

Interrelationships between consumer decision making and consumer confidence for domestic fruit group-buying in Taiwan

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ABSTRACT

During recent years, through the art of network socialization, transportation and sale circuits have been effectively kept on par with vigorous industrial development. This has triggered the association to indulge in what is commonly known as “Group-buying.” The purchase that the association indulges in is largely based upon consumer statistics and the gathering of relatives and friends, effectively increasing the quantity of purchase. The marketing strategy here calls for a mutual benefit, as a negotiation of price is established to the seller, reaching an agreement wherein both parties have reduced transaction costs. This paper focuses on consumer group-buying of domestic fruit. A research project was established, and a Taiwan-wide survey conducted in four different geographical districts. The survey emphasized consumer-association purchase. It was found that decision making is based greatly upon “convenience”, “inexpensive US prices,” “trust in quality standards,” and finally, “consumption habits.” Other important factors of the purchase decision included the seller’s “reliability” and “kindness and compassion.” This extensive research thoroughly analyzes the reasons behind the decision making of a consumer upon purchasing the emerging circuit’s expense patterns and the demands made regarding the group. It also provides the group with reasons for the purchase of businesses that develop entrustment upon marketing strategies, especially towards the emerging circuit.

1. Introduction

Before the power of the Internet had been universally recognized, it was evident that it was difficult for a consumer to collect the “foot” of purchase quantity, due to the limits established by the geographical environment, such as the lack of resources. However, as we begin to embrace the strength of the Internet, cybernetics have effectively broken time

and special constraints that were almost impossible to overlook before. It is now possible for consumers to gather resources in different areas of the world, and increasing quantities can now be purchased easily. The buyer of the association purchase is allowed to take advantage of strengthening the seller’s bargaining power, obtaining a low price range for the product. However, with the population of the transaction, quantities of orders may increase, and thus, the ultimate drop of the price of the product itself. Here

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we will find that it is not necessary for the buyer to purchase massive amounts in quantity, and may buy the commodity at wholesale prices. Thus, the seller may effectively reduce the cost of recruiting customers, in turn mutually reducing transaction costs of both parties. This creates a solid example of a mutually beneficial business transaction between cooperating parties (Dodge, 1999; Lai, 2002).

The enterprise is an unceasing entity in which the main key is the consumer. The answers to a competition's successes and failures is the deep study of a customer's demands and desires in the market, commodities and products provided by the interior adjustment enterprises, and catering to the purchase motives of the consumer. Presently, a new marketing channel has been created and developed: group-buying for enterprises instead of the traditional method of multi-level marketing distribution. This has now evolved to a Group-buying process, served on use of delivery by consumers in which they simplified and reduced the complication of the process towards the production and consumption of the entire transaction. The distribution pattern has now become very different from the past. Therefore, thorough analysis has been made for the new pathway that consumers will take for group-buying. This particular study will employ consumer decision-making behavior to strengthen their confidence. The analysis has also instigated several discussions that encourage the development of new marketing strategies.

This study investigates four dimensions of Group-buying: the characteristics of consumers, their purchase decision models, consumer confidence, and consumer experience. A questionnaire was administered by the Marketing Group in order to further explore and understand the behavior of group-buying consumers. This should provide a basis for decision-making, and

can effectively use resources to provide customers with the services that they expect, and create a competitive advantage for themselves. The study has two main sections: first, the understanding of group-buying customers and their behaviors; secondly, an analysis on the of the factors to be expanded in group-buying channels and sales strategies.

2. Literature Review

2.1 Group-buying

Group-buying is defined by the demand of consumers, as prices rise with increasing demand. A quantity discount model integrates the two main elements of combined consumer needs (demand aggregation) and discounts in quantity (volume discounting) (Anand and Aron, 2003). The process of group-buying, usually of the same product or service, needs for consumers to form a common alliance (coalition) to a large amount of demand for manufacturers to conduct price negotiations, requests for discounts or other financial interests such as gifts (Li *et al.*, 2004; Yuan and Lin, 2004). The more group-buying consumers are involved, the more their bargaining power will increase (Yuan and Lin 2004).

2.2 Consumer Confidence

Moorman *et al.* (1993) have defined consumer confidence as the "trusted trading partners on their own wills"; they believe that the establishment of mutual trust derives from the employment of the capacity, reliability, and integrity aspects of performance. Rousseau *et al.* (1998) contend that trust is a psychological state, based on the intentions or behavior of others, and positive expectations, which includes the intent to accept losses. Garbarino and Johnson(1999) have pointed out that trust is an important key in customer services, and is provided by the organization's service quality as well as reliability of confidence. Berry (1995) states that trust is an acting component in

trading, and is also the acting will of their dependence. Doney and Cannon (1997) specify that “trust” refers to a trusted person on any targeted object (Ganesan, 1994; Kumar *et al.* 1995).

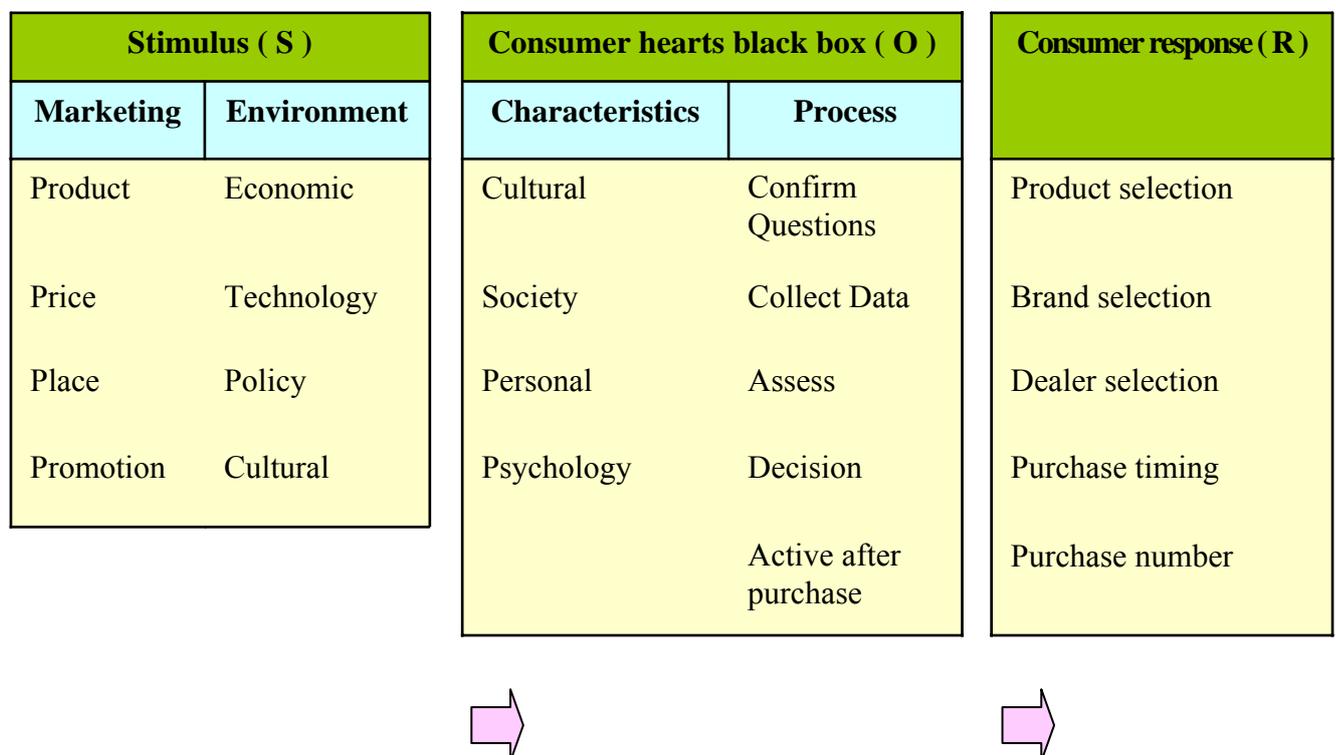
In this study, we employ the measure of consumer confidence proposed by Doney and Cannon (1997). Trust can be divided into two dimensions. The first is the objective assessment of the degree of trustworthiness of trading partners, i.e., whether or not trading partners can depend on the extent and declaration. The second dimension is kindheartedness, which means that partners in good faith seek cooperative transactions and consider the other benefits of mind. Furthermore, there will be no speculative trading behavior of objects that are produced. According to the content of this study, “trustworthiness” and “kindheartedness” play a large role in the measurement of confidence variables.

2.3 Consumer Behavior

The research on consumer behavior over the years has developed a variety of different models from various angles to explain the reactions and mindsets of consumers. The following study will focus on a systematic model that empirically applies the consumer behavior model of Kotler.

Kotler (1997) stands outside marketing and environmental stimulation through the process of handling consumer “black boxes” between the marketing or environment “stimulus” and the consumers final “response” (Figure 1). This concept permits the research to follow up on a consumer’s purchase decisions. Because personal characteristics and decision-making processes are different, this results in a conclusion of differed reactions. The process covers three facets, which are environmental aspects, individual, and psychological differences.

Figure1: Kotler’s Consumer Behavior Pattern



Data Source: P. Kotler (1997) Marketing management: Analysis, planning, implementation, and control (9th ed.). New Jersey: Prentice-Hall.

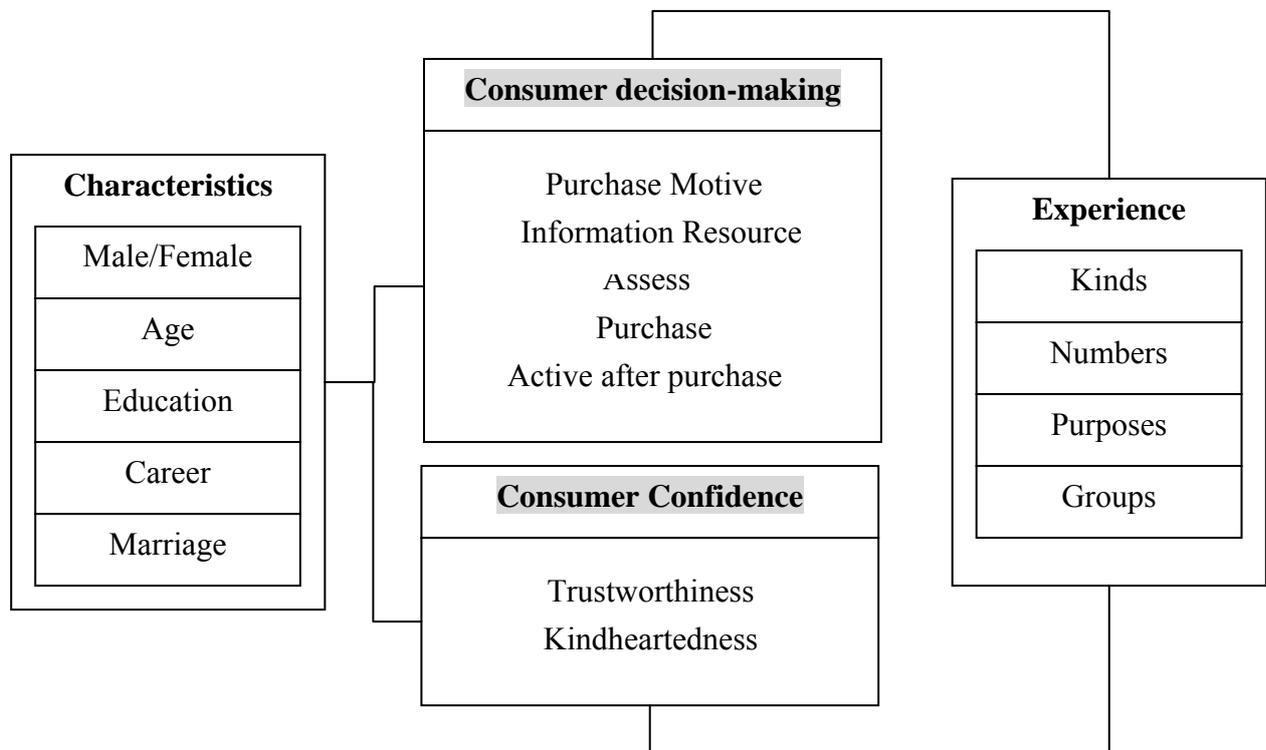
3. Conceptual Framework

3.1 Research Framework

This study investigates four dimensions of Group-buying: the characteristics of consumers, their purchase decision models, consumer confidence, and consumer experience. A questionnaire-based survey was conducted

by the Marketing Group in order to further explore and understand the behavior of Group-buying consumers to provide a basis for decision-making, effectively use resources to provide customers with the services that they need to meet their expectations, and create a competitive advantage for themselves.

Figure 2: Research Framework



3.2 Sample Design and Survey

The subjects regarding this study are aimed at investigating groups of past consumers. On June 1, 2009 to September 30, 2009, Taiwan was segregated into four areas – northern, central, southern, and eastern parts. Within each region, a total of 300 questionnaires were distributed; of the total 1,200 questionnaires, 482 were invalid, and 718 were effectively answered. The effective rate was 59.83%.

The questionnaire was designed with closed-type questions on basic personal

information and the different experiences of consumers. The remaining questions were structured along a 5-point Likert scale. Four parts that were included in the survey: the first was the basic personal data and experimental analysis of each individual consumer, which includes gender, age, educational level and area of residence amongst other basic characteristics of the investigation. The second part of the survey was designed to elicit the motivations behind their purchase, information sources, evaluation criteria, purchasing activities and the a

total of 15 post-assessment problems, which helped understand the behavior of consumers more thoroughly.

The third part involved consumer confidence, the use of consumer perceptions of “kindheartedness” and “trustworthiness”; six designed subjects were made in order to further understand the attitude behind the trust of consumers put upon group buyers. The final part of the survey sought to ascertain the experience of Group-buying, including the number of people involved in Group-buying and the purpose behind the purchase. The customer groups were questioned about their items of purchase, so that an analysis could be established on a buying group’s consumption patterns.

4. Research Results and Discussion

4.1 Basic Characteristics and Experimental Analysis of Consumers

Recovery of the results in the questionnaires, the sample structure as follows:

A. Distribution of Residence: The object according to the place of residence in the questionnaire is divided into northern, southern, central and eastern regions; the effective number of copies is established to be a total of 312.

B. Gender Analysis: The total of Group-buying consumers that are females than males are 32.7 % and 67.3%.

C. Age: The percentage of Group-buying consumers are concentrated largely in the range of 26-35 years of age (42.1%), followed by the range of 36-45 years of age (29.4%)

D. Educational Level: Upon post-secondary education 71.3% were gathered, followed by 17.1% who have only attained high school level.

E. Average Frequency of Group-buying: Respondents that purchased 1-3 times a year resulted in 84.6%, whereas those who purchased 4-6 times resulted in

8.9%, and finally, those who purchased 10 times (or more) were rounded to 5.8%.

F. Consumer Groups: Consumers in consumer groups that belonged to companies with main accounts resulted in 48.9%, followed by those who established accounts with family and friends resulted in a 38.9% share.

G. Group-buying Fruit Categories: Group-buying consumers who purchased grapefruit items resulted in 83.23%, consumer usually Group-buying Fruit for a gift.

H. Reasons for Purchase: Group-buying consumers who find it cheaper (21.9%), importance of good quality (20.1%), having been introduced to products by relatives and friends (16.1%), saving procurement time (14.3%), and convenience (14.1%).

I. Information Sources: Group-buying consumer information sources that were introduced by relatives and friends (36.9%), and those that were introduced by the Network Information Introduction (26.7%).

4.2 Reliability and Validity Analysis

The consumer aspect of the survey is divided into three parts: the first part is the basic information of consumers and the analysis of their individual purchasing experiences; the second part refers to the decisions made behind purchase, and the last part is based upon the trust that consumers put into Group-buying. In this study, Cronbach’s α value of 0.8609, and the consumer’s confidence in Cronbach’s α value of 0.8275 have safely met reliability standards. The consistency of the questionnaire is proven to be solid and reliable.

The validity of the analysis in general is divided into content validity and construction validity. In terms of content validity, the scale of this research involved compiling research by various experts and scholars of literature and research findings in order for the scale to appropriately cover the needs of research topics. This

was namely the representation of the content involved on scale, or according to the content which has considerable relevance. As for construction validity, Kerlinger (1986) stresses the validity of construction of measure; the view of scores and total coefficients between items (items to total), can be effectively established as long as the coefficient value is greater than 0.5. Composite reliability is greater than 0.7, and extraction variance must be greater than 0.5. Therefore, through this particular study, we learn that consumers have greater trust behind purchases with a larger construction validity.

4.3 Consumers Confidence in Decision-Making and Analysis of Survey

This study employed two analytical routines in the software SPSS (Statistical Products and Servers Solutions) -- factors

analysis and principal component analysis -- to retrieve the factors of decision making behind consumer purchases, through the 17 items designed for this particular analysis. The Eigenvalue, which is a variable greater than 1 is the standard, as you remove four factors as a reference. The KMO (Kaiser-Meyer-Olkin) and the Bartlett Ball Test (a test of sphericity) measure the appropriateness of testing the dimensions of factor analysis. If the KMO sampling meets the appropriate value which is greater than 0.7 or more, the Bartlett ball test p-value becomes close to 0, and can be carried out with factor analysis (Long, 2005). In this study, the dimension of consumer purchases of the KMO is valued at 0.894, and the Bartlett ball test had accordingly reached significant levels. The said parent groups have common factors that exist in the correlation matrix for factor analysis (table 1).

Table 1: KMO and Bartlett's Test

KMO (Kaiser-Meyer-Olkin) (MSA)		.826
	Approximately χ^2	4756.928
Bartlett Test	d.f.	312
	P value	.000

The common factor extraction method is used four times more than the maximum shaft square method, and has obtained factors of original variables and correlation coefficients. With the structural matrix, the absolute value of all factors is greater than 0.40, in order to explore the common factors available; and in addition, the rotation method with the Kaiser normalization of the Promax method. After computation has been employed, the cumulative explained variance is 60.10% original.

Consumer Purchasing Decision Analysis, and the reliability of these results, are shown in Table 2. When it comes to the dimensions of decision-making purchases in a total of 15 items, through extensive analysis of factors, four

factors were extracted. The characteristic dimensions of each factor are greater than 1, and the total explained variance is 60.10%. The four aspects of reliability of Cronbach's α analysis showed that its value is greater than 0.7, which indicates that it is reliable. The factor analysis model was named "convenience", "good things inexpensively priced", "quality trust", and finally "spending habits". The basis of the recommendation of Zaltman and Burger states that as long as the eigenvalue is greater than 1, the factor loadings (factor coefficients) is greater than 0.30, and can explain more than 40% of variance, the factor analysis of results would be stable.

Table 2: Consumer Purchase Decision-Making Factors, Reliability and Validity Analysis

Factors	Numbers and Items	Item Total	Factor loading	Eigenvalue	Explained Covariance%	Cronbach's α
Factor 1	Introduce Group-buying to friends.	.521	.508	3.427	21.52	.8826
	Beauty package.	.258	.402			
	Safe orders	.636	.712			
	Convenient options of payment.	.656	.742			
	Rapid order.	.655	.741			
	Group-buying is satisfied.	.536	.590			
	Convenient and fast delivery services.	.709	.716			
	Reply consumers' complain immediately.	.542	.502			
Factor 2	Quality is good.	.763	.786	2.6325	36.47	.7956
	Price is lower than commercial price.	.749	.798			
Factor 3	Get "Sample" before buying.	.701	.737	2.021	50.36	.7012
	Because friends introduce.	.700	.721			
Factor 4	Consider Group-buying priority.	.589	.701	1.326	62.13	.7218
	Understand the quality of Group-buying.	.698	.805			
	Used to buy with the same Group-buying dealer.	.472	.564			

Factor dimensions of convenience: the study shows that factor dimensions, has a total of eight items, and its factor loading value is greater than 0.7 of the items. Safe orders, convenient options of payment, fast processing and delivery services needed to facilitate orders from customers, are amongst the four items in which address the main concerns of Group-buying side-factors, which is 'convenience'. If the factor scores a higher dimension, the tendency in consumer convenience factor increases. In this study, it is known as "convenience".

Factor dimensions of thriftiness: a total of 2 factors, mainly for good quality and even lower prices than commercial prices, stress that the main reason why consumers purchase products is because of its solid quality yet inexpensive price range. If the dimension of the second factor is higher, the more consumers tend to be attracted to inexpensive price ranges. In this study, it is known as "inexpensiveness/thriftiness".

Factor dimensions of trust: a total of 2 factors as well, mainly for the purchasing and access towards products due to introductions established by relatives and friends. The main factor of trust is for the consumer in Group-buying to access products based on suggestions made by relatives and friends. In this study, it is known as "trust".

Factor dimensions of spending habits: there are three factors that are based upon four items, which is mainly associated with the consumption habits of a consumer. The main factor of consumer spending habits is through the priorities obtained of a consumer, as well as quality and understanding of Group-buying, which is associated with a fixed buy. In this study, it is known as "spending habits".

The following statistics establish the relative importance of the four factors in this study: "explained variance" resulted in 21.52% as the largest percentage, followed by 14.95% of "inexpensiveness", "trust" ranging to a total of 13.89%, and the last, "spending habits", with 11.77%. It can be inferred that the "convenience" aspect of Group-buying is one of the primary factors of the consumer. However, under the same conditions, the average consumer would be less accommodating on their consumption habits.

In this study, the consumer confidence variables were measured using the Likert five-point scale. In Table 3 the mean and standard deviation are used to explain the distribution of all variables. Consumer confidence in the description of the table states that "trustworthiness" (3.36) has the highest average; thus, we can conclude that "trustworthiness" is the most important factor behind consumer confidence.

Table 3: Description of Analysis of Customer Confidence

Variables	Numbers and items	Means	Standard deviation
Trustworthiness	Group-buying dealer can offer trustworthiness information of products.	3.36	3.82
	Group-buying dealer can offer trustworthiness payment service.		
	Group-buying dealer can offer trustworthiness trade platform.		
Kindheartedness	Group-buying dealer can offer customization service.	3.02	4.89
	Group-buying dealer won't leak personal information.		
	Group-buying dealer can offer" After-sales service".		

To understand consumer purchase decisions, consumers of group buyers purchase a correlation between the usage of Pearson correlation analysis of variables and the dependent intercropping correlation analysis (Table 4). Correlation

coefficients ranged between 0 and 1, and if the correlation coefficient is higher, and if the relationships between values are closer, there is less correlation between variables.

Table 4: The Willingness of Group Buyers' Purchasing Intentions

Group Buyers' Purchasing Intentions	Convenience		Inexpensive price ranges		Trust in quality		Habits	
	Correlation coefficient	p-value	Correlation coefficient	p-value	Correlation coefficient	p-value	Correlation coefficient	p-value
	0.905**	0.000	0.872**	0.000	0.821**	0.000	0.806**	0.000

Note: **A p-value of < 0.05 was considered to be statistically significant.

Consumer purchasing decisions, including "convenience", "inexpensive price ranges", "trust in quality" and "habits" for the intentions of group buyers are significantly interlinked to P values that tend towards 0. "Convenience", "US Properties of Lian", "trust in quality", and "habits" will certainly affect the intentions of Group-buying purchases. It is evident that buying with convenience and buying US materials of good quality on an inexpensive price range may increase not

only consumer confidence, but purchase as well.

Table 5 expresses the consumer's confidence in "trustworthiness" and "kindheartedness" for the reasons behind Group-buying purchases. The P value is set to 0, and shows that both factors will affect a decision of a Group-buying purchase. It is evident that the more consumers puts trust in their Chamber of Commerce, the higher the possibility of an intention to purchase by customers.

Table 5: Correlation Between Consumer's Trust and Intent to Purchase

Group Buyers' Purchasing Intentions	Trustworthiness		Kindheartedness	
	Correlation coefficient	p-value	Correlation coefficient	p-value
	0.932**	0.000	0.878**	0.000

Note: **A p-value < 0.05 was considered to be statistically significant.

5. Conclusions and Recommendations

The main purpose of conducting this study was to understand the characteristics behind the spending habits of a consumer. With a questionnaire distributed to potential consumers, we provided fruit Group-buying businesses with marketing proposals. An entity can be purchased by sellers to enhance bargaining powers which lead to a lot of beneficially lower prices. The buyer does not have the intention of buying unless items are sold at a better price than the market. When the seller is concerned, Group-buying strategies help recruit customers. Therefore, we can conclude that transaction costs can be effectively reduced, with mutual benefits on both ends for buyers and sellers. The results of this study can be applied by the following recommendations:

A. Fruit Group-buying strategies should emphasize on quality, safety, and must focus on production management and grading standards, providing customers with merchandise that are safe and of good quality.

B. Fruit corporations attract customers by purchasing inexpensive products. It has been gathered that direct purchasing reduces spreading and the opportunity to earn profit amongst distributors. Customers usually want to buy products that are less than the fixed market prices set for these commodities, as Group-buying are of reference standard. A fixed profit will ensue if proper marketing strategies are employed.

C. When it comes to ordering, payment, processing and prompt delivery service, convenience plays an important role for customers. A convenient way of processing definitely attracts customers more; there should be various options available for a customer, such as a diversified portfolio, customer service hotlines, availability on credit card payments. Payments made within 24 hours of service will be most satisfying to customers.

D. Customer satisfaction is difficult to guarantee, especially concerning the majority of physical products. Consumers should be provided with services for consultation, along with the availability of a toll-free Customer Service Hotline; this increases customer satisfaction.

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