The Special Challenges of Ecommerce in China:[i] A Preliminary Investigation of Sufficient Conditions for Generating Adequate Consumer Trust For Initial Launch

Eric K. Clemons clemons@wharton.upenn.edu
The Wharton School

Fujie JIN
jinfj1@gmail.com
The Wharton School

Fei REN
fren@gsm.pku.edu.cn
Guanghua School of Management

Ying WANG
wangly@wharton.upenn.edu
The Wharton School

Josh Wilson
joshsw299@yahoo.com
The Wharton School

ABSTRACT

The ecommerce market in China is both the largest online market in the world and the one with the greatest number of low quality or counterfeit product offerings. Using case studies to develop testable hypotheses, as proposed by Eisenhardt and Graebner, we examine three very successful online companies in China and their very different paths to success. Our findings suggest that offering promises, assurances, and guarantees to consumers is not sufficient, because it is relatively easy for low quality sellers to offer counterfeit promises along with counterfeit products. We do find that promises backed up reputational capital can be sufficient to generate necessary online trust, and that actions must be taken to maintain quality in order to maintain trust. We understand the limitations of the work: since the same dataset cannot be used both to generate hypotheses and to test them we view this work as theory generation and not theory testing.

1. Introduction:

China is the largest ecommerce market in the world and the fastest growing [3] Commerce in China has unique challenges, both online and off, because China has the highest incidence of product counterfeiting in the world and also has the highest reported number of hazardous, even lethal product tamperings and food contaminations. These problems are occurring in China at a time of high online usage and therefore at a time of highly informed consumers. These problems are visible because those consumers who would normally order online are precisely those who are most informed of the hazards of products in the Chinese market and thus most aware of the problems associated with products that are purchased sight-unseen.

We address the following ***research question***: What factors have contributed to online trust in the most successful ecommerce companies in China and how have these factors contributed to online growth? To answer this question we study the initial launches of three highly successful online retailers. We do not suggest that these concerns are unique to China, and in this paper we are unable to ascertain the extent to which these concerns are unique to the Chinese market.

Our ***research methodology*** employs a small sample of intensive, semantically rich case studies. In the manner of Eisenhardt and Graebner [24], we use these case studies to develop a theory of trust development in the Chinese ecommerce marketplace.

We have two principal findings. First is that promises and assurances that products are genuine and of high quality, and promises and guarantees that defective products will be replaced, are necessary, but they are not sufficient. One would expect these promises, assurances, and guarantees to be offered by any website offering quality products. These build trust because they are binding commitments when given by high quality firms who would lose a great deal by publicly breaking these commitments. But empty promises are cheap and easy to provide, and can easily be offered by fly-by-night vendors, who are in the market briefly to make high profits selling fake goods, and ready to exit as soon as they are caught. Sellers of counterfeit goods will back the goods up with counterfeit promises. The second finding is that reputational capital is necessary to back up promises: reputational capital (1) ensures that the seller has more to gain by collecting the annuity value associated with its high quality operations over time, (2) assures buyers that this is true, and (3) assures buyers that the seller will stand by its promises rather than jeopardize this annuity value. (4) In the absence of reputation for the seller, reputational capital can be provided by a trusted third party guarantor. Ideally, this trust would be provided by national legal systems, but all too often legal recourse is not the ideal way to proceed against an internet seller who has committed a small fraud against you. Reputational capital provides the mechanism whereby promises become binding on high quality firms.

We do not use these case studies to test our findings, since they were used to develop the findings. This work seeks to further the development of a theory of consumer confidence in China. We conclude with suggestions testing this theory. Likewise, we are aware of no prior work that quantifies differences between China and other markets; we address this in our topics for future research as well.

2. Literature Review:

2.1 Information Asymmetry

978-0-7695-4525-7/12 $26.00 © 2012 IEEE
DOI 10.1109/HICSS.2012.586

The impact of information asymmetry on markets has received considerable attention in the information economics and information-based strategy communities since Akerlof, Spence, and Stiglitz shared the Nobel Prize in Economics. When sellers have an information advantage over buyers, buyers' behavior can lead to collapse of the entire market [1]. The influence of information asymmetry on different markets has been studied extensively, for example, on insurance market equilibrium [8, 59], and on corporate governance [36, 39, 72].

Signaling can mitigate information asymmetry, when the high-quality party with private information reveals his type by providing signals that would be costly for low quality parties to provide [70]. Signals need not directly address product quality; sometimes the mere fact that efforts were made to provide this signal can indicate high quality, as in some advertisement and pricing signals [54]. Signals can be misused, especially when sending a false signal has little cost to the sender. The party with private information often finds it advantageous to attempt to provide untruthful information about their types, misleading the other party [25]. "Cheap talk" [4, 26, 54] has been shown to influence outcomes.

Screening is used to mitigate information asymmetry, where the party at an information disadvantage attempts to induce the counterparty to reveal its type honestly. Screening involves offering a set of alternatives from which the counterparty can choose; if this set has been properly designed, then parties of superior types will make choices that identify them as superior. For example, insurance contracts can be designed so that (superior) low-risk individuals will select one policy, generally with a higher deductible. In contrast, (inferior) high-risk individuals will select an alternative with lower deductibles. Unlike signaling, where the party with more information attempts to communicate credibly about itself, in screening the party at an information disadvantage designs the mechanism to induce honest communication by the other. As with signaling, screening mechanisms need to be carefully designed to limit masquerading, whereby inferior types take actions intended to portray themselves as more attractive than they truly are. Kirmani and Rao [44] provide a comprehensive taxonomy of product quality signals.

2.2 Information Asymmetry for Ecommerce

Addressing information asymmetry may be even more critical when markets and commerce move online, given the anonymity of parties, the ease of masquerading, and the difficultly of actually inspecting products before purchase. Firstly, customers cannot physically examine products before purchase, giving rise to opportunistic behavior in forms of counterfeit or defective products, or just products that are not precisely the same as promised. Since the identity of both customers and the store itself may not be known, receiving payment, receiving quality merchandise, and the ability to obtain a satisfactory outcome if problems occur, are all uncertain. Difficulty in identifying and authenticating vendors on the Internet [57] makes it easy for a vendor to profit by cheating, then to exit, reenter under a different name, and continue fraudulent activities [28,40]. These problems reduce customers' willingness to purchase online, reduce the price paid for merchandise sold online [10], and impede the continuing growth of the online market.

Customers' trust is important for ecommerce both in the initial set up stage [63] and longer-term stable development [41]. Different factors attribute to trust in ecommerce during different stages of customers' online shopping behavior [13]. Lohse and Spiller [51] argue that the prior existence of a trusted physical store serves as a strong signal. The mechanisms used to reduce information asymmetry in traditional markets are applied in ecommerce. From an economics perspective, feedback mechanisms can serve as a signal and can contribute to trust in the vendor, therefore generating price premiums [5]; a trusted third party's evaluation of vendors can serve as a signal and facilitate transactions [14]; vendor guarantees can provide a signal and boost the trust of ecommerce consumers, even in the absence of known reputation of the sellers and their products [62]. A number of additional papers specifically address the role of trust in ecommerce (e.g., [16, 27, 30, 32, 56, 59, 61])

None of the actions suggested above has been completely satisfactory in the US or Chinese settings. Rating systems can be abused by pumping ratings up through artificial means, harvesting the value of the ratings through fraudulent behavior, and then rapidly exiting the market [15, 40, 45]. Often the same fraudulent vendor will enter repeatedly, using different names, after each round of harvesting [28]. Finally, third party systems to prevent this, like buySAFE, are not yet available in China.

2.3 Reputational Capital

"Reputation" is "the extent to which buyers believe a selling organization is honest and concerned about its customers" [19]. High product quality and financial soundness both contribute to corporate reputation [38, 69]. In commerce, and in ecommerce specifically, reputational capital serves as a self-regulation mechanism, for firms with good reputation find it uneconomical to jeopardize the price premium provided by their reputation by engaging in opportunistic behavior [12] ,leading to increased consumer confidence [29]. Altough not relevant to our work, branding alliances and website quality can be used to enhance initial trust [52].

2.4 Differences Between China and other Ecommerce Markets

We believe that Chinese consumers experience a greater degree of counterfeit products, perhaps the greatest incidence of counterfeit products in the world today. Moreover, Chinese consumers experience the highest degree of *dangerous* or *toxic* products, including melamine in milk products, candies, and baby formulas, Clenbuterol in pork and pork products, sodium borate in pork; and 6-benzyladenine in bean sprouts. China is also the world leader in the production of counterfeit products. Although Chinese consumers may look at the same factors when assessing risk as online shoppers in other markets, they may experience lower willingness to pay than online shoppers in other markets in the presence of the same risk factors.

While shoppers everywhere must contend with the fact that sellers know more about whether products are fresh, safe, and genuine than their customers, the risks to Chinese shoppers are higher. There is a considerable body of theory that suggests that information asymmetry can be reduced by signaling mechanisms [68, 76], by risk-shifting mechanisms like promises and warranties [9], and by reputational capital [42].

Several papers have studied e-Commerce in China and have identified the factors that have increased trust; most find the same factors that increase trust in the United States [31, 48, 49]. Some studies discuss the severity of trust issues in China, and ways in which factors differ in importance in creating trust in e-Commerce in China compared to other markets [22, 32, 38, 53, 60, 65, 75]; we are aware of no other studies that attempt to identify the necessary and sufficient conditions to create a level of trust adequate to allow the creation of a successful e-Commerce site in China.

2.5 Methodology

This paper uses a small number of semantically rich case studies to explore a theory of trust development in ecommerce in China. The general validity and challenges of this method are explained by Eisenhardt and Dyer [20,23]. The application of case study methodology in Management Information System is explored by Galliards and Land, Lee, and Yin [30, 46, 73]. In particular, Lee [46] defends this method as scientific and as appropriate for MIS research, given that the hypothesis derived from cases are logically consistent, offer better predictions than those not grounded in field experience, and are falsifiable. We believe that theory-building is appropriate for this research, given the lack of previous literature specifically dedicated to mechanisms for creating trust in Chinese ecommerce and the unique problems of consumer confidence in Chinese ecommerce and commerce more generally. These theories can form the basis for subsequent studies of trust development in online Chinese markets.

We conducted several rounds of interviews with three important online shopping sites in China, Taobao, 360buy, YiHaoDian (The Store), in order to assess how three very different businesses dealt with the problems of information asymmetry and lack of trust among Chinese online shoppers. These companies were chosen because of their size and growth potential, and because of their very different business models and very different histories. The discussions with each company involved multiple visits with several different individuals, and consisted of in-depth and unstructured interviews that explored (1) how the companies were launched, (2) initial problems with consumer confidence, (3) mechanisms for the development and strengthening of consumer confidence, and (4) recent extensions of corporate activities designed to benefit from the growth of consumer confidence. These discussions helped us understand how each company addressed the problems of building, preserving, and profiting from consumer confidence.

3. Quality Concerns and Challenges for Ecommerce in China

Ecommerce in China is especially important, given China's massive population and large number of Internet users. According to China Internet and Network Information center, the number of Chinese Internet users reached 457 million by the end of year 2010 and the number of online shoppers grew at 48.6% annually, making China the largest online market in the world.[ii]

At the same time, ecommerce in China faces concerns like unsatisfactory product quality and the persistence of counterfeit products, posing challenges to gaining customers' trust. A recent survey shows that 37.4% of online shoppers list product quality issue and counterfeit product as their major concerns for online shopping, while another 19.0% list ensuring timely delivery as a concern.[iii] Compared with customers of traditional physical stores, ecommerce customers are more informed about quality issues, because of their quick access to quality incidents reports through the Internet channel. Problems with quality incidents influences consumers' behavior, and therefore also influences vendors' strategies. American ecommerce companies began operations in an environment in which commerce was viewed more favorably.

4. Hypotheses:

Our preliminary observations suggest the following hypotheses:

Hypothesis 1: Online reputation matters when it is credible. Consumers prefer to shop from websites that are associated with successful online or offline merchants with well-known public reputations, from websites that have served them well in the past, or from websites that are recommended by their friends. Websites with which they have little credible information experience a greater trust penalty.

Hypothesis 2A: Sellers' promises alone are of little incremental value without something to create trust in the promise. Prior reputation can create trust. A promise from Carrefour or Wal-Mart is credible because they have reputations that they do not want to damage; they are likely to back up their promises. A promise from CheapStuffQuik.com or from CheapStuffQuik.com.cn may not be credible and may not reduce the trust penalty. If the merchant is reliable then the promise will of course be honored, but if the merchant is unreliable then the promise may be unreliable as well.

Hypothesis 2B: Sellers' promises alone are of little incremental value without something to create trust in the promise. Sellers' promises are far more convincing if they are backed up by a third party with the power and authority to force sellers to honor their promises. This can be payment mechanism (such as MasterCard, Visa, American Express, or PayPal), a third party bond from an insurance company, issued by buySAFE [14], or an escrow account administered by a reliable third party.

Hypothesis 3: Ecommerce businesses need to continue to provide convincing signals, principally through honoring their online assurances and promises in order to preserve reputational capital. This preserves assures consumers that the businesses still believe that the annuity value of their reputational capital exceeds the rewards from short-term opportunistic harvesting.

Hypothesis 4: It is expected that as the Chinese ecommerce market evolves, additional profitable opportunities will arise from extending into the sale of trusted private label offerings, much as we now observe in Trader Joes and Whole Foods in the United States.

Our first and second hypotheses are informed by I Research's "China Online Shopping Market Survey Report" in 2009, which suggests that leveraging the seller's reputation is primary method for creating trust in online markets. The problem in China is that most online sellers are small vendors that do not have reputations, compounded by the fact that sellers with bad reputations can easily exit the market and reenter under new names with a clean start, without the penalties caused by their previous poor reputations. Our three case studies suggest mechanisms that have been used to create and preserve sellers' reputations.

5. 360buy: Jump-Starting Online Reputational Capital From Successful Offline Beginnings

Perhaps the fastest way to develop reputational capital as a large online retailer is to begin with even more reputational capital painstakingly earned as an even larger offline retailer. 360buy offers an example of jumpstarting online reputational capital via a prior offline history. 360buy also has carefully maintained its reputation, and has begun the introduction of private label products such as gourmet rice. And yet, despite its online successes, it immediately lost the bulk of its market share as soon as it made the transition to online operations; while this loss of share had many contributing causes, 360buy senior management attributes it in part to the immediate lack of credibility suffered by all new online vendors in China.

360buy began in June 1998 in Beijing as an offline electronics products distributor. As an offline vendor it carefully managed its sourcing channels to ensure that it sold only genuine, new, and high quality products. By 2001, the physical store predecessor of 360buy was the national leader in the sale of its products. Selling quality products, and having a reputation for having done so in its physical stores, contributed to the creation of customer trust.

360buy.com was relaunched in 2004 as an online B2C retailer. In 2003 customers' fear of shopping, created by SARS, almost destroyed a large number of physical retailers, which threatened the survival of 360buy's offline business. 360buy management decided that online retailing held more promise than continuing its current, traditional operations. In 2004, it shut down its offline business, closed all of its physical locations, and became a pure online retailer. The transition was painful, because of trust issues consumers were less likely to make expensive purchases online, even from a vendor with a reputation, and 360buy immediately lost three fourths of its sales volume.

And yet, clearly the decision to move online was correct. Since its initial move online, 360buy has enjoyed annual growth rates in excess of 200%. It currently has a 33.9% share of all of China's online B2C retailing, with 20 million registered users, 150,000 orders per day, and 35 million daily views.

360buy had severe trust issues at its online launch since it started by selling branded electronics products, which are far more expensive, and at least in China might potentially have problems with counterfeiting, or with some vendors selling defective and lower quality offerings.

We can trace the development of trust at 360buy to the following:

1. 360buy enjoyed an initial reputation as a trusted seller, which it inherited from its larger offline antecedent, but which was limited largely to a loyal following it inherited from the prior offline retailing operations.
2. 360buy earned a gradual accumulation of trust and additional customers, largely resulting from confidence created by the high quality of its products and its service, as spread by word of mouth.
3. 360buy provides guarantees, assurances, and promises. 360buy guarantees that all of its products are genuine. It promises customers that if they receive a counterfeit product, they will receive a

payment that is 10 times their initial purchase price.

4. 360buy also takes actions to protect its reputation. 360buy holds its product inventory, allowing it to inspect products and to enforce its strict standards on the quality of the products it sells. It has spent significant amounts of money on advertising, to promote consumer awareness of its guarantees, assurances, promises, and quality service, and to help consumers understand the importance it places on its reputation. Management understands that protecting their reputation is essential to providing credibility to their promises.

The management team at 360buy is quite explicit. They will continue to take actions designed to maintain trust, and will continue to avoid actions that harvest it for short-term gain. *"We are trying hard to maintain our reputation as it provides us a long term stream of benefit. We won't do anything improper that would risk losing it,*" said Mr. Xu, director of strategy research at 360buy.

Currently, 360buy is planning to introduce its own private label (store brand) products, initially focusing on gourmet rices and organic foods. These products are normally higher margin than the products in 360buy's core portfolio, since 360buy is directly involved in the production of and supply chain for these products, bypassing some of the intermediaries normally associated with them..

In summary, we found that their reputational capital is an essential element of 360buy's successful campaign to develop and increase their online trust. Their offline origins created their initial reservoir of trust, without which promises, assurances, and guarantees may be seen as little more than cheap talk. They continued to invest in their reputation, thus providing support for credibility of their promises, assurances, and guarantees, and thus allowing their business to grow. The findings from 360buy contributed to the development of all of our hypotheses and are consistent with all of our hypotheses.

6. Taobao: Make Reputation Matter to Individual Vendors

Taobao was established in May of 2003 by the Alibaba Group. Initially, Taobao faced fierce competition from eBay, and Taobao invested several million RMB in TV advertisements during this period of competition for recognition and share. Despites its large expenditures on advertisement and other costs associated with its launch, unlike eBay, Taobao did not initially charge its users a percentage fee for transactions. This strategy represented a significant unrecovered investment, which signaled that Taobao expected and indeed needed to stay in the market for a long time, in order to recover its initial losses. These measures, combined with the reputational capital provided by Alibaba's established reputation, initially proved effective in creating Taobao's own reputation and in developing a large and loyal customers base. However, much as eBay experienced serious problems with sellers not acting in eBay's best interests [9, 13, 25, 37], Taobao began to experience problems with opportunistic behavior from its sellers.

After 8 years of rapid development, Taobao now has 5 million registered sellers, 200 million buyers and daily views in excess of 70 million. In 2010, Taobao achieved 40 billion RMB in sales (60.7 billion USD), accounting for 71% of total ecommerce market share[iv] and 95.5% of the C2C market[v]. Taobao has been launching new platforms to extend its business from C2C to B2C and other markets. Taobao introduced Taobao Mall platform in Apr. 2008 to the domestic B2C market, AliExpress in Apr. 2010 to the international B2C market, and Juhuasuan ("Best Bargain") in Sep. 2010 to the Groupon market. In 2010, Alibaba Group's market value was \$2.7 billion, ranking first among all Chinese IT companies.

Clearly Alibaba had two challenges when launching TaoBao: (1) How to use Alibaba's reputation and brand value to protect the value of Taobao. eBay lost almost 75% of its value between October '08 and '09 and is still down by about 25%, and Alibaba clearly did not want Taobao damaged. (2) How to prevent Taobao from developing the sort of problems that would damage not only its own reputation but Alibaba's as well.

Taobao's business model is to serve as a "Market Place," or as a platform for vendors and buyers to actively engage in transactions. This model has an intrinsic advantage — it is dynamic and evolves naturally, organically, and quickly. Taobao does not need an overall strategy for extensions into new products or new product categories, nor does it need to fund investments in all these areas; opportunistic vendors of all sizes will spot what they think are opportunities, will make investments in products, and will offer them for sale to consumers, and it is these vendors who do the research, hold the inventory, and accept the associated risks. This model also has a fundamental problem: Taobao does not take physical possession of sellers' inventory and cannot assure quality. In some instances, vendors may sell inferior products, counterfeit products, obsolete inventory, or spoiled inventory.

Taobao employed a series of measures to protect its reputational capital and prevent the collapse of its market. The first three of these are designed explicitly to make sellers behave in a way that is consistent with preserving Taobao's reputation; sellers now behave in a way the preserves Taobao's reputational capital. The remaining five use Taobao's reputation to increase consumer confidence in the marketplace:

(1) The Customer Protection Project (CPP) lets sellers voluntarily reveal their quality, by choosing which guarantees and promises to offer consumers: Promises involve unconditional returns and refunds, penalties for selling counterfeits, and on-time delivery.

These promises are credible because they are backed up by cash the sellers have deposited in escrow with Taobao, to be used in case of customer complaint.

(2) Taobao imposed higher costs on sellers for cheating. When vendors could cheat and easily reenter the market at small cost, then some opportunistic behavior was probably inevitable. Taobao now requires that vendors provide their Chinese Identification Number, a unique identification for each Chinese resident, when opening new store at Taobao. If a seller is discovered cheating and is banished from Taobao, he will not be able to return. In addition, Taobao launched campaigns against sellers who deal in counterfeit products. In April 2011 Taobao closed 12,000 sellers' stores found to provide faulty or counterfeit products.

(3) Taobao now provides advance reimbursement to consumers, before final dispute resolution. If the products are found to be counterfeit, regardless of when this is discovered, Taobao will reimburse buyers immediately, out of the deposit vendors paid upon joining the Consumer Protection Project.

(4) Taobao introduced a seller rating system. The major American C2C platform, eBay, initially took no direct role in its rating system, which had many problems and limitations [16, 34]. The most significant was "rating rings" to scam the rating system entirely: Vendor A sells to B, who sells to C, who sells back to A and the three constantly provide each other with high ratings, increasing both the number of ratings each enjoys and their average numerical rating score. Learning from eBay's problems, Taobao incorporated algorithms to discover and prevent "ratings rings", helping to make rating information more accurate and credible.

(5) Taobao screens vendors through historical transaction records. It encourages vendors with higher buyers' ratings and lower complaint rates to become "premium vendors". Taobao also helps these vendors by directing traffic to them. Only premium vendors are allowed to sell products in categories that have higher counterfeit rate, like cosmetics, and produce higher price premiums and higher seller margins.

(6) Taobao encouraged vendors to store their goods in Taobao's central warehouses, to lower shipping costs. This also enables Taobao to inspect these vendors' merchandise. In addition, Taobao now employs third party inspectors to act as mysterious buyers, who randomly purchase items.

(7) Alibaba introduced Alipay, a 3rd party escrow company, to provide secure payment services. This service boosts consumer confidence in online transactions through safeguarding their payment process.

(8) Additionally, Taobao has been working on creating new private label Taobao brands. To provide a specifically designed transaction platform for these products, Taobao launched the "no-brand quality-products" platform. These private label brands bypass the problem of seller behavior by allowing Taobao to act as retailer rather than just as a platform.

7. YiHaoDian (The Store): Invest And Inspect to Acquire Reputational Capital:

When launched in July of 2008, YiHaoDian (Number 1 Store, or simply The Store) began with no online presence, and had no reputation to use to enhance consumer trust. Unlike 360buy, which had the reputation of its prior physical operations, or Taobao, which had the reputation of Alibaba, YiHaoDian was totally unknown. Its slogan "Integrity, Customers, Execution, Innovation", was intended to reflect its commitment to providing quality products, but a slogan alone does not create consumer trust. Large and publicly visible initial investments to create reputational capital, supported by highly visible and well-publicized quality control measures to protect and preserve reputational capital were the two mechanisms for creating consumers' trust in YiHaoDian. It rapidly became the fastest growing online supermarket in China and the 5th largest B2C retailer.

YiHaoDian took the following actions to create reputational capital, in order to ensure that its promises to consumers would be believed:

- Founders' Reputation: Dr. YU Gang (Chairman) and his co-founder Mr. Jun Ling Liu (CEO) both left senior executive positions at Dell to start YiHaoDian . The high personal opportunity costs involved in creating this venture demonstrated their determination to make their online business work.
- Large Initial Investments: YiHaoDian made large investments in warehouses, and simultaneously started its operations in several product categories. Their size and visibility of these initial investments sent the signal that they were investing for the long term..
- Media coverage: YiHaoDian media coverage ensured brand recognition and publicized the firm and the founders' commitment.

These actions taken together allowed YiHaoDian to "purchase" its initial reputational capital.

Once YiHaoDian had reputational capital, this provided credibility for the firm's promises to its customers. These promises were all designed to increase consumer confidence: (1) Promise of easy return and liberal replacement policy; (2) Promise of timely solution to customer complaints; and (3) Promise of the strictest possible measures of quality control, backed up with testing, strong sanctions against suppliers when necessary, and full protection of consumers.

Quality assurance is important enough to be treated at length in the following section.

7.1. Strict Quality Control:

When it was first established as an online B2C grocery store, YiHaoDian focused on branded products with large market share and with strong reputations; still, in China, YiHaoDian had two concerns. The first was ensuring that their merchants actually sold them genuine, fresh, high quality products and not stale, expired, or counterfeit substitutes. The second was ensuring that customers knew that their products were genuine, fresh, and high quality. The YiHaoDian senior team immediately understood that customers' confidence in their products would be essential to the success of their business. YiHaoDian does its own inspections or outsources inspections to trusted third parties and uses strict measures to ensure compliance: if any shipment contains counterfeit or defective items the entire shipment is returned, and if counterfeits were detected the vendor is fined an amount equal to ten times the amount of the vendors' invoice. Inspection is possible because YiHaoDian, unlike Taobao, takes delivery of products before they are shipped.

Some suppliers were initially reluctant to agree to these strict terms. The best suppliers stayed because they were confident in their own quality and because they saw YiHaoDian potential to become the largest online supermarket in China. YiHaoDian continues to enforce quality standards, and will tolerate no lapses either from suppliers or from its own team.

YiHaoDian's reputation for quality has allowed it to expand into private label offerings, much like 360buy and Taobao, allowing them to capture higher margins. Dr. Yu proudly recounted their successful experience in selling Yangcheng Lake crabs. Because of their quality and their scarcity, the price can be as high as 218 RMB ($34) for a single crab. The market was flooded by fake crabs, farmed from other areas and masquerading as authentic Yangcheng Lake crab [54]. YiHaoDian signed a contract with the Yangcheng Lake local government and rented 78 acres of the lake for crab farming. Both crab farmers and the local government signed contracts with YiHaoDian, specifying that they will be fined 1000 times the value of the invoice if they should be found to provide fake crabs to YiHaoDian. Such seemingly extreme measures guaranteed "crab authenticity", and YiHaoDian was able to reap high profits margins from these crabs of known quality.

Quality logistics is also crucial to maintaining high quality online operations [7, 8], since poor logistics can destroy even the highest quality products. As a distinguished scholar in Operations Management, Dr. Yu helped YiHaoDian build an efficient delivery system. At present, The Store completes 60% to 70% of its logistics in house, and is working towards the completion of a national distribution network.

7.2. Current Assessment

YiHaoDian has 9 million customers, and they believe that virtually all of their customers are now confident about product authenticity and quality when shopping at YiHaoDian. Their strong reputation enabled rapid growth. During the past 3 years, sales grew from 5 million RMB in 2008 to 805 million RMB in 2010, and are expected to reach 3 billion RMB annually by the end of 2011. Monthly growth rate is about 28% and is still accelerating. Keeping up such rate of growth, YiHaoDian expects to rank No.1 in FMCG (Fast Moving Consumer Goods) industry and No.4 among all Chinese B2C websites by the end of 2011.

The annuity value of YiHaoDian's operations over time is more valuable than any short-term opportunities to harvest it. Our experience with YiHaoDian is consistent with all four of our hypotheses.

8. Conclusions and Discussion of Future Research

8.1. Summary

We used these cases to develop four hypotheses for the development of ecommerce in China. (1) Offering consumers promises is valuable only if these promises are credible. (2) Sellers' promises will be credible if they are backed up either by a reputation that is too valuable to lose or by a third party that is itself trusted to enforce the sellers' promises. (3) Reputation must be protected and nurtured in an online environment. (4) And as firms' reputations grow they will extend into private label offerings based on their own reputation rather than the reputations of their suppliers, allowing them to capture more of the total profits from a product. This last point is consistent with our hypotheses, and with American experience.

Our interviews support all four of these hypotheses. The three firms we studied all followed different paths to gaining and growing consumer trust and different paths to gaining and growing their reputational capital, but they all succeeded in part because of their reputational capital.

8.2. Limitations

These hypotheses are supported by well-developed theories for information asymmetry and market collapse and for signaling, screening, and reputational capital as mechanisms for addressing information asymmetry. They are also supported by the same interview-based data that we used to formulate the hypotheses. We have limited data to provide explicit support for our hypotheses, or to demonstrate that the Chinese ecommerce marketplace values promises, reputational capital, or third party guarantees differently from other markets. The hypotheses are best viewed as a plausible theory of the development of ecommerce in China, rather than as established conclusions.

8.3. Future Research

We have designed experiments and have arranged to run them simultaneously in Philadelphia, Beijing, Singapore, and Munich. Running the experiments in China will allow us to test our four hypotheses for the Chinese market. Running the same experiments in other markets will help us explore the extent to which Chinese consumers behave differently from consumers in other markets.

Participants will be asked to assess their willingness to pay for products from a set of merchants, under two different treatments. The products will be products that we can assume subjects will find interesting, such as a piece of sporting equipment, a pair of casual shoes, a concert ticket, etc. Sellers will be completely described in terms of their reputation and the experience that the subject can assume to have had with each website, but no specific websites will be shown since we cannot adequately control users experience with or attitudes towards, actual sites.

Subjects will be shown a photograph of the product and given two reference prices, the manufacturers' suggested retail price and an average online selling price from a highly respected (but unnamed) seller. Subjects will be asked to provide their prices for the product, from the set of sellers, under two of three treatments:

(A) Subjects will be asked the amount that they would be willing to pay for the product from the each of the described sellers.

(B) Subjects will be asked the amount that they would be willing to pay for the product from the each of the described sellers, in the presence of explicit promises from the seller that the product is new and genuine, and can be returned for a full refund if the buyer is not satisfied.

(C) Subjects will be asked the amount that they would be willing to pay for the product from each of the described sellers, in the presence of explicit promises from the seller that the product is new and genuine, and can be returned for a full refund if the buyer is not satisfied. In addition, sellers will be stated to be bonded, so that funds for refund are available, and refunds are administered by a trusted third party, not by the seller.

Subjects will be shown a page for one product, for all six sellers, with Treatments A and B, or Treatments A and C, or Treatments B and C. Subjects will be asked to provide prices for each pair of seller and treatment. No subject will receive all three treatments so that subjects will not be tempted to impose linearity or intermediate pricing on treatments that represent intermediate conditions.

The experiment provides a natural extension to work that has been done previously. One body of experiments examines factors that contribute to trust when shopping online, without trying to quantify the factors or their interaction. Another body of related experimental work tries to assess the factors that make promises credible, by stepping through claims (e.g., "We promise that the camera is new, genuine, and has a US warranty."), data (e.g., "Our promises are credible because we are bonded."), and backing (e.g., "Our bond was issued by the Prudential Insurance Company; the existence of our bond can be verified online at buySAFE.") [43]. Kim and Benbasat demonstrated that different structures of trust assuring arguments engender different levels of consumer trust. An earlier study by Kim and Benbasat analyzed numerous online merchants and determined that popular stores and stores selling more expensive products use more assurances than less-popular stores and stores that sell less expensive products.

Few empirical studies involving trust and ecommerce have been conducted in rapidly developing economies with low-trust environments across a variety of products and vendors. Low-trust in ecommerce in China due to lack of institutional and transactional trust has scarcely been studied in comparison to other ecommerce markets. The study proposed here will illuminate some of the guiding forces in these markets and demonstrate the impact of these forces on consumers and business strategy. It will be among the first to attempt to quantify differences in consumer trust, and the financial implications of those differences, across product types and across markets. Initial pretests are under way.

9. References:

[1] Akerlof, G. A. The Market for "Lemons": Quality Uncertainty and the Market Mechanism. *Quarterly Journal of Economics*, 84, 3, (1970), 488-500.

[2] Ajzen, I. The Theory of Planned Behavior. *Organizational Behavior and Human Decision Processes*, 50, (1991), 179 - 211.

[3] "An Internet with Chinese Characteristics", *The Economist*, 400(8744) (2011) 71-72.

[4] Austen-Smith, D., Interested Experts and Policy Advice: Multiple Referrals under Open Rule, *Games and Economic Behavior*, 5, 1, (1993), 3-43.

[5] Ba, S. Whinston, A. B. and Zhang, H. Building Trust in the Electronic Market Using an Economic Incentive Mechanism, 1999 International Conference on Information Systems, P. De and J. I. DeGross (eds.), Charlotte, NC, December 1999. Decision Support Systems 970 (2002).

[6] Berry, L. Relationship Marketing of Services-Growing Interest, Emerging Perspectives. *Journal of the Academy of Marketing Science,* 23, 4, (1995), 236-245.

[7] Bitner, M. Building Service Relationships: It's all about promises. *Journal of the Academy of Marketing Science,* 23, 4, (1995), 246-251.

[8] Bond, E. and Crocker, K. Smoking, Skydiving, and Knitting: The Endogenous Categorization of Risks in Insurance Markets With Asymmetric Information. *Journal of Political Economy*, 99, 1, (1991), 177-200.

[9] Boulding, W. and Kirmani, A. A Consumer-Side Experimental Examination of Signaling Theory: Do Consumers Perceive Warranties as Signals of Quality? *Journal of Consumer Research* 20, 1, (1993), 111-123.

[10] Brynjolfsson, E., and Smith, M. Frictionless Commerce? A Comparison of Internet and Conventional

Retailers, *Management Science,* 46, 4, (2000), 563-585.

[11] Cabral, L., and Hortacsu, A. "The Dynamics of Seller Reputation: Theory and Evidence from eBay", Working Paper, (2005).

[12] Chiles, T.H. and McMackin, J.F. Integrating Variable Risk Preferences, Trust, And Transaction Cost Economics, *Academy of Management Review,* 21, 1, (1996), 73–99.

[13] Choudhury, V. and Karahanna, E. The Relative Advantage of Electronic Channels: A Multidimensional View, *MIS Quarterly*, 32, 1, (2008), 179-200.

[14] Clemons, E. K. BuySAFE-Creating and Profiting from the Bonded Seller™ Advantage, *Journal of Management Information Systems*, 24, 2, (2007).

[15] Cripps, M. W., Mailath, G. J. and Samuelson, L. Imperfect Monitoring and Impermanent Reputations, *Econometrica*, 72, 2, (2004), 407–432.

[16] Davis, F. D. Perceived Usefulness, Perceived Ease Of Use And User Acceptance Of Information Technology. *MIS Quarterly*, 13, 3, (1989), 318-323.

[17] Dellarocas, C. The Digitization of Word of Mouth: Promise and Challenges of Online Feedback Mechanisms, *Management Science*, 49, 10, (2003), 1407-1424.

[18] Dellarocas, C. and Wood, C.A., "The Sound of Silence in Online Feedback: Estimating Trading Risks in the Presence of Reporting Bias", University of Maryland Decisions and Information Technologies Department Working Paper (2006).

[19] Doney, P.M. and Cannon, J.P. An Examination of the Nature of Trust in Buyer–Seller Relationships, *Journal of Marketing,* 61, (1997), 35–51.

[20] Dyer, W. G. and Wilkins, A. L. Better Stories, Not Better Constructs, to Generate Better Theory: A rejoinder to Eisenhardt, *Academy of Management Review*, 16, 3, (1991), 613-619.

[21] Edelman, B. "Adverse Selection in Online 'Trust' Certifications", unpublished working paper, 2006.

[22] Efendioglu, A. and Yip, V. Chinese Culture and e-Commerce: An Exploratory Study, *Interacting with Computers*, 16, (2004), 45-62.

[23] Eisenhardt, K. M. Building Theories from Case Research. *Academy of Management Review*, 14, 4 (1991), 532-550.

[24] Eisenhardt, K. M. and Graebner, M.E. Theory Building from Cases: Opportunities and Challenges. *Academy of Management Journal,* 50, 1, (2007), 25–32.

[25] Farrell, J. and Rabin, M. Cheap Talk. *The Journal of Economic Perspectives*, 10, 3, (1996), 103-118.

[26] Farrell, J. and Gibbons, R. Cheap Talk Can Matter in Bargaining, *Journal of Economic Theory,* 48, 1, (1989), 221-237.

[27] Fishbein, M.A. and Ajzen, I. Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research, MA: Addison-Wesley, (1975).

[28] Friedman, E. and P. Resnick. "The Social Cost of Cheap Pseudonyms." *Journal of Economics and Management Strategy***,** 10, 2, (2001), 173–199.

[29] Fung, R. and Lee, M. EC-Trust (Trust in Electronic Commerce): Exploring the Antecedent Factors, AMCIS 1999 Proceedings Americas Conference on Information Systems, 12-31-1999.

[30] Galliers, R. D. and Land, F. F. Choosing Appropriate Information Systems Research Methodologies. *Communications of the ACM,* 30, 11, (1987), 900-902.

[31] Gao, Y., Wu, X. A Cognitive Model of Trust In E-Commerce: Evidence from a Field Study in China. *Journal of Applied Business Research,* 26, 1, (2010), 37-44.

[32] Gefen, D. and Heart, T. On the need to include national culture as a central issue in e-commerce trust beliefs. *Journal of Global Information Management*, 14, 4, (2006), 1-30.

[33] Gefen, D. and Straub, D. Managing user trust in B2C e-services. *E-Service Journal*, 2, 2, (2003), 7-25.

[34] Geng, X., Whinston, A.B. and Zhang, H., Health of Electronic Communities: An Evolutionary Game Approach, *Journal of Management Information Systems*, 21, 3, (2005), 83-110.

[35] Greenberg, R., Wong-on-Wing, B., and Liu, G. Culture and Consumer Trust in Online Businesses. *Journal of Global Information Management*, 16, 3, (2008), 26-34.

[36] Grossman S.J., Hart, O.D. Takeover Bids, The Free-Rider Problem, and the Theory of the Corporation, *The Bell Journal of Economics*, 11, 1, (1980), 42-64.

[37] Huang, S., Li, C.R., Lin, C.C. A Literature Review of Online Trust in Business To Consumer E-Commerce Transactions: 2001-2006. *Issues in Information Systems ,*8, 2, (2007), 63-69.

[38] Jarvenpaa, S., and Tractinsky, N. Consumer Trust in an Internet Store: A Cross-Cultural Validation, *Journal of Computer-Mediated Communications,* 5, 2 (1999), 1-35.

[39] Jensen, M.C. and Meckling, W.H., Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure, *Journal of Financial Economics*, 3, 4, (1976) 305−360

[40] Jin, G. Z. and Kato, A., Price, quality, and reputation: evidence from an online field experiment. The RAND Journal of Economics, 37, (2006), 983–1005.

[41] Keen, P.G.W. Are you ready for the "Trust" Economy, *ComputerWorld,* 31, 16, (1997), 80.

[42] Keller, K. L. Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, 57, 1, (1993), 1–22.

[43] Kim, D., and Benbasat, I. The effects of trust-assuring arguments on consumer trust in Internet stores: Application of Toulmin's model of argumentation. *Information Systems Research*, 17, 3, (2006), 286–300.

[44] Kirmani, A. and Rao, A.R. No pain, no gain: A Critical Review of The Literature on Signaling Unobservable Product Quality. *Journal of Marketing*, 64, 2, (2000), 66.

[45] Khopkar, T., Li, X., and Resnick, P. "Self-Selection, Slipping, Salvaging, Slacking, and Stoning: the Impacts of Negative Feedback at eBay", *Proceedings of ACM EC 05 Conference on Electronic Commerce*, Vancouver, Canada, 2005.

[46] Lee, A. S. A Scientific Method for MIS Case Studies.

MIS Quarterly, (1989), 33-49.
[47] Lee, H. G. Do Electronic Marketplaces Lower the Price of Goods, *Communications of the ACM*, 41, 1 (1998), 73-80.
[48] Liao, Z., and Shi, X. Consumer perceptions of internet-based e-retailing: an empirical research in Hong Kong. *Journal of Services Marketing,* 23, 1, (2009), 24–30.
[49] Liu, C., Marchewka, J. T., & Ku, C. American and Taiwanese perceptions concerning privacy, trust and behavioral intentions in electronic commerce, *Journal of Global Information Management*, 12, 1, (2004), 18-40.
[50] Liu, S.Y. and Avery, M. Alibaba, the Inside Story Behind Jack Ma and the Creation of the World's Biggest Online Market Place, New York: Harper Collins Publishers, 2009.
[51] Lohse, G.L. and Spiller, P. Electronic Shopping, *Communications of the ACM,* 41, 7, (1998), 81–87.
[52] Lowry, P. B. et al. Explaining and Predicting the Impact of Branding Alliances and Web Site Quality on Initial Consumer Trust of E-Commerce Web Sites*,* *Journal of Management Information Systems,* 24, 4 (2008), 199–224.
[53] Martinsons, M. Relationship-based e-commerce: theory and evidence from China. *Information Systems Journal*, 18, 4, (2008), 331-356.
[54] Matthews, S. Veto Threats: Rhetoric in a Bargaining Game, *Quarterly Journal of Economics*, 104, 2, (1989), 347-370.
[55] McKnight, D.H., Choudhury, V., Kacmar, C. Developing and Validating Trust Measures for e-Commerce: An Integrative Typology, *Information Systems Research*, 13, 3, 2002, 334-359.
[56] Milgrom, P. and J. Roberts. *Economics, Organization, and Management*, Englewood Cliffs: Prentice Hall, 1992.
[57] Neumann, P. Identity-Related Misuse, *Communications of ACM,* 40, 7 (1997), 31-32.
[58] Ottaviani, M. and Sørensen, P. N. Reputational Cheap Talk. *The RAND Journal of Economics,* 37, 1 (2006), 155-175.
[59] Oliver, R. L. A cognitive model of the antecedents and consequences of satisfaction decisions, *Journal of Marketing Research,* 17, (1980), 460-469.
[60] Pang, C., Yen, D., and Tarn, M. Exploring Online Shoppers' e-trust in China. *Human Systems Management,* 26, (2007), 193–198.
[61] Pavlou, P. A. and Fygenson, M. Understanding and Predicting Electronic Commerce Adoption: an Extension of the Theory of Planned Behavior. *MIS Quarterly*, 30, 1, (2006), 115-143.
[62] Pennanen, K., Trust, Risk, Privacy and Security in e-Commerce, *MIS Quarterly*, 27, 1, (2003), 51-90.
[63] Pennington, R., Wilcox, H. D. and Grover, V. The Role of System Trust in Business-to-Consumer Transactions, *Journal of Management Information Systems,* 20, 3, (2004), 197-226
[64] Quelch, J.A. and Klein, L.R. The Internet and international marketing, *Sloan Management Review,* (1996), 60–75.
[65] Richards, J., Shen, D. E-Commerce Adoption Among Chinese Consumers: An Exploratory Study. *Journal of International Consumer Marketing*, 18, 3, (2006), 33-55.
[66] Rothschild, M. and Stiglitz, J. Equilibrium in competitive insurance markets: An essay on the economics of imperfect information. *Quarterly Journal of Economics,* (1976), 629-649.
[67] Sesser, S. "Not All Hairy Crabs Are Created Equal", The Wall Street Journal, 26 November 2003.
[68] Shapiro, C. "Premiums for High Quality Products as Returns to Reputations," *Quarterly Journal of Economics,* (98), 1983, 659-679.
[69] Shenkar, O. and Yuchtman-Yaar, E., Reputation, Image, Prestige, and Goodwill: an Interdisciplinary Approach to Organizational Standing, *Human Relations*, 50, 11 (1997), 1361-1381.
[70] Spence, A.M. Job Market Signaling. *Quarterly Journal of Economics,* 87, 3 (1974), 355-374.
[71] Stiglitz, J.E. The Theory of "Screening", Education, and the Distribution of Income, *The American Economic Review*, 65, 3 (1975), 283-300.
[72] Tirole, J. L. *The Theory of Industrial Organization.* Cambridge: MIT Press, 1988.
[73] Williamson O. E. Transaction Cost Economics: The Governance of Contractual Relations. *Journal of Law and Economics*, 22, 2, (1979), 233-261.
[74] Yin, R. K. Research Design Issues in Using the Case Study Method to study Management Information Systems. In J.I. Cash Jr. and P.R. Lawrence (eds.), The Information Systems Research Challenge: Qualitative Research Methods, Boston: Harvard Business School Press, (1989), 1-6.
[75] Yoon, C. The effects of national culture values on consumer acceptance of e-commerce: Online shoppers in China. *Information & Management,* 46, (2009), 294–301.
[76] Zucker. L,G. "Production of Trust: Institutional Sources of Economic Structure, 1840-1920." Research in Organizational Behavior. Greenwich. CT: JAI. 1986, pp. 53-111.

---

[i] Research was supported in part with grants from Peking University Guanghua School of Management and the Wharton School, for joint faculty research.

[ii] China Internet and Network Information Center, 27th statistical report on China' Internet Development, http://www.cnnic.net.cn/dtygg/dtgg/201101/t20110118_20250.html.

[iii] China Intelli Consulting Group. 2011 Online Shopping Behavior Survey.2011(4).

[iv] *loc cit.*

[v] China Internet Network Information Center (CNNIC). 2010 Chinese e-Commerce Market Report.2011 (2).