistically is more willing to do business with strangers than others. Only 44 percent of those who have not had any trouble in the past five years report that they would do business with strangers (this in spite of the fact that the vast majority report doing business with a new middleman every year). While trust appears to be strong even for those who have been cheated in the past, there are limits. Of those who know someone who has been cheated in the past, 57.1 percent use written contracts, compared to only 12 percent overall. The effectiveness of such contracts is suspect, however. A significant minority of those who have been cheated in the past (20.9 percent) have established long-term contracting relationships with middlemen.

5. Policy Implications of the Study

The policy implications of this study are not altogether obvious at first glance. The issues raised by the interactions of farmers and middlemen do not rise to the level of market failure. Farmers must enter the market to sell and are not likely to stop because buyers have an incentive to act opportunistically. The interactions between farmers and middlemen do, however, indicate that significant transaction costs are present in this otherwise competitive market. Reducing those costs can improve the efficiency of the market and have a positive impact on household income for farmers by reducing risk while improving access to trade credit for middlemen.

In the first instance, it is clear that improving the efficiency and the accessibility of the Vietnamese judicial system should continue to be an important priority for Viet Namese policymakers. If parties had reasonable access to the judicial system, contracts, both written and oral, would be significantly bolstered and there would be a commensurate reduction in transaction costs. Viet Nam and the international community have had an active programme in legal and judicial reform for at least the past decade. The focus has been on drafting legislation, training judges and improving the overall efficiency of the judicial system. Achieving the goal of an efficient and accessible judiciary, however, is a difficult and expensive long-term proposition. Work in that area is by no means done.

Without duplicating or supplanting the judicial assistance programs going on elsewhere, there are discrete ways that one can improve the efficiency of spontaneous markets, thereby reducing transaction costs for market participants. In the case of the pomelo market where parties engage in one-off transactions, the market would benefit from the addition of a feedback mechanism to create virtual second periods for transactions. An efficient judicial system does this by creating legal rights to second period enforcement of promises made between strangers. In other circumstances, ethnic, cultural or social ties can create second period opportunities that promote norms of behavior in order to constrain bad behavior by market actors.

A feedback mechanism in the Mekong Delta would not have the benefit of either strong social ties or cultural norms. Nevertheless, one could build on local institutions to create a feedback mechanism that would facilitate the development of commercial reputations by actors in the fruit market. Information can be a powerful device in facilitating trade between strangers. A feedback mechanism could be as simple as a voluntary reporting system where parties who have had disputes with either middlemen or farmers could post their experiences.

Such a mechanism might be similar to the feedback/reputation devices presently employed on Internet auction and seller sites, like eBay and Amazon. In those markets, information about past performance of anonymous counter-parties is used as a virtual second period in order to constrain potential opportunistic behavior and facilitate trade between strangers.

Developing a reputation mechanism for fruit markets in the Mekong Delta need not be technically advanced or complicated. Its function would not be to supplant formal institutions, nor would it require the active intervention of formal institutions or third parties. A feedback mechanism could take advantage of market forces to encourage parties, both farmers and sellers, to improve their contract performance. It would do this by creating an opportunity for farmers and middlemen to participate in a virtual second period with otherwise anonymous counter-parties - evaluating the trustworthiness of recent counter-parties and sharing that information with others in the marketplace across the Mekong Delta. For example, in the United States a publication called Consumer Reports provides consumers with information about durable goods and services. This publication is useful for consumers because they will typically have little information about the quality of these kinds of goods and services since they are rarely in the market for them. A seller who receives a good rating for quality and service from Consumer Reports can expect to generate more sales.

Participants in the pomelo market, through a feedback system - either web or paper-based, could generate reputations. Bad actors who received negative feedback would, over time, find market actors moving away from them. A reputation mechanism works not only to punish bad actors, but it also rewards good players. Generating a valuable reputation is difficult now given the high degree of competition and the cost of information gathering about potential counter-parties.

With a reputation mechanism in place, parties may find it relatively inexpensive to develop reputations for fair dealing that are widely known. Good traders will create value for themselves by credibly signaling to the market their reputation for fair dealing. Middlemen will be willing to pay more to farmers who have a reputation for always providing high quality produce and performing on contracts. Farmers might be willing to take less from (or provide more credit to) a middleman who is known for not absconding on promises to pay. By providing parties an avenue for punishing bad actors, a reputation mechanism limits risk and creates incentives for parties to provide better quality at lower prices.

A second order effect of a reputation mechanism is that it would provide farmers and middlemen with better pricing information. Farmers presently get all of their pricing information from middlemen. A reputation mechanism would allow farmers and middlemen to better know the prices for pomelos in all parts of the Mekong Delta and thereby improve the efficiency of the market. A web-based mechanism which could provide pricing information in close to real-time might be more valuable to farmers than a paper-based system that might have a substantial production lag.

A reputation mechanism does not entail the creation of additional licensing or regulation which is neither necessary nor feasible. It is simply a way to improve market efficiency through the development of market mechanisms and the power of information. This approach should strengthen existing market structures and support improving the efficiency of the market without imposing undue costs and burdens on market participants. The approach taken to facilitate information flows need not be high-tech, indeed some of the most effective of these mechanisms can be decidedly low-tech.[17]

The VFA or the Southern Fruit Research Institute (SFRI), in conjunction with local agriculture committees, is probably the most appropriate body to create a reputation mechanism. However, in order to develop a reputation mechanism, VFA (or the SFRI) will likely have to reorient some of its activities and find ways to extend its reach. Unlike provincial governments it has broad enough scope to cover transactions throughout the Mekong Delta. Unlike the Ministry of Agriculture and Rural Development, these institutions are focused enough on issues related to fruit markets and the Mekong Delta that they could reasonably be expected to place a high priority on the effort. Local agriculture committees can help VFA extend its reach to the commune level.

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[17] For example, publishing the names and pictures of non-violent criminals is one typical way of creating an informal community sanction through shaming.

However, there are a number of challenges related to the design of such a proposed mechanism. First, a reputation mechanism requires a large-scale data collection effort. Neither the VFA nor the SFRI have the strong representation at the village or commune level in the Mekong Delta that would be required in order to collect transaction and reputation data, but collection of data could be overseen by local agriculture committees.

Assembling and sharing data in a low-cost manner is another challenge. This might be overcome through technology. A simple web-based application combined with collaboration from local agriculture committees at the village level could be sufficient to start. Of course, penetration of technology at the village level is still rudimentary and a web-based approach might be infeasible for the moment.

In the alternative, a bi-monthly newsletter with information collected by the VFA or the SFRI, could be circulated with information about unsuccessful transactions and with pricing information. Such a publication could be replaced at the appropriate time with a web-based approach.

Policy Options[18]

Policy Option One:	Web-based Reputation Mechanism
Objective:	Improve efficiency and lower risk of fruit markets by facilitating information flows regarding market actors.
Local Partners:	VFA, SFRI, local agriculture committees
Detail:	Web-based application can assemble information from transactions around the Mekong Delta providing farmers and middlemen with real-time (or near real-time) information on prices and feedback on dealings with middlemen and farmers.

Policy Option Two:	Newsletter Reputation Mechanism
Objective:	Improve efficiency and lower risk of fruit markets by facilitating information flows regarding market actors.
Local Partners:	VFA, SFRI, local agriculture committees
Detail:	Paper-based newsletter can assemble and provide basic information on unsuccessful transactions between buyers and sellers.

[18] To keep our discussions focused, we have purposefully limited ourselves on policy recommendations related directly to the creation of reputation mechanisms that help farmers and middlemen reduce their transaction costs. In practice, however, it is important for the policy makers to be informed by other policy approaches. One such approach could be to build institutions that facilitate the dispute settlement and contract enforcement (e.g., by improving the capacity of the local courts, by organizing farmers and/or middlemen into associations, or by facilitating the emergence of key actors in the commodity chain such as Hoang Gia Fruit and Vegetable Processing and Export Company.) Another approach could be to improve the current system of market information that can provide relevant market information (i.e., price, quality, address of sellers and buyers etc.) in a timely and precise manner. This information system will benefit from the cooperation among the farmer and middleman associations, the local and regional agriculture extension services, the research institutes (such as SFRI and IPSARD), and international technical support.

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