天津外国语大学

研究生学位论文

**An Empirical Study on Green Marketing Strategies for Chinese Food Industry Based on Customer Needs Analysis**

基于消费者需求分析的中国食品企业绿色营销策略实证研究

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By WEN Jie

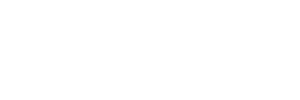
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原创性声明

本人声明所呈交的学位论文是本人在导师的指导下进行的研究工作及取得的研究成果。据我所知，除了文中特别加以标注和致谢的地方外，论文中不包含其他人已经发表或撰写过的研究成果，也不包含为获得天津外国语大学或其他教育机构的学位或证书而使用过的材料

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致 **谢**

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摘 **要**

随着经济的发展和工业化的进程，人们生活水平不断提高，但同时付出的环境代价也令人堪忧。绿色营销就是在这样的背景下兴起的，它强调的是在提升经济发展和利益的同时能够达到可持续发展的要求，经济活动应该降低对环境的污染和威胁，制造出安全和质量可靠的产品。中国食品行业的发展迅速，但伴随其中的食品安全问题成为了社会和消费者最关心的话题。中国消费者对安全、质量可靠、绿色食品的需求不断增加。食品产业的绿色营销趋势日益明显。

本文主要讨论了中国食品产业应该采取怎样的绿色营销策略来满足中国消费者的需求，通过问卷调查、数理统计的实证研究，调查并分析了中国消费者对目前中国食品产业的满意度及对绿色食品的需求，基于此提出中国食品产业绿色营销策略的建议。

文章首先介绍了国内外绿色营销的发展现状和研究成果，分析了目前中国食品产业的现状及存在的问题。文献综述部分是对传统营销和绿色营销的对比分析，绿色营销概念的形成，与其他消费者相比，绿色消费者的特点其消费倾向；及目前绿色营销主要的策略，包括防御性营销和主动性营销，根据营销策略将企业分为极端环保、防御环保、灰度环保及偏向环保。

问卷是本文收集消费者对食品企业绿色营销的倾向性的主要手段。借助

SPSS16.0，作者采用了信度分析、因子分析、聚类分析及交叉列表分析，对问卷的结果进行了数理统计分析。主要结论包括消费者对目前食品产业的满意度及对绿色食品的消费意向，基于因子分析，测试了目前消费者的绿色消费倾向；通过聚类分析，将消费者做进一步的市场细分，并得出相关的人口特征；最后基于消费者对绿色食品的产品特性、价格、购买地点及促销方式的偏好，分析了我国食品产业在进行绿色营销时的营销组合。

**关键字**： 绿色营销；食品企业；营销策略；消费者需求

**Abstract**

With the economic development and industrial evolution, comes with the enhancement of people's living standard, it is hard to ignore the global environmental issues. Under such circumstances, green marketing, which emphasizes sustainable development, started to emerge. Campaigns have been launched to reduce the environmental impacts, eliminate the threats on human living environment, and produce safe and quality reliable food. The Chinese food industry is developing rapidly, unfortunately what has caught more attention from society and consumers are the food safety problems. Chinese consumers are eagerly calling for safe and reliable food. The green marketing for food industry appears to be urgent.

This paper discusses mainly which kinds of green marketing strategies should be employed by Chinese food industry in order to better serve their demands. To reach solid conclusion, inquiry and statistic method are used to support the empirical analysis. Suggestions for green marketing strategies in which food industry are provided based on the analysis of consumers' opinions of Chinese food markets and their demands for green food.

This paper introduces first the current status of green marketing and related domestic and foreign researches, with the summary of the Chinese food industry development situations and problems. In the literature review, the differences between traditional marketing and green marketing are presented together with the evolution of green marketing and its originality, as well as the demographical characteristics of green consumers. The recent green marketing strategies are introduced, including defensive and assertive strategies. Companies are categorized into four types according to their green marketing strategies: extreme green, defensive green, shaded green, lean green.

Questionnaires are collected to have a better understanding of consumers' demands for green food and acceptance of green marketing. With the help of SPSS

16.0, reliability analysis, factor analysis, cluster analysis, and cross table analysis are carried out as statistic methods. The major findings include: to what extend Chinese consumers satisfy with food products, how well do the consumer accept the green marketing ideology, and what are their demographical characteristics. Through factor analysis, consumer green consumption tendency are tested; through cluster analysis, segmentation of green markets is realized, and their demographical characteristics are summarized with cross table; in the end, green marketing mix for food products are suggested based on analysis of consumers' preferences for food products, price, places and promotions.

**Key words**: Green marketing; Food industry; Marketing strategy; Consumer needs

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## **Chapter One Introduction**

## **1.1** **General background**

The economic developments around the world enhance people's living standard. However coming along with the economic benefits, it is also urgent to emphasize the environments protection. Under the theme of sustainable development, people's concerns for the environment are prevalent. And the needs for economic friendly and effective products are increasing. In the future, the environment will be the theme most widely discussed by governments, organizations, and consumers; and such discussion will have a crucial impact on the thinking and behaviors of people and society (Simintriras et al., 1994). All type of business are trying to be involved in the green markets and expressing their concerns for environmental issues, not only because of consumer needs but also the commercial ethics and social responsibility. Environmental concerns include issues: global warming, climate changes, shrinkage of natural resources, healthy problems due to pollution of air and water, endangered wildlife and etc. (Ottman, 1998). As response to this trend, business started to create greening business and green marketing, which are aimed to improve both economic and ecological performance of business. Green marketing includes the production, distribution, promotion, and packaging with recycled or reused materials and methods (Boone and Kurts, 2010). Examples of green products can be low energy consuming electronics, natural household cleaning products, clean powered appliances, natural or organic foods, Hybrid vehicles, eco business operation or tourism. Companies who are actively participated into sustainable developments name few are Nissan, HSBC, Toyota, and Gamesa.

China, as one of the most important economic entities in the world, is still in the phrase of demanding developments. The main task of the nation is to improve social productivity and people's living standard, which means grand needs for resources.

However, before realizing the national goal, China has to solve prominent environmental problems first, such as population growth, pollution, natural resources shortage, and most recently the production of healthy food. China is the world largest carbon emission nation in 2010. And adopting and participating actively into sustainable development is unavoidable for China. It is not just because of external pressure, but also because of the importance green industries have on the momentum of future economic growth. The Chinese government announced at The Copenhagen Climate Change summit in 2009 that the nation plans to reduce carbon emission by 40 up to 50 percent in 2020 compared to those of 2005. Korea Trade Investment Promotion Agency expects that Chinese carbon emissions are likely to hit a peak between year 2030 and 2035 ([Amanda, and Min](http://www.biztechreport.com/source/amanda-min-chung-han), 2010). The idea of green marketing was introduced to China in early 90s of twenty century (Chen, 2009). The management skills of Chinese companies on green marketing are still in the premier stage, compared with other countries. The environmental protection awareness of Chinese consumers is continuing increasing.

Among all the industrials in China, food industry draws more attentions than others due to increasing scandals and crisis of food security. From January to May of 2009, sales of Chinese food industry came up to RMB 315.635 billion (Research Report on Chinese Food Industry, 2008-2009). As the increased living standard, people are looking for more healthy, safer, better quality food. However, consumer needs are not satisfied but instead threatened because of tremendous food safety scandals. In 2005 Sudan 1 Red Dye which links to cancer and other negative health effects was found in food products and it was used in many major Chinese cities. In 2008, Melamine was found in the milk formula products; Sanlu Group, as the major dairy producer in China, was bankrupted due to adoption of melamine. It caused a fresh outbreak of kidney disease and six babies died and 294,000 were made sick by the tainted formula with 51,900 requiring hospitalization (Bradley, 2009). In 2011, food products marketed under Shuanghui Group's Shineway brand were produced from pigs that were fed Clenbuterol. Clenbuterol is an additive that can speed up muscle building and fat burning to produce leaner pork. Dizziness, heart palpitations and profuse sweating can be led by

Clenbuterol. In 2007 Shuanghui Group is No.166 of top 500 companies in China (AFP, 2011). As obvious from the scandals, food industry should adopt a green strategy, which promotes safe and sustainable food, as response to the demands of customer and trends of global market developments, and promote ethical business behaviors.

## **1.2** **Need for the study**

The whole world now is working hard on reducing their production impact on the environment to reserve the planet, because it is a social ethic call and consumer concern. The green marketing will be the key strategy of business activities in the following decades. China will be inevitably involved in this world campaign if the country wants to achieve long term development. And Among all this Chinese industries, food industry is special, due to its nature and special situation in Chinese food market, which is currently examined by numerous security scandals. To develop a healthy food industry, green marketing is necessary, considering green marketing, with the aim of sustainable developments, are characterized by promoting safe and healthy products with safe and clean production technology and environment, at the same time energy saving and minimized pollution. To be successful in adopting green marketing, food manufacturing enterprising need to understand first: what are the expectations of the consumers; what is the degree they are interested into green marketed food; what are the main reasons forced them to buy green marketed food; will they pay more and what is the maxim price they can accept; to be effective with the marketing, what is the best marketing mix. It is necessary to conduct an empirical study to answer the above questions.

The study of green markets is believed first attempted by researchers to establish a relationship between marketing and environment in early 1970s (Arminda F. M., 2010). The studies of green marketing, abroad and domestic, are mainly focused on: definition and conceptualization, segmentation, price strategy, green promotion, consumer and their behaviors, the marketing mix, etc. (Teng, 2007). In China, on CNKI, there are 3184 articles and dissertations with the key word of" Green Marketing", among them 495 are with second theme of" green food", but only 2 are under theme of

“Food industry". They are *Green Marketing Strategy for Chinese Food Manufacturing Enterprise* by Wang Bo and Studies on the *Strategies of Green Marketing in Chinese Food Enterprises* by Yan Geliang. Both of them are: 1）studying actually the" Green Food Strategy"; 2）applying literature review as the main methodology. Different from them, this paper is: 1）studying on" the Green Marketing Strategy for Food Industry" not only just for" Green Food"; 2）applying empirical methodology by conducting questionnaire beside literature review; 3）analyzing the suitable strategies based" Consumer needs".

## **1.3** **Purpose and significance of the study**

The world sustainable development calls for effective, eco-friendly use of energy to produce clean, safe, and recycled products. Coming along with the sustainable economic, the green marketing is inevitable. China needs to actively participate into this global trend of green marketing if the nation wants to achieve its long term development goal to improve the living standard of the people. What comes prominent and urgent to boost the green marketing campaign is to develop its food industry, owing to the nature of food industry and safety problems recently of Chinese food markets.

Food industry needs to employ the green marketing strategy which requires the enterprises to produce with reliable raw materials, technology, and within safe environment to ensure the quality, healthiness, safety, and environmental concerned products. Thus a research of customer needs for such green products is necessary to prove that there exist customer needs and it is strong enough as obligatory. To achieve success of business, the enterprises also need to understand what kinds of green marketing strategy mix they should adopt.

Based on the needs, the aim of this paper is to identify suitable green marketing mix strategy for food industry, by investigating the consumer needs of green marketed foods, their demographical characteristics, their drivers for purchasing, and expectations through empirical study.

## **1.4** **Methodology**

The scientific research is carried out with systematic methods which are consisted with 3 layers: methodology, research mode, and specific methods and techniques. There exist two major methodologies: empirical and humanism or theoretical (Feng Xiaotian, 2009). Both theoretical and empirical analyses are adopted in this paper, since theories and previous studies work as the theoretical frame building, which laid solid and reasonable supports for further phenomenon explanations, and to reach convincing conclusions for marketing strategies, based on which the empirical study of consumers feedback can be reliable.

Empirical studies generally adopt quantitative methods while theoretical studies use qualitative methods. Quantitative analysis focuses on measurements and calculations of subjects, and the researchers emphasize the impersonality, objectives, the cause and effect relation among objects, with which the logical and statistical analysis are employed to explain the phenomenon and the reasons behind. While on the other hand, qualitative researchers work hard on understanding the concepts, the characteristics, metaphors or symbolism of the objects, by using descriptive and inductive analysis to reach general rules (Feng Xiaotian, 2009). The thesis uses both qualitative and qualitative approaches.

According to Silverman (2002), questionnaires are used to measure how intensely people feel about issues in quantitative research. Dellinger and Leech (2007) argued that literature review is an effective to conclude specific research in form of qualitative studies. For theoretical analysis, the author applies literature review method to construct theoretical structure for the whole paper and questionnaire design, based on sorting out the green marketing theories, researches, and finding. The primary data is collected through questionnaire survey for empirical analysis of consumers' attitudes towards Chinese food markets and green food. The secondary data are used by quoting research findings, figures, and methods, mainly from research papers, reports, and Internet, and are traceable in literature review and theoretical framework of this thesis.

For the empirical analysis, questionnaire research is conducted to collect primary

And real time data. With the help of SPSS 16.0, statistical analysis including reliability analysis, factor analysis, cluster analysis, and cross table analysis are carried out to reach reliable and credible conclusion of the survey results.

## **1.5** **Organization of the thesis**

This paper is consisted with five parts or chapters.

As the introduction, the global developments in term of social and economic are provided to present an overall picture of the world and business. In spite of the undeniable improvements of human being's living standards, the world environment problems are serious, which call for safe, environmental friendly products and green food is one of the products. China is selected as specific research target considering recent huge food safety scandals. Following on, the need for the study, practical and theoretical significance, the purpose, methodology applied, and organization of the paper are further explained.

Second part presents the literature review with previous studies concerning the same issue abroad and domestic. The foreign research is focused more on theory building and empirical studies on green marketing, covering many industries. The domestic studies make efforts on combing Chinese situation with mature theory explanations, and the historical phases of green marketing research is introduced.

Third part explains the definition of discussed topic, the theoretical frame work of thesis. Comparison between green marketing and classic marketing is made concerning conceptual and managerial perspectives. Green marketing strategies can be divided into two categories: defensive and assertive. A green marketing strategy matrix includes extreme, defensive, shaded, and lean green strategies. The characteristics of green consumers are introduced to show the specialty of this segment for food markets.

Part Four is the statistics analysis of the questionnaire results. The questionnaire is composed by three parts: demographical feature, green tendency testing, and marketing mix preferences. Descriptive and statistical analyses are used to illustrate the current situation of Chinese food market and consumers' attitude towards green food.

Part Five is designed to reach conclusion of the study, and most importantly to provide suggestions for food industry of how to carry out green marketing. Based on the questionnaire results and the analysis, a summary of the food markets trends, consumer attitudes and preference, segmentation, and marketing mix are offered as references for Chinese food industry to launch the green marketing strategy.

#### **Chapter Two Literature Review**

## **2.1** **Previous studies**

Concern for the environment is prevalent among people throughout the world. Businesses have responded by creating and marketing products that are" green" or environmentally friendly. All types of business are addressing environmental issues, whether they are retail firms, manufacturers, or service firms. During the past several decades, however, the concept of environmental friendliness has been widely embraced by consumers and businesses.

Green marketing has been a hot topic since the beginning of 1970s. Many scholars carried out the studies on green marketing, from perspective of theories constructing, empirical research on practical solutions, marketing strategies, consumer behavior etc. Chinese researchers joined this stream of study much later, and due to the society and economical differences, there are some various characteristics of the studies in China.

### **2.1.1** **Studies abroad**

From the 1970s, scholars in USA started to research on marketing with an environmental perspective. The started point can perhaps be traced to monographic edition of the journal of marketing of 1971 by Kassarjain, and later Fisk in 1973 (Chamorro, 2009). The stress of studies of that period was concentrated on environmentally concerned consumers and their behaviors (A. M. F. do Paco, 2010). The eruption of a second ecological movement in the late 1980s and early 1990s led to another boom in research with the publication of various books specialized in green marketing topic of a wider range (Chamorro, 2009).

The concept of sustainable development played an important role in promoting

Green marketing. The promotion of sustainability through marketing as a means and ends is proposed by Varey (2010). He first gives a new logic for marketing as a social process. He then offers a prescriptive welfare agenda to transform traditional marketing principles and practices toward supporting sustainable society. The core marketing strategy of market orientation is reconceptualized as" sustainable market orientation" (SMO) by Mitchell et al. (2010). They explain this broader concept of market orientation, and contribute a new corporate marketing model. In the SMO model, they propose three sustainable development objectives: social, economic, and environmental sustainability. Finally, they present corporate benefits and a model for empirical testing.

The main authors in green marketing are Thogersen, John (7), Kangun, Norman (6), Grove, Stephen J. (5), Polonsky, Michael J. (5), Banerjee, Bobby; Crane, Andrew; Kilbourne, William E.; McCarty, John A.; Shrum, L. J.. (all 4). In the bracket are the numbers of articles they published till end of 2009 (Chamorro, A et al., 2009).

Jacquelyn A. Ottman (2011), one of the green strategy pioneers from USA, wrote [*The New Rules of Green Marketing: Strategies, Tools, and Inspiration for Sustainable*](http://www.bkconnection.com/ProdDetails.asp?ID=9781605098661)[*Branding*](http://www.bkconnection.com/ProdDetails.asp?ID=9781605098661). In this book, she describes how thinking and acting green has gone mainstream. Green marketing is no longer simply a niche market. Marketers need to use an environmental presentation when marketing products, and promote the added value of those green products. Jacquie Ottman tries to show to marketers that they must emphasize primary benefits to win over mainstream customers. With green consumers now forming the mainstream, it is the right time now to consider the new rules of green marketing. Ottman provides practical strategies, tools, and inspiration to help companies build every aspect of a credible value-based green marketing strategy. She used a proactive approach to sustainability to spur innovation, develop products that are green throughout their life cycle, communicate credibly to avoid accusations of" green washing," team up with stakeholders to maximize outreach to consumers, take advantage of social media, and much more.

Antonio Chamorro, Sergio Rubio and Francisco J. Miranda (2009) carried out a research by adopting literature review. They analyzed the main characteristics of articles on green marketing published in most relevant journal during 1993-2003. They grouped

The articles under" green marketing" into five subtopics: concept and strategies, green communication, green consumer, recycling behaviors, and macro marketing. According to their study, 26.13% of the articles under analysis are theoretical while 72.96% are empirical research. Main statistical technique used in empirical studies on green marketing are: analysis of co-variance (7.32%), analysis of variance (14.63), conjoint analysis (3.66%), correlation (13.41), qualitative analysis (12.20%), descriptive analysis

（17.07%）, discriminant analysis (3.66%), factor analysis (35.37%), regression models (19.51%), structural equation models (17.07%). The most commonly used data collection technique is the survey, employed in 62.83% of the studies working with primary data. Fewer studies use observation by means of content analysis (10.26%) or personal interviews (6.41%). For the origin of the authors, they find a total of 47.74% of the articles are signed from the US, while 8.10% are from the United Kingdom and 5.40% from Canada. Among continental European countries, research on green marketing has been of most interest in Denmark (with 7.20% of the articles), Germany (3.60%) and Holland (2.70%).

The Portugal researchers, Arminda M. Finisterra do Paco and Mario Lino Barata Raposo (2010), their empirical study on Portugal aims to identify the distinct green market segmentation. They also investigated green consumer behaviors and their perceptions on green marketing. Their survey covered 887 consumers aged above 18. They applied demographic criteria and environmental criteria. For the environmental criteria, which are the main factors of consumer behaviors, are environmental concern, perceived consumer effectiveness, perceived behavioral control, environmental knowledge, environmental affection, verbal commitment, and ecological consciousness. According to the survey results, they characterize the various consumers into 3 segments: first" the uncommitted" 36%, who are main young people and relative low incomers; second" the green activists" 35%, who aged between 25and 34 and between 45 and 54 with high education levels, and working in more qualified jobs, with higher income; third" the undefined" 29%, including individuals from higher age and with lower educational levels. These segments can be adopted by firms to assess their products attractiveness, and position well.

Frank-Martin Belz and Birte Schmidt-Riediger (2010) published their research on green marketing strategies by collection evidences from food industry. They identified four green marketing strategy types with distinctive characteristics: performers, followers, indecisive and passives. They believe that the success of green marketing is highly depended on the consumer eco awareness and their sensation to environmental issues. They conducted an empirical study in German food market, which is the one of the largest food market in Europe. The study is based on the hypotheses that consumers, retailers, competitors, legislators, top management, public exposure and industry membership are all contributing to the formulating of company green strategy. The results of the empirical study shows that five dimensions of strategic green marketing are: 1) ecological product quality, 2) social product quality, 3) market segmentation, 4) targeting, 5) positioning. And consumers and top management have highest influence on strategic decision on green marketing. Retailors play important role in promoting the green products. But the stakeholders influence little on the industry generally small. In the end, based on the study conclusion and mature of food industry, it is believed the results can be generalized to other industries as for references of green strategy developing.

### **2.1.2** **Studies domestic**

The concept of green marketing was first introduced to China in 1990s. The first time Chinese researchers learnt about this idea was on the international marketing forum hold in Hongkong on November 1992 (Zhang Xiaohui, 2009), from when it started to be a hot topic and the research on it is growing mature.

The development of green marketing research in China can be roughly divided into 4 periods (Li Shizong, 2008):

Introduction: 1993—1994. At that time, the concept of green marketing was still new and unfamiliar to Chinese consumers. They did not have the green consciousness and not capable for green consumption yet. The number of research articles was also limited.

Growing: 1995—1997. The concept of green marketing started to be very popular and urgent, which caught the attention not only in academic research area but also the whole society. There were dozens of research paper published each year. And they were mainly focused on green marketing theories, strategies and feasibility, combining with the trends of sustainable development.

Maturing: 1998—2001. The key research theme at that time was to analyze the necessity of develop green marketing with the sustainable development theories as the basis and the differences between traditional marketing and green marketing. And people tried to put green marketing theories into practices, expanded the research on different industries. Leaded by theoretical research, consumers started to develop their green consciousness to form a big enough segmentation which drew the attention of firms and government.

Prospering: 2002 till now. After entering 21 century, thanks to rapid progress of green marketing theories and practices, it is an era of greening. With the growth of Chinese people's living standard and economic status, it is doubtless that evolution of traditional market to cleaner and healthier market is needed. Under such circumstance, green marketing plays a critical role in shaping the marketing to meet the needs and lead the social preference to a green future.

The majors works on green marketing in China to name a few including *Green Marketing* by Wang Fanghua and Zhang Xiang, *Green Marketing Management* by Shen Genrong, *Green Marketing---Environment and Sustainable Development Strategies Studies* by Luo Guomin, Peng Leiqing, Wang Xianqing, *Research on Green Marketing* by Wang Houfeng, et al. The researches in China mainly focuses on: theory of green marketing, such as sustainable development theory and concepts of green marketing; green consumers and their behaviors; green marketing strategy for firms, such as market needs analysis, the development and implement of company green strategy, firm reputation on green marketing, green products develop and marketing strategy; practical green marketing strategy for companies, such as green packaging, trademark, pricing strategy, distribution strategy for green marketing, advertisements and promotion strategy for green products.

According to Wang Aiming (2003), the major forces driving the progressing of green marketing in China are: 1) the national economic police of sustainable development; 2) the regulation of green marketing; 3) green consumption tide helped to shape the market; 4) a call for company to formulate their strategy to meet to green needs; 5) the green barrier required companies to focus on green marketing; 6) the development of technology provided favorable conditions for green marketing.

Wan Houfeng (2001), professor from Center-South Commerce University, carried out an empirical study on Chinese consumers' green consciousness and needs for green products. Worked together with her students, she collected questionnaires (360 of 500) from 7 cities of more than 20 regions of the residences. The research questions are mainly concerned on where the respondents are from (city, town, village), the level of income, whether their level of income impact their willingness to buy green foods etc.

Jiang Huiping and Li Guojin (2007) systematically analyzed the Game Theory behaviors in green marketing. They indicated that there are five kinds of game playing in green marketing. They are between consumers and firms, firms and firms, consumers and comsumers, government and firms, consumers and government.

Wei Mingxia (2002) developed a green marketing performance evaluation system by dividing 64 basic indicators into company, social environment and eco-environments, and the overall performance among the three aspects.

Concerning food industry green marketing, Wang Bo's research (2007) provides some suggestions for strategy making for Chinese food enterprises. His study is made by applying the literature review, which means the conclusions are reached by analysis of theories, other research, and social phenomenon. Based on the situation of Chinese food development, he believed that China is still new to green food market. The green food or organic food would work hard to employ green marketing to meet the challenge. In his research, he categorized the green food, summarized the phases of green food industry development, and the possible characteristics of green food consumer. To support his research results, he conducted survey in a green food company.

## **2.2** **Green marketing**

Environmental issues are a major business and social issue that have been growing in importance. A major challenge facing businesses is how to market environmentally friendly products to consumers. It is evident that the concept of green marketing may have different meanings to different domains of business or studies, but there is something essential in the definitions. And from the development of the definition evolution, it is possible to find out the critical ideology in the green marketing and be aware of the difference from classic marketing.

### **2.2.1** **Definition**

It has not yet reached a consensus on the definition of green market yet since its emergence. But some major definitions are widely recognized. American Marketing Association defined of green marketing as the study of the positive and negative aspects of marketing activities on pollution, energy depletion and non-energy depletion (Henion and Kinnear, 1976).

Peattie (1995) defined green marketing as the holistic management process responsible for identifying, anticipating and satisfying the requirements of customers and society, in a profitable and sustainable way. Charter and Polonsky (1999) 's definition of" greener marketing" is the marketing or promotion of a product based on its environmental performance or an improvement thereof.

“Sustainable marketing" has been defined by Fuller (1999) as the process of planning, implementing and controlling the development, pricing, promotion and distribution of products in a manner that satisfies the following three criteria: (1) customer needs are met (2) organizational goals are attained, and (3) the process is compatible with ecosystems. Prakash (2002) used the term green marketing to describe the relationship among the marketing discipline, the public policy process and the natural environment. Belz defined as building and maintaining sustainable relationship with customers, the social environment and natural environment (Belz, 2008).

TABLE 2.1 Summary of Green marketing concepts

| Time | Author | Definition |
| --- | --- | --- |
| 1976 | Henion and  Kinnear | Marketing activities on pollution, energy depletion, and non-energy  depletion. |
| 1988 | Winter | A strategy management process which can meet the expectation of  stakeholders. |
| 1992 | Carter | A products strategy that promotes products which are produced with  Minimized the environmental impacts. |
| 1993 | Coddingto | Way of managing marketing activities with high respects to  environment. |
| 1994 | Kotler | Firms develop eco-friendly products with recycled and disposable  Materials, manage the pollution prevention, and use energy in an effective way. |
| 1995 | Peattie | A sustainable management that can identify, anticipate and meet  Consumers and social needs, and brings economic profits. |
| 1999 | Fuller | The process of planning, implementing and controlling the development, pricing, promotion and distribution of products in a  Manner that satisfies customers, organizations and ecosystem. |
| Charter and  Polonsky | Marketing or promotion of a product based on its environmental  Performance or an improvement thereof. |
| Ottoman | Strategies that develop products with practical values, sustainability and  Higher quality. |
| 2002 | Prakash | The relationship among the marketing discipline, the public policy  Process and the natural environment. |
| 2008 | Belz | Building and maintaining sustainable relationship with customers, the  Social environment and natural environment |

Sources: Sorted by author.

As a summary of all the definition above, we can conclude that, green marketing :

1) is a process of planning, implementing and controlling of marketing activities; 2) its target is to satisfy customer needs and maintain sustainable relationship with social and natural environment; 3) its performance will be evaluated by economic, social, and ecological aspects.

The definition can be categorized according to different emphasis:

Product oriented view: green marketing is centrally marketed with products and its impact on environment. It means new technology and new product have more sustainability (Simula, Lethimark, and Salo 2009). It is also referred to as the efforts of a corporation to design, produce, distribute or promote in an environment friendly way

（Polonsky and Mintu-Wimsatt, 1995）.

Environment oriented view: green marketing is driven by and should be focused on environment issue. The Queensland Government 2006 presented its definition as" Marketing activities without having detrimental impact on the environment.”

Objective oriented view: Stanton and Futrell (1987) argued that green marketing as actions intended to replace current needs and wants with minimal harmful impact on environment. Grant (2007) suggested that the objective of green marketing is to educate customers and make them willing to go green by changing their life styles and behavior and then to minimize environmental harm while maximize the economic benefits.

Profit oriented view: Polonsky (2001) concluded the main motivations for creating and marketing greener products are product differentiation with the main purpose to create a competitive advantage, to become a market leader, and cost savings.

Strategically oriented view: According to Hartmann and Ibanez (2006), green marketing generally focuses on the efficiency of cognitive persuasion strategies, and believes that the consumer's high involvement concerning environmental issues is an effect of growing environmental knowledge. McDaniel and Rylander (1993) used the term green marketing to describe marketers' efforts to develop strategies targeting the environmental consumer.

Considering the nature of food industry, food manufacturers should be clear that their decision of implementing green marketing should be targeted as to meet the needs of consumers. And the purpose of this paper is to empirically identify the consumer needs for food industry from green marketing perspectives, which means food products are safe and healthy, produced under reliable technology and environment, at the same time with minimized eco impact. The importance of food industry's green marketing is not only creating economical profits but also promote ethic business conducts. And these five categories will be used as to identify the consumer emphasis concerning food green marketing.

### **2.2.2** **Differences between classic marketing and green marketing**

American Marketing Association defined Marketing as organized activities that create values, and transfer the value to consumers so as to maintain good relationship between organization and consumer by profiting organization and stakeholders. Marketing management is to manage consumer needs and customer relationship based on products or service values and customer satisfaction. It is the heart of marketing (Kotler, 2009).

TABLE 2.2 The development of marketing management

| Time | Orientation | Focus | Profit drive |
| --- | --- | --- | --- |
| Before 1950s | production | Production efficiency | Production methods |
| 1950S and 1960s | selling | Customers study | Selling methods |
| Before 1960s | products | Products design | Quality |
| 1970S to present | marketing | Relationship management  /customer satisfaction | Needs and wants of customers |
| 21St century | Holistic marketing | Benefit to society/branding | Everything matter |

Sorted by author from: [http: //en. wikipedia. org/wiki/Marketing](http://en.wikipedia.org/wiki/Marketing)

To manage marketing activities in 21st century, organizations need to meet all the requirements as before but also need to carry out holistic marketing management, which mean" everything matter "(Kotler, 2012). The same for food industry manufacturers, green marketing could be one of the" holistic marketing" which will benefit the society and create values. But there are differences between green marketing and classic marketing.

TABLE 2.3 Changes in marketing concepts

|  | Green Marketing | Classic Marketing |
| --- | --- | --- |
| Consumers | People with unique lifestyle | Individuals |
| Products | Same qualification throughout the product life stage | Flexible qualification throughout product life stage |
| Marketing | Promote values as social ethics | Profit oriented |
| Organization | Active Motivated Interdependent Cooperative  Long term oriented  Integrated strategy | Passive  Independent, competitive Separated by industry Short term oriented Profit maximize |

Source: Ghosh, Moloy. (2010). *Green Marketing-A Changing concept in Change Time*.

Management Edge, Vol. 4, No.1, pp 82-92.

TABLE 2.4 Changes in marketing managerial perspectives

|  | Green Marketing | Classic Marketing |
| --- | --- | --- |
| Goals | Customer satisfaction Organizational goal  Eco-system compatibility | Customer satisfaction Organizational goal |
| Decision making frame of reference | Integrated thinking Boundary spanning Long term oriented | Immediate channel network Fragmented thinking  Non-boundary spanning  Short term oriented |
| Philosophical basis | Bio-centric  Ecosystem physical limiting factor Eco cost must be paid | Anthropocentric Ecosystem an open sink |
| Ecological accountability | Product risk Global/international  Full accounting of ecological cost Both public and private sector are responsible | Limited product risk Local/regional/national No/under paid eco cost Individual alone is responsible Public is responsible |
| Tool/approaches | Use product life circle assessment & waste disposal, environment audit Pro-active approach  Use of cross function team Focus on progresses  Strategic alliances to accomplish sustainable goal  Focus on "products as service” | Use planning to minimize the cost  Re-active approach to waste management  Isolated department function Focus on industrial function Focus on tangible goods |

Source: Saxena, Rajan. (2009). *Marketing Management*. 1st edition, Tata-Mc Grow-Hill Pub. New-Delhi. Co. ltd, pp 657.

**Chapter Three Green Marketing Strategies and Questionnaire Design**

## **3.1** **Green marketing strategy**

Environmentally friendly business strategies can contribute to competitive advantage and superior financial performance. Research has considered that green marketing practices have positive impact on ecological conservation and company profits (Sharma, et al, 2008).

### **3.1.1** **Defensive and Assertive**

According to McDaniel and Rylander (1993), consumer marketers should realize that green marketing can bring profitability rather than only pure altruism if organization can increase consumer environmental consciousness. Green marketing must be fully integrated into a company's marketing strategy; marketers should understand the environmental problems and be able to include these issues into the strategic marketing management process. They put forward two main approaches to green marketing strategy: defensive strategy and assertive strategy.

The defensive strategy is also called reactionary approach. Most companies tend to adopt a defensive green marketing strategy because it requires the minimum effort aimed at avoiding negative consequences. There are three types of defensive approaches. The first type is to comply with minimum government environmental regulations to avoid tax or penalties. A second type is to meet minimum standards to avoid a consumer boycott. A third type is to react to competitors' environmental activities to keep pace with competition by doing no more than what is needed (McDaniel and Rylander, 1993).

The cost of defensive strategy may be relatively lower since it only requires the company make the minimum greening effort. However, one should also realize that the

Benefit of this strategy is quite limited. McDaniel and Rylander (1993) believed that a company which adopts a defensive strategy probably will not attain any significant increase in market acceptance, and even will lose its market share. The company image will also not be improved compared to competitors since most consumers will eventually recognize that this company is only making the minimum greening effort. As a result, it is difficult for a company to gain a competitive advantage and will be more susceptible to consumer or government backlash (McDaniel and Rylander, 1993). Companies who take this strategy do not well sense the trends of markets and needs of consumer.

The alternative to a defensive strategy is an assertive strategy, also called aggressive strategy. Companies that use the assertive approach have the best opportunity for a sustainable competitive advantage in this dimension. This strategy requires company being a" first mover" on environmental issues and making more effort than government regulations and consumers' expectations, which means marketers should respond to market incentive rather than to regulations (McDaniel and Rylander, 1993). They argued that the" first mover" image is the key to profiting from green marketing while the latecomers may be seen as imitators and even be doubted of its true intent by consumers.

The company which adopts an assertive green marketing strategy will be more likely regarded as a sincere environmental activist and this positive public image can bring a sustainable competitive advantage beside increased profitability, since its leadership position in promoting green marketing and long term strategy management will attract and maintain customers while may need not to spend time and energy on prepare government or regulatory audit on environment issue (McDaniel and Rylander, 1993).

### **3.2.2** **The green marketing strategy matrix**

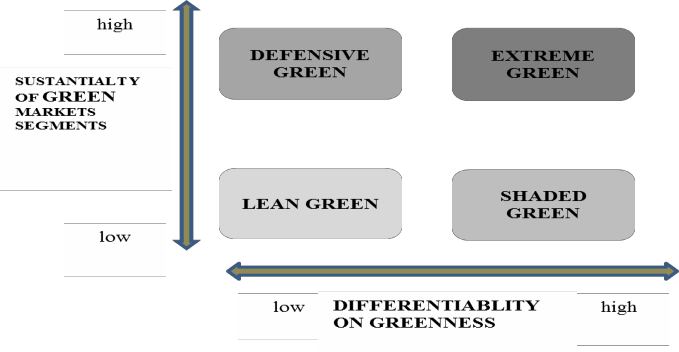
Based on empirical survey, Ginsberg and Bloom developed green marketing strategy matrix by categorized with two dimensions: substantiality of green market

Segments and differentiability of greenness. According to extent of two dimensions, the matrix consists of four types strategy: Lean Green, Defensive Green, Shaded Green and Extreme Green strategy. Companies may choose one of the green marketing strategies

From the matrix after self‐inspection concerning the likely size of the green market in

Their industry and their ability to differentiate their products on" greenness" from competitors.

CHART 3.1 Green marketing strategy matrix



Source: Ginsberg, Jill M, & Bloom Paul N. (2004). *Choosing the Right Green Marketing Strategy*. MIT Sloan Management Review, pp 81.

Before deciding on any strategy, companies should be clear about first the green consumer segmentation and second competitors strategy. Not all people are appealed to green aspects products. Understanding the target consumer will help marketers to know whether" greenness" is an appropriate selling attribute and how it should be incorporated into the marketing mix (Ginsberg and Bloom, 2004). Companies contemplating a green strategy must consider how competitors are pursuing these potential target segments.

Lean Green. Lean Greens try to be good corporate citizens, but they are not focused on publicizing or marketing their green initiatives. They are interested in reducing costs and improving efficiencies through pro-environmental activities, thereby creating a lower-cost competitive advantage but not green. They focus on long-term preemptive solutions to comply with regulations, while do not expect profits from green segments. Lean Greens are hesitant to promote their green activities or green product attributes for fear of being held to a higher standard—and not always capable of living up to it or differentiate themselves from competitors (Ginsberg and Bloom, 2004).

Defensive Green. Defensive Greens, who recognize that the green market segments are important and profitable constituencies that they cannot afford to alienate, usually use green marketing as a precautionary measure, a response to a crisis, government regulation, customer claims, or a response to a competitor's actions. Their target is to enhance brand image and mitigate damage. Their environmental initiatives may be sincere and sustained, but their efforts to promote and publicize those initiatives are sporadic and temporary, because of the lack on differentiation on green. Unless they discover that they can obtain a sustainable competitive advantage on the basis of greenness, they will not take aggressive promotion of greenness which they believe would be wasteful and would create expectations that could not he met (Ginsberg and Bloom, 2004).

Shaded Green. Shaded Greens invest in long-term, system-wide, environmentally friendly processes that require a substantial financial and nonfinancial commitment. Environmental benefits are promoted as a secondary factor. These companies regard green as an opportunity to develop innovative needs-satisfying products and technologies that result in a competitive advantage. They have the capability to truly differentiate themselves on greenness, but they choose make more money by stressing other attributes, promoting the direct, tangible benefits provided to the customer and selling their products through mainstream channels (Ginsberg and Bloom, 2004).

Extreme Green. Extreme Green companies are shaped by holistic philosophies and values. Environmental concerns are fully integrated into the business and product life-cycle process, driven by greenness. Practices involve life-cycle pricing approaches, total-quality environmental management and manufacturing for the environment. Extreme Greens often serve niche markets and sell their products or services through boutique stores or specialty channels (Ginsberg and Bloom, 2004).

TABLE 3.2 Green Marketing Mix

|  | PRODUCT | PRICE | PLACE | PROMOTION |
| --- | --- | --- | --- | --- |
| LEAN | X |  |  |  |
| DEFENSIVE | X |  |  | X |
| SHADED | X | X |  | X |
| EXTREME | X | X | X | X |

Source: Ginsberg, Jill M, & Bloom Paul N. (2004). *Choosing the Right Green*

*Marketing Strategy*. MIT Sloan Management Review, pp82.

Differences among the four strategies of green marketing can be seen by considering how the four elements of the marketing mix—product, price, place and

Promotion—are utilized in each strategy. The lean green strategy is one in which greenness tends to be exhibited mostly in product development, design and manufacturing. The defensive green strategy mainly involves the promotion aspect of the marketing mix making particular use of quieter public relations promotions rather than overt tools like advertising. The defensive green also quietly pursues greenness in its product development, design and manufacturing. The shaded green strategy puts some secondary emphasis on greenness in its more overt promotional efforts and also pursues greenness in product development, design and manufacturing as well as in pricing if cost efficiencies can be achieved with greenness. Finally, the extreme green strategy involves heavy use of all the marketing mix elements, including the place element, as distribution systems and retailers are chosen and given incentives on the basis of their greenness.

## **3.2** **Green marketing mix**

Green marketing mix can be implemented with the same philosophy of classic marketing mix. Bradley (1989) first introduced the concept of" Green Marketing Mix" and provided a Green Market Mix checklist for companies to conduct an audit to check whether their products are light or dark green. These 8 items are: Price, Product, Package, Promotion Distribution, Advertising, Sales Force and After Sales Service. Queensland Government Environmental Protection Agency (2006) suggested that the four Ps of conventional marketing mix can be addressed in green marketing strategy but in innovative ways.

Product: Products are the core of companies. Green products should provide customers with values at the same time respond to environment protection. Production in green is a process that ensures safety and quality of products. Package is part of product and will convey the value and communicate organizational culture with

Customers. Businesses must be prepared to provide their customers with information on the environmental impact of their products and manufacturing processes (Ottman,1998).

Price: The pricing strategy in green marketing strategy is to balance and combine the consumers' price sensitivity and environmental conciseness. Glorieux-Boutonnat (2004) claimed that to" go green" is expensive to invest in a short-term but can be very profitable in a long-term since it can bring cost reductions. And green products are not necessarily more expensive than ordinary food if all the associated costs and product

Life-cycle are taken into considerations. But customers are willing to pay higher initials

And for long run economic (Polonsky and Rosenberger, 2001).

Place: Green marketing strategy requires the company provides customers the access to their products in a greener way in the delivery process. This process includes transportation ways, distribution channels, locations and every link from transporting the products out of the company to delivering them to customers (Haofu Fan & Lin Zeng, 2011).

Promotion: Green promotion involves communicating information on the environmental commitments and the efforts made by companies to consumers. This element in the green marketing mix includes various activities like paid advertising, public relations, sales promotions, direct marketing and on site promotions (Queensland Government, 2006). Marketers have to consider what environmental information should be communicated and how should it be communicated (Polonsky and Rosenberger, 2001).

## **3.3** **Questionnaire design**

Back to the theme of the paper, the green marketing strategy for food industry, the key words are: 1) marketing strategy 2) in green way 3) in the food industry 4) of China.

As demonstrated in literature review, current marketing strategy management requires companies to take everything into consideration, including production, products, selling, customer relationship, and most important in our time branding. For

Green marketing, all the classic marketing management characteristics are necessary but at the same time require taking eco and social sustainability into consideration. Food industry is special due to the nature of the products and difficulties of differentiation. But it is just because of the nature, which means everyone needs to consumer food products every day, while under the circumstance of Chinese food environment, the basic safety, healthiness of the food can be used as differentiation.

The objective of this paper is to provide strategy references for food industry concerning green marketing based on empirical study on consumer needs. To develop a marketing strategy, the consumer study is critical. Food industry should launch green marketing due to problems in Chinese food production but also a long term development perspectives. Thus the paper needs to answer:

- How strong is Chinese consumers demand for green marketed food?

- What is the characteristic of the consumers?

- What are the motivations behind their buying behaviors?

- What kinds of green marketing mix are preferred by consumers?

According to the target, the questionnaire is consisted by three parts or criteria: 1) demographical criteria; 2) green concerned criteria; 3) marketing mix criteria. Likert scales are used to measure the dimension (1 strongly disagree; 2 disagree; 3 neutral; 4 agree; 5 strongly agree).

The target of the survey is to understand the attitude of Chinese consumers towards food markets and green food. Thus the targeted respondents are Chinese people above 18 years old, who consume in Chinese food markets and knowing about green food. Author has screened the examinees' fitness for the questionnaire by asking before the test whether they know about green food. The respondents should be even in gender, cover as wide of age and income scale as possible, and from various cities and provinces.

**Chapter Four Findings and Suggestions for Green Marketing strategies**

## **4.1** **Descriptive analysis**

The questionnaire is consisted by tree part or criteria: 1) demographical criteria; 2) green concerned criteria; 3) marketing mix criteria. Likert scales are used to measure the dimension (1 strongly disagree; 2 disagree; 3 neutral; 4 agree; 5 strongly agree).

The target of the survey is to understand the attitude of Chinese consumers towards food markets and green food. Thus the targeted respondents are Chinese consumers above 18 years old and be familiar with green food. Author has screened the examinees' fitness for the questionnaire by asking before the test whether they know about green food. To achieve high reliability of the survey results, wide range of age, income, living city, education background is took care of.

There were 131 of examples collected, among which 2 are invalid. With the help of SPSS 16.0, the statistical analysis is adopted to interpret the results. The major analyses are covered with descriptive analysis, factor analysis, and cross table analysis.

|  |  |
| --- | --- |
| α ≥ 0.9 | Excellent |
| 0.8 ≤ α < 0.9 | Good |
| 0.7 ≤ α < 0.8 | Acceptable |
| 0.6 ≤ α < 0.7 | Questionable |
| 0.5 ≤ α < 0.6 | Poor |
| α < 0.5 | Unacceptable |

A reliability test was carried out using Cronbach's Alpha coefficient for all the examples. The Cronbach's alpha value obtained for this research is 0.826. Cronbach's alpha statistic is widely used in the [social sciences,](http://en.wikipedia.org/wiki/Social_sciences) business, nursing, and other disciplines. A commonly accepted rule of thumb for describing internal consistency using Cronbach's alpha is as follows (George, D., Mallery, 2003):

Source: sorted by the author from: Wang Shufeng (2007), Applied Statistics.

Concerning the demographical terms, gender, age, monthly income, education, and living city are asked, as well as examinee's opinions on Chinese food industry.

For gender, of 129 examinees, there are 58 males and 71 females. For the age, 50.4% are between 18-25, 38.0% are between 26-30, 4.7% are between 31-40, 5.4% are

Between 41-50, 1.6% are between 51-60. About the monthly income, 24.8% have below

2000, 38.0% between 2000-3500, 21.7% between 3500-6000, 6.2% between 6000-8000,

3.1% between 8000-10000, 6.2% have above 10000. As for education, 62% have bachelor degree, 24% have master degree, 7% have Ph. D, 5.4% have degree abroad. The examinees are from 17 provinces, with largest number 31% from Tianjin, then Yunnan 16.28%, Shanghai 9.3% and Beijing 9.3%, as shown in pie chart below.

CHART 4.1 Living city



TABLE 4.2 Demographical features

| gender | | age | | income | | education | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Male | 58 | 18-25 | 50.40% | <2000 | 24.80% | High school | 0.80% |
| Female | 71 | 26-30 | 38.00% | 2000-3000 | 38.00% | bacholor | 62% |
|  | | 31-40 | 4.70% | 3500-6000 | 21.70% | master | 24% |
| 41-50 | 5.40% | 6000-8000 | 6.20% | Ph. D | 7% |
| 51-60 | 1.60% | 8000-10000 | 3.10% | Degree abroad | 5.40% |
|  | | | | >10000 | 6.20% |  | |

As a summary of all demographical data, the gender are generally equal; the age cover almost all the possible length as a matter of consumption ability, with 18-30 years old people taking most part who are also the major force of food purchasing; monthly income varies from below 2000 to above 10000, which should be according to different living standard in different cities, and from 2000 to 6000 taking nearly 90% which is a the reality of Chinese labor market; for education background, examinees are from all

Levels, with bachelor and master degree taking 86%. Concerning geographical location, data are collected from most parts of China, except Tibet, Xinjiang, and Inner Mongolia, and other less developed or special provinces. And it is important to collect data from various parts of China, due to the regional cultural differences and living standards.

Demographically speaking, with geographical consideration, the answers from the examinees are reliable enough to tell the general situation and attitude of Chinese consumers.

The examinees were asked about their general views on Chinese food industry and green food industry, with the figures show below.

CHART 4.3 To what extent Chinese food industry satisfy consumer needs



TABLE 4.4 Demographical characteristic for attitude towards food industry

|  | variables | very  dissatisfied | dissatisfied | neutral | satisfied | very  satisfied | total |
| --- | --- | --- | --- | --- | --- | --- | --- |
| gender | Male female  total | 12  16  28 | 24  34  58 | 19  20  39 | 3  0  3 | 0  1  1 | 58  71  129 |
| age | 18-25  26-30  31-40  41-50  51-60  total | 15  13  0  0  0  28 | 27  22  4  4  1  58 | 21  13  2  3  0  39 | 2  1  0  0  0  3 | 0  0  0  0  1  1 | 65  49  6  7  2  129 |
| education | High schoole bachelor master  Ph. D  Degree abroad other  total | 0  19  5  0  4  0  28 | 0  32  19  5  2  0  58 | 1  27  6  3  1  1  39 | 0  1  1  1  0  0  3 | 0  1  0  0  0  0  1 | 1  80  31  9  7  1  129 |
| income | Below 2000  2000-3500  3500-6000  6000-8000  8000-10000  Above 10000 total | 4  14  4  2  2  2  28 | 16  22  13  2  1  4  58 | 11  12  9  4  1  2  39 | 1  1  1  0  0  0  3 | 0  0  1  0  0  0  1 | 32  49  28  8  4  8  129 |

Female are clearly showing their dissatisfaction while male are more neutral and certain number of them are even quite satisfied. People above 30 are concerned while

People younger than 25 are showing some satisfaction. People with degree abroad are quite strongly disappointed, while bachelor and masters are moderately dissatisfied, and people with Ph. D are more neutral. Higher of the income, more dissatisfied with the food industry. As conclusion, food industry should work on improving the satisfaction of female, middle aged, people with middle level education, and with high income.

CHART 4.5 When consumers are buying food, what they care most?



92.2% of the examinees agree that food safety scandals will influence their decision of buying certain products, while other 7.8% do not care, among who the number of female is higher, and with bachelor degree, aged between 25-30, and with income of 2000-3500, and most of them never buy green food.

85.3% of them have tried buying green food, while 14.7% have never bought before. Among people who tried the green food, 1.6% buy each day, 5.4% buy each week, 42.6% buy often, and other 36.4% occasionally. For people who buy green food each day, they are with income above 10000, which means they can clearly be the target group. However, the major population, 80%, is buying green food less often than one week. And food is supposed to be consumed each week. To attract the majority with suitable strategy will bring profits.

For, the major reasons why people buy green food, 69.4%, is the reliability of the products, then buying as response to propaganda of green marketing of 13%, while 4.6% care most of the company image and other 4.6% buy as gifts. From which we can conclude that the most important attribute of food should be reliable quality, and food

Manufacture can launch their green marketing to promote green food as people response actively to green propaganda, by adopting that companies can gain trust from consumers resulted from reputable company image. Big part of people due to the reason above will buy green food as gifts, and company can position themselves as best choice for gifts by adding value on package, delivery, etc.

CHART 4.6 What is the major reason for buying green food



Among the 14.7% people who never buy green food and 36.4% who just buy occasionally, 38.5% believe that the quality of green food is not necessarily reliable, 15.4% think the price is too high, 7.7% think green food diversity is low, 11.5% find green food inconvenient to buy while other 11.5% people do not care. What these results imply is that food manufactures should improve their product quality which is also why most people buy the products; setting reasonable price which can be accepted by more clients; increase the quantities of distributors and retailers; and develop more new products. All of these points will be discussed later as marketing mix and strategy according to questionnaire results analysis.

## **4.2** **Green tendency**

The second part of the questionnaire is aimed to investigate people's green behavior and their concerns towards food industry, with 15 questions posted among which 11 ones are testing green tendency and last 4 are used to evaluated concerns towards general opinion on food industry development. The scales used to measure the dimensions are 5 points Likert scales, with 1 for strongly disagree, 2 for disagree, 3 neutral, 4 for agree, and 5 for strongly agree. This part of analysis is necessary for marketing segmentation for green food markets based on the results of people's green tendency and attitude towards food industry. Based on the fact that there are differences between individuals to their green tendency, behaviors, and the variables are extensive, a factor analysis was conducted to simplify these variables. The grouped variables were used as references of segmentations with demographical characteristics.

The data obtained were submitted with statistical analysis including factor analysis, cluster analysis, and cross tables analysis. The segmentation conclusion can be reliable combining with tendency evaluation and demographical differentiations.

Factor analysis method was used to extract and group the factors, the analysis results of SPSS is displayed below. Factor analysis is used to downsize the complicated and big numbers of variables into few comprehensive factors, which can represent the interrelation among the variables (Wang Shufeng, 2007, pp227). The variables are grouped into 4 factors while the last 4 variables are grouped into one aiming to show peoples opinion on food industry. All of 5 factors account for 67.8% of the total variance. The Cronbach reliabilities of each group are above acceptable level with KMO of 0.78.

TABLE 4.7 Rotated component matrix

F1 F2 F3 F4 F5

Check green mark 0.441

Never buy scandalous products 0.49

Join activities 0.496

Angry about food scandals 0.412

*Cronbach Reliability* 0.645

Make special effort 0.682

Reading reports 0.678

*Cronbach Reliability* 0.796

Suggest friends and family 0.721

Care development 0.697

Donate money 0.697

*Cronbach Reliability* 0.721

Support food green marketing 0.562

Highly concerned on food 0.59

*Cronbach Reliability* 0.792

Bad managemenr 0.424

government 0.814

consumer 0.675

Serious problem 0.533

*Cronbach Reliability* 0.691

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.

Bartlett's Test of Sphericity Approx. Chi-Square df

Sig.

0.78

447.357

105

0

Taking into account the correlation to each factor, we can categorize and describe them into five terms: green buying behaviors, industry knowledge, readiness to promote, concern on green marketing, and social concern on food quality.

### **4.2.1** **Green buying behaviors**

This factor reflects a tendency of consumers to be careful to identify the food quality when shopping, and their attitude towards food safety scandals concerning shopping decision. They are more tended to check the green mark, never buying scandalous products, and take part in activities to promote green food. The variables and coordinated frequencies are showed below.

TABLE 4.8 Green buying behavior

|  | Mean | Strongly  disagree | Disagree | Neutral | Agree | Strongly  agree |
| --- | --- | --- | --- | --- | --- | --- |
| I check green mark when I buy food | 3.22 | 2.3% | 17.8% | 45.0% | 25.6% | 9.3% |
| I will never buy products of company which had security scandals | 4.12 | 0.0% | 1.6% | 15.5% | 52.7% | 30.2% |
| I have participated in activities promoting green food | 2.50 | 10.9% | 41.9% | 36.4% | 7.8% | 3.1% |
| I become angry with food scandals | 4.50 | 0.0% | 0.8% | 8.5% | 31.0% | 59.7% |

From figure above, it can be told that when people shopping, 34.9 % of them always check the green mark, while nearly half of them not check each time, which reflects that the food buying behavior of most people are not green oriented yet. It can also be possible that the green mark is neither so visible nor reliable, which will be further explained in the third part of the questionnaire. Only 10.8% people agree that they have participated in activities to promoting food safety and green food, while 52.8% have never joined, which means that people's intention to take active participation is not high.

From the means, one can get to know that, when it comes to food safety scandals, people's detestation is clear. 82.8% of them will never consumer products from companies with scandals. And 90.7% of them feel angry towards food safety scandals. It is easy to understand the reason, but it again proves that food manufactures should be very careful and be strict with the food quality. As soon as they made mistake, the result would be catastrophic.

### **4.2.2** **Industry knowledge**

This factor reflects people's action to gain knowledge on food industry on may special efforts to buy the green food.

TABLE 4.9 Industry Knowledge

|  | Mean | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
| --- | --- | --- | --- | --- | --- | --- |
| I make special effort to buy green food | 3.52 | 0.8% | 7.8% | 38.8% | 44.2% | 8.5% |
| I am interested in reading reports concerning green food industry | 3.32 | 1.6% | 9.3% | 49.6% | 34.9% | 4.7% |

52.7% of the respondents agree that they make special effort to buy green food, which means if they have to choose between green food products and other ordinary products, they will take green food. Only 7.8% will prioritize green food for the shopping. For food manufacturers, it is convincing that nearly half of the people have very positive attitude towards green food and it is a good beginning.

And for people's intention to know about food industry development, 39.6% of respondents agree they are interested in reading reports about food industry. The following behavior is a sign of keen attention. Green marketing for food is a new trend,

And it is important to inform consumers about the food development and the green ideology. For people who already following closely about, it is will not be hard. But food companies need to make extra efforts to arise attention of other 60% of the population to promote the development of the whole industry.

### **4.2.3** **Readiness to promote**

This factor reflects how people support the development of food industry. The extent to which they care about the food industry is reflected by their willingness of giving money to green food propaganda and whether they suggest their family and friends to buy green food.

TABLE 4.10 Readiness to promote

|  | Mean | Strongly  disagree | Disagree | Neutral | Agree | Strongly  agree |
| --- | --- | --- | --- | --- | --- | --- |
| I will give money to green food propaganda to promote food industry | 3.65 | 2.3% | 13.2% | 42.6% | 34.1% | 7.8% |
| I suggest friends and families to buy green food | 4.24 | 0.8% | 4.7% | 34.9% | 48.1% | 11.6% |
| I care the development of food industry | 3.62 | 0.8% | 6.2% | 38.0% | 40.3% | 14.7% |

Analysis of this factor is important because it tells the extent consumers cares about the food industry and what they would do to promote the green food. To the question" I care the development of food industry", the mean is 3.62, only 7% of the respondents do not care at all. It is a good sign to say that the development of food industry attract people's attention. And proper strategy will correspondently have significant impact on them. And it is meaningful for food enterprises to get consumers support. Whether green marketing strategy will be a good choice will discussed. To show their concerns for food industry, examinees are asked whether they are willing to give money to support the green food propaganda to promote green food industry or suggest their friends and families to but green food, the answers are inspiring. 41.8% of the people are ready to give money to promote green food and 59.7% want to ask their friends and families to buy green food, which means that half of the people are taking active roles in promoting green food industry and will support the development. And we have reason to believe that these big parts of population will response to the green marketing.

### **4.2.4** **Consumer acceptance of green marketing**

This factor will explain how people will accept the ideas of green marketing and extent to which they care about the food quality. It is useful to food industry to check whether the green marketing ideology will be feasible.

TABLE 4.11 Consumer acceptance of green marketing

|  | Mean | Strongly  disagree | Disagree | Neutral | Agree | Strongly  agree |
| --- | --- | --- | --- | --- | --- | --- |
| I support the green marketing ideology of food industry | 3.88 | 0.8% | 0.8% | 26.4% | 53.5% | 18.6% |
| I am highly concerned on food quality | 4.24 | 0.0% | 0.0% | 17.8% | 40.3% | 41.9% |

When asked whether people support the green marketing ideology of food industry, only 1.6% of they have doubts, and the mean reaches 3.88, a positive result. And back to the centric concerns of food, 41.9% of the people showed their strong agree and while other 40.3% agree, which is normal but it is confirmed again by people's strong desire for food quality. Due to that reason, food enterprises should fully understand that it is urgent to carry out green marketing and the needs are tremendous.

### **4.2.5** **Social concern on food quality**

This factor interprets consumers' concerns from a social perspective. Currently the food safety problems are obvious, and what are the causes behind, different people holds their own views. But it is generally agreed that enterprises management, government, and consumers could be responsible in different aspects. Is that possible that there exist people who do not care at all about food quality or food safety problemAndwouldthatnumberbebigenoughthatfoodindustry'seffortofpromotingqualitywouldbemeaningless?

TABLE 4.12 Social concern on food quality

|  | Mean | Strongly  disagree | Disagree | Neutral | Agree | Strongly  agree |
| --- | --- | --- | --- | --- | --- | --- |
| Food safety problem is the result of bad management of company | 3.98 | 2.30% | 4.70% | 17.10% | 45.00% | 31.00% |
| Food safety problem is the result of government weak supervision | 4.4 | 0.00% | 0.00% | 1.60% | 56.60% | 41.90% |
| Food safety problem reflects consumer power is still not strong enough | 3.44 | 4.70% | 17.80% | 23.30% | 37.20% | 17.10% |
| Food safety problem is not so serious | 1.6 | 55.80% | 34.90% | 5.40% | 1.60% | 2.30% |

As it showed about, according to the mean value, people tend to believe the problem of food safety is results of government week supervision, then bad

Management of food companies, and least consumer impact. It is clear that our government did not do enough work to organize well the regulation of food safety, which give food companies possibilities to make serious mistakes but will not be punished or finned. From food manufacturer's perspective, the wrong understanding of management and wrong strategy lead to bad results and scandals, which, as mentioned above, is not acceptable and will not be easily forgiven by consumers. At the same time, consumers start to realize that their power is not strong enough to direct and monitor the food industry. However, consumers are the forces supporting and driving the markets. As more consumers will be able to realize that, more possible for the companies to develop strategy and explore the market to satisfy consumers based on their wants.

As a summary, companies should employ green marketing to push government to strengthen the supervision, develop the companies themselves with morale vision, which is green marketing, and help consumers to gain their powers on direct the market, so that the companies can serve them better with profitability.

It is not surprising to see that there are 3.9% of people thinking the food safety problem is not serious. Luckily, they are just small part of the population, and their indifferences to food safety will not have significant influence on the green marketing, and they are not the target of green food industry.

## **4.3** **Green food market segmentation**

To reach a consolidate analysis of consumers characteristics, segmentation of the market, which is critical for enterprises to focus on certain group of consumers, is proceeded. Based on the factors analysis above, cluster analysis is carried out to identify different groups, and the correlated demographical characters. Cluster analysis is a multifaceted statistical method which can categorize variables into groups according to the similarities and correlation among each other. The target of cluster analysis is to find out the regular pattern of certain variable and reflect the general rules (Wang Shufeng, 2007).

According to the mean and standard deviation of clusters results, it is possible to

Characterize the various groups into 4 segments. The segmentations are explained as following:

TABLE 4.13 Cluster analysis results

|  | CLUSTER 1  N=55 42.64% | | CLUSTER 2  N=37 28.68% | | CLUSTER 3  N=11 8.53% | | CLUSTER 4  N=25 19.38% | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Mean | Std. Devi | Mean | Std.  Devi | Mean | Std.  Devi | Mean | Std.  Devi |
| Green I check green mark when I buy food  Buying I will never buy products of company which had security scandals  Behavior I have participated in activities promoting green food  I become angry with food scandals | 2.85  3.85  2.33  4.38 | 0.678  0.591  0.695  0.733 | 3.89  4.49  2.27  4.49 | 0.809  0.651  0.732  0.692 | 2.55  3.73  1.73  4.27 | 0.82  1.009  0.467  0.786 | 3.32  4.28  3.6  4.84 | 1.03  0.614  0.816  0.374 |
| Industry I make special effort to buy green food | 3.27 | 0.56 | 3.97 | 0.645 | 2.18 | 0.603 | 3.96 | 0.611 |
| Knowlede I am interested in reading reports concerning green food industry | 3.18 | 0.58 | 3.59 | 0.551 | 2.09 | 0.831 | 3.76 | 0.779 |
| Readiness I will give money to green food propaganda to promote food industry | 3.13 | 0.579 | 3.38 | 0.758 | 1.91 | 0.701 | 4.32 | 0.476 |
| To I suggest friends and families to buy green food | 3.38 | 0.561 | 4 | 0.577 | 2.55 | 0.82 | 4.24 | 0.663 |
| Promote I care the development of food industry | 3.35 | 0.615 | 3.86 | 0.631 | 2.36 | 0.809 | 4.4 | 0.645 |
| Concerns I support the green marketing ideology of food industry | 3.69 | 0.54 | 4.05 | 0.664 | 3 | 0.894 | 4.48 | 0.586 |
| On green I am highly concerned on food quality | 3.89 | 0.658 | 4.7 | 0.52 | 3.64 | 0.809 | 4.56 | 0.583 |

TABLE 4.14 Demographical characteristics

|  | CLUSTER 1 | CLUSTER 2 | CLUSTER 3 | CLUSTER 4 |
| --- | --- | --- | --- | --- |
| N=55 42.64% | N=37 28.68% | N=11 8.53% | N=25 19.38% |
| Mean Std. Devi | Mean Std. Devi | Mean Std. Devi | Mean Std. Devi |
| Gender | 1.56 0.501 | 1.54 0.505 | 1.55 0.522 | 1.52 0.51 |
| Age | 1.64 0.91 | 1.84 1.068 | 1.64 0.674 | 1.68 0.748 |
| Education | 2.65 1.04 | 2.35 0.588 | 2.73 1.009 | 2.64 0.952 |
| Income | 2.64 1.591 | 2.24 1.011 | 2.09 0.944 | 2.4 1.354 |

One thing clear is that there is not big difference between male and female concerning green food preferences. However, many researchers are arguing that women are more likely to present green buying behaviors (Mostafa, 2007). According to Mainieri and Barnett (1997), women tend to be more pro-environmental than men, since they more green products and participate more in separation of packages for recycling.

The first segmentation is composed by people from age between 18-30, bachelor degree, with monthly income between 2000-3500. People of this segmentation are young, and most are from the cities of in-land China. There are less active in green food buying behaviors. They are less care about green mark when shopping food and the food safety scandals influences less on their decision of purchasing. They participated moderately in activities promote green food. For industry knowledge, they are neutral to make special effort to buy green food or moderately reading reports on green food. Their readiness of promoting green food industry is ranked 3rd among 4 groups but

Relatively high, for example they are willing to give money to propagandas, suggest friends and family to buy green food. As for their intention to support green food industry, they show middle level kin. As a summary of the characteristic of this segmentation, they are younger than other segments, between 18-30, with middle level education, and lower income, and their willingness to buy green food is midlevel, and this group of people takes 42.6% of the respondents, which could represent a big part of population.

The second segmentation is consisted by people aged between 26-30, with bachelor degree, with monthly income between 3500-6000. In this segmentation, people are much older, with middle level education, and higher income than first segmentation. The green buying behavior is obvious and highest than others by always trying to check green mark when shopping food, and their negative attitude towards food safety scandals products are clear, and will never buy them. They participated moderately in activities to promote green food. And they are much rational about food safety problem by showing moderate disagreeable. They make more special efforts to buy green food and spend time on reading reports about food industry to obtain knowledge about food industry. Their willingness to give money to green propaganda is ranked second among 4 groups with relative high scores, and they are quite interested to suggest friends and family to buy green food. They are quite ready to accept and support the green marketing ideology of food industry. And they are people who concerned most on food quality than others. And this group of people occupies 23.7% of the population. They are young between 26-30 years old, normally their careers are starting to stabilize, with quite good salary of 3500-6000 per month, and their middle level education and experience allows them to keep rational about food industry and they show their attitude by never buying scandal food and always checking the green marks. They could be key segmentation for green marketing for food industry.

The third segmentation is characterized by people from age 31-40, most master degree and degree from abroad, with monthly income between 3500-8000. People from this segmentation have the higher education. This segmentation has the largest number of people who have degree abroad. They are in their middle age, with very good salary

Above 3500 per month. In all terms of green buying behaviors, industry knowledge, readiness to promote green food, and concerns in food issues, the scores of this group are lowest than all others. Delightfully, they concern a lot on the food quality, which is the back stone of green marketing for food industry. However, this segment is special: they do not check green mark often during shopping the food; they do not care too much about food scandals when select food; the percentage of them participate into green activities is very low; they do not make special efforts to buy green foods, nor were they interested in about knowing the development of food industry; they do want to give money to propagandas to promote green food, and will not suggest their friends or families to buy green food; they do not care too much on green marketing for food industry. This segment is probable difficult to be targeted and satisfied with green marketing strategy and luckily they just are just 9% of the population.

In the fourth segmentation, most people are between 31-50 years old, with master degree or Ph. D, with monthly income above 6000. This group contains the largest numbers of people with Ph. D, and there are oldest among all other with monthly income above 6000. On contrary to the 3rd segment, this segment has the highest scores in terms of all evaluation factors. They participated more in green activities; they strongly get angry about food safety scandals; they will make special efforts to buy green food and spend time on reading reports to gain knowledge on food industry development. They show high concerns to green food industry by being glad to give money to propagandas to arise people's attention on green food industry, and advising friends and families to buy green foods. They care a lot of the food quality and at the same time highly support the green ideology for food industry development. With their strong supportive attitude toward green food, financial advantage, and large percentage of population, nearly 20%, this segment could be key target for green marketing.

TABLE 4.15 Green Segmentation Characteristics

|  | Demograph | Characteristics |
| --- | --- | --- |
| ONE | Age: 18-30  Income: 2000-3500 bachelor | Young, from cities,less active in green buying behavior, neutral about green food, nearly half of the population |
| TWO | Age: 26-30  Income: 3500-6000 middle level education | Young, higher income, keen about green food, make special efforts to buy green food, one forth of the population |
| THREE | Age: 31-40 income:3500-8000  Higher education, degree abroad | Middle aged, lest care for green food, neutral towards food safety scandals, low participation in promoting green food,  One tenth of the population |
| FOUR | Age: 31-50  Income: above 6000 master and Ph.D | Older, high level of education, hign income, highest level in green tendency, keen about green food, make special effort to  Buy green food, one fifth of the population |

The summary of the characteristics of each segment is showed above. Taking the consumer preferences, income, and percentage of the population, the suitability for green food can be ranked from the most feasible to the least feasible as: segment FOUR, segment TWO, segment ONE, segment THREE.

## **4.4** **Green marketing mix (4Ps)**

The third part of the questionnaire is designed to investigate people's preferences and acceptance concerning marketing mix. To reach a reliable and more comprehensive analysis of the 4Ps, 20 questions are asked in terms of products, price, place, and promotion.

### **4.4.1** **Green product**

TABLE 4.16 Product attribute of green food

**Mean** S td Devi **strong**

**disagree**

**Disagree neutral agree** strongly

**agree**

| Food quality is the most important | 4.53 | 0.791 | 1.6 | 1.6 | 4.7 | 27.1 | 65.1 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Food ingredients are the most important | 3.53 | 0.919 | 1.6 | 9.3 | 38.8 | 34.9 | 15.5 |
| Product Food nutrition is the most important | 3.81 | 0.811 | 0.8 | 3.1 | 30.2 | 46.5 | 19.4 |
| Food taste is the most important | 3.48 | 0.821 | 0.8 | 10.1 | 38 | 42.6 | 8.5 |
| Food production technology the most important | 3.5 | 0.821 | 0 | 10.9 | 38.8 | 40.3 | 10.1 |
| Safe production environment is the most important | 4.22 | 0.742 | 0 | 2.3 | 11.6 | 47.3 | 38.8 |

Concerning product attribute, six questions are asked about people's attitude towards food quality, ingredients, nutrition, taste, production technology, and safe production environment. And the most important aspect, no surprise, is quality, with

Mean of 4.53 and 65.1% people shown their strongly agree. Then the safety environment is ranked as the second important factor, with mean of 4.22, and 86.1% of the people agree, which followed by nutrition, production technology, and taste. What the food enterprises can get from these results are: 1) Quality of food, in essential of food as safety, is far more important than other aspects. 2) To ensure a reliable food quality, consumers strongly believe that safe production environment is vital. 3) The main motivation to buy food is to satisfy basic biological needs, which means feeding and nutrition. To achieve quality and nutrition, ingredients and production should be reliable too. 4) Consumers are willing to sacrifice the taste just to ensure the safety of the food. The priorities of these six attributes can be ranked from most important to less important as: safety, reliable production environment, nutrition, ingredients, production technology, and taste.

### **4.4.2** **Green price**

TABLE 4.17 Consumer price sensitivity

**Mean** S td Devi **strong**

**disagree**

**Disagree neutral agree** strongly

**agree**

| I am willing to pay more for green food | 3.5 | 0.858 | 3.1 | 7 | 34.9 | 47.3 | 7.8 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Price I am willing to pay tax for green food | 2.84 | 1.022 | 10.1 | 27.1 | 35.7 | 23.3 | 3.9 |
| The price of green food is unnecessarily higher  Than other food products | 4.1 | 0.769 | 0 | 3.1 | 15.5 | 49.6 | 31.8 |

Currently, it is generally perceived by customers that the price of green food is higher than other food products, and most of them agree that the high price could be a barrier for then to buy green food. But on the other hand, nearly one of five of the people believe to have high price is the strategy of differentiation of green food. As an empirical study to testify what is the real attitude of consumer towards green food price, they are asked 3 questions as: 1) Are you willing to pay more prices for green food; 2) are you willing to pay tax to consume green food; 3) The price of green food is unnecessarily higher. And it turned out that more than 55% of the people are willing to pay more for green food. But on the other hand, 81.4% of the people also believe it is not always necessary to pay higher prices to buy green food, which means to get good quality food, consumer feel ok to pay more but it does not mean the currently the high

Price is the acceptable level of price for people. At the same time, 27.2% of the respondents accept to pay for tax of green food to be access to good quality food, while 37.2% shown their disagreement by arguing that they are purchasing something with excellence to show their support. But it is ridiculous to pay tax and it is could result in stopping people from buying green food, just like Tabaco. On the contrary, people who purchase bad quality or harmful products should pay more.

### **4.4.3** **Green promotion**

TABLE 4.18 Promotion strategies for green food

**Mean** S td Devi **strong**

**disagree**

**Disagree neutral agree** strongly

**agree**

| The package of green food is not easy enough to | 3.89 | 0.793 | 0 | 7 | 16.3 | 57.4 | 19.4 |
| --- | --- | --- | --- | --- | --- | --- | --- |
| The most important for food package should | 3.87 | 0.86 | 0 | 5.4 | 27.9 | 41.1 | 25.6 |
| Current advertisements of food are not reliable | 4.32 | 0.677 | 0 | 11.8 | 44.1 | 44.1 | 0 |
| Promotion Advertisements for green food are not reliable | 3.98 | 0.76 | 0 | 1.6 | 24.8 | 47.3 | 26.4 |
| Green food marks are reliable | 2.87 | 0.922 | 6.2 | 26.4 | 46.5 | 16.3 | 4.7 |
| Green mark is just marketing method | 3.66 | 0.914 | 1.6 | 8.5 | 29.5 | 43.4 | 17.1 |
| Food industry should carry out green marketing | 3.86 | 0.808 | 0.8 | 3.1 | 26.4 | 48.8 | 20.9 |

Promotion is a key part of marketing mix. It can be combinations of package, advertisements, public relationship…In this paper, the promotion methods are mainly focused on product packaging, advertisements, and green marks. For the packaging, over 76.8% people insist that the packages of green food are not easy enough to be recognized. What they expect most from the package is to ensure the safety and quality of the food, which means to food companies they should work more on design eye-catching and high level of recognition package which ensure the safety of the food. For advertisement, only 11.8% of people believe the advertisements of ordinary food are reliable, what worst is only 1.6% believe in green food advertisements. From the results, it can be concluded that people have high doubts on the trustworthiness of ads for green food, and when food company carry out green marketing it is important to focus on building up trust with consumers or not rely too much on advertisement as promotion method. The green mark, which is the most distinguishable symbol of green food, has won only 21% of people's trust. The whole food industry should work on to promote the reliability of green mark with the aim to promote the green marketing of

Food industry. And 60% of people believe green mark is just simply a promotion method. To some extent, it will be more than just a promotion method if food industry use it well as an effective promotion method, which can work as trade mark. When asked about whether food industry should carry out green marketing, 70% of people shown their support, which is a good beginning with such large scale of population support.

### **4.4.4** **Green selling place**

TABLE 4.19 Places for selling green food

**Mean** S td Devi **strong**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Food safety should be ensure during distribution | 4.28 | 0.586 | 0 | 7 | 58.1 | 34.9 | 0 |
| There should be special area just for selling green | 4.06 | 0.682 | 0.8 | 0 | 15.5 | 59.7 | 24 |
| Independent stores should be opened up for green | 3.64 | 0.925 | 1.6 | 8.5 | 31.8 | 40.3 | 17.8 |
| The number of green food distributors currently  can meet my demand | 2.84 | 0.805 | 4.7 | 24 | 56.6 | 11.6 | 3.1 |

**disagree**

**Disagree neutral agree** strongly

**agree**

**Place**

Food in supermarkets and food markets

Where to sell the products to reach as big the quantity of consumer as possibleBesideefficiency, towhatextendtheconsumercareaboutthesafetyoftransportationWill itbea green idea toset upindependent store orstand for green food?

These are the main questions for food green marketing as far as this paper concerned. 34.9% agree that companies should ensure the food safety during the distribution and transportation, while 58.1% people are not sure. It is highly agreed by 84.5% of people that there should be special green area in supermarkets or food markets, and other 58.1% of people support to set up independent stores just for green food. For the implication to food industry, it is more responsive to consumer needs to set up special area for supermarkets or food markets instead of dealing with small retailers with many other products. At the same time, independents store for green food are expected to set up in residency area which provide more access of the products to consumers. Currently, only 14.0% of the respondents are satisfied with the numbers of green food distributors. There is a big gap for sellers to fulfill, which is what the food industry should do to better install green marketing.

As summary of the marketing mix, consumers are looking forwards to food with reliable quality which produced under reliable and safe environment, and they are

Willing to make sacrifice of the taste and pay higher to gain the essential of the food. But it is not the reason of green food to be more expensive than other food products, especially with proper implementation of green management, the cost of production could be lower. As the important and spoken-symbol of green food, the green mark has failed to gain trust from the consumers, as well as the green food advertisements. It is critical to develop advertisement with truth and convincing facts, instead of just profit-orientation technique, which is disgusted by consumers. The distribution and transport should not only be efficient but also with the assurance of the food quality. Unfortunately, the current number of green food distributors is far away from satisfying the consumers who are expecting to buy green food from specialized area or independent stores with easier access.

#### **Chapter Five Conclusion**

## **5.1** **Summary of the study**

To answer the major research questions of the paper:

First, how strong is Chinese consumers demand for green marketed foodAmong129respondents, 21.7%feelverydissatisfied, 45%aredissatisfied, and30.2%arejustnoclearopinions, only3%saytheyfeelsatisfiedaboutfoodindustry. 52%ofthemwillprioritizegreenfoodonshoppinglist. 60%aretryingtosuggesttheirfriendsandfamilytobuygreenfood. 71%areshowingstrongsupporttofoodgreenmarketing. 40%arewillingtogivemoneytopropagandatopromotegreenfoodindustry.

Second, what is the characteristic of the consumersTheyaresegmentedinto4groups, withcertaindemographicalcharacteristic, basedontheevaluationoftheirgreentendency, whichincludegreenbuyingbehaviors, greenfoodindustryknowledge, readinesstopromote, andconcernsongreenissues.

People of first segment are young, from cities, less active in green buying behavior, neutral about green food, occupied nearly half of the population. They are important for green food industry, because they occupy the largest part of the population, and they are young which means they will be the main consumption force in the future. At the same time, they care modestly about green food which provides potentiality for market growth.

In second segment, people are characterized with young people, higher income, keen about green food, and they make special efforts to buy green food, taking one fourth of the population. The segment takes big quantity of people who have high income, however they are less sensitive to green food than segment four.

People of third segment are of middle aged, least care for green food, neutral towards food safety scandals, have low participation in promoting green food, taking one tenth of the population. This segment is difficult to be targeted for green food due to

People's indifferent or negative attitude towards green food at the same time the quantity is not bigger than other.

Fourth segment is surely of the key segments for green food markets. People of this group are older, high level of education, high income, and highest level in green tendency, keen about green food, and they make special effort to buy green food, with one fifth of the population. They strongly support the green food, and with high level of consumption ability, and take large part of the population.

Third, what are the motivations behind their buying behaviorsWhenpeopleareshoppingfood, 41%caremostthebrandreputation, andthenistheingredients, productstandardsorcertification, andprice. Andwhentheychosegreenfood, 70%oftherespondentsconsidertheprimaryimportanceisreliablequality, andthentheyconsidertheirbuyingasaresponsetothepropagandatopromotinggreenfood.

Fourth, what kinds of green marketing mix are preferred by consumersFormarketingmix, consumersarelookingforwardstofoodwithreliablequalitywhichareproducedunderreliableandsafeenvironment, andtheyarewillingtomakesacrificeofthetasteandpayhighertogaintheessentialofthefood. Butitisnotthereasonofgreenfoodtobemoreexpensivethanotherfoodproducts, especiallywithproperimplementationofgreenmanagement, thecostofproductioncouldbelower. Andhegreenmarkactingasthespoken-symbolofgreenfood, hasfailedtogaintrustfromtheconsumers, aswellasthegreenfoodadvertisements. Itiscriticaltodevelopadvertisementwithtruthandconvincingfacts, insteadofjustprofit-orientationtechniques, whicharedifficultforcustomerstobeloyalforlongtime. Thedistributionandtransportshouldnotonlybeefficientbutalsoensurethefoodquality. Thecurrentnumberofgreenfooddistributorsisfarawayfromsatisfyingtheconsumerswhoareexpectingtobuygreenfoodfromspecializedareaorindependentstoreswhiteasieraccess.

The marketing mix for green food can be summarized as below, according to the analysis of the study:



FIGURE 5.1 Green marketing mix for green food

## **5.2** **Limitations of the study**

Despite of all necessary preparation and tremendous help obtained to fine tune the paper, due to the limitation of times and resources, the paper suffers some drawbacks and imperfections, and the limitations of the resources are summarized below with the intention for future researches and further improvement.

About the questionnaire, if the numbers of questionnaires responded can be grander and the respondents' demographical characteristics could be more various, especially the age, income level, and education back group, and living cities, the reliability of the results can be increased.

At the same time, if the questionnaire design can be tested before been carried out real survey, the validity and reliability of the research would be more scientific and can explain more aspects concerning the issue. And more time and energy should be allowed to overcome this design limitation.

For the statistical analysis, the major statistical methods adopted for this paper are factor analysis and cluster analysis. To reach a more reliable conclusion, it is necessary to combine with other ways of analysis, with consideration of internal correlation and mutual impacts among certain factors of customers buying behaviors. However, due to the lack of sufficient time to develop the model, it is difficult for the author to remedy the weakness in short time.

The major methodologies adopted are literature and empirical studies. For the

Literature review part, if more time for research is allowed, the summary of previous studies, insights, and trends could be concluded. At the same time, for theories used to support the analytical framework are limited on marketing, marketing strategies, and green marketing, if theories related to consumer buying behaviors, food industry nature, and international trade, the significance of the paper can be more obvious.

## **5.3** **Suggestions for further research**

This paper is focused on green marketing for food industry from consumer's needs. Future research can focus on other industries for green marketing implementing. Food industry is consisted with many departs, of which each has different features and consumers group. Segment deeper the food industry in green marketing strategy can be also interesting. The study is confined to consumer needs; it is as critical to explore what are the current marketing strategies of food industry. What are the food companies are doing to meet the marketing demands and what are the characteristics of their strategies, to what extent they satisfied the consumers?

Future research can also work on eliminate the limitations of the study. For example, enlarging the scope of the respondents; further developing the credibility of the questionnaire design; utilizing other statistical analysis, introducing consumer buying behaviors theories.

The study is concerned only on Chinese consumers, and it could also be interesting to check the opinions of foreigners in China and their green buying behaviors in China, whether their demands are strong enough to be targetedAndacomparativestudybetweenChinesefoodmarketandforeignfoodstudywouldbeinsightfulforChinesefoodindustrytolearnnewthings, suchastheproducts developinganddesign, productiontechnology, packaging, managementsystem, andstrategies.

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**Appendix**

**中国消费者对绿色食品需求调查**

非常感谢您参与此次的问卷调查。该问卷共三部分，47道题，大概需要5分钟左右的时间。问卷结果只作为学术研究数据，不涉及个人信息。如果您对此次问卷调查的结果感兴趣，请在问卷后留下您的邮箱。

您的：

1. 性别 A男 B 女

2. 居住地（城市名）

3. 年龄

A 18-25 B 26-30 C 31-40 D 31-50 E 51-60 F 60以 上

4. 教育背景

A高中 B大专本科 C研究生 D博士 E海外留学 F其他

5. 收入水平（月收入，人民币）

A 2000 以下 B 2000- 3500 C 3500-6000 D 6000-8000 E 8000-10000 F

10000以上

6. 您对目前我国食品产业的满意程度

A非常不满意B不满意C一般D满意E非常满意

7. 您购买食品时，最关心食品的

A品牌信誉B食品配料C产品标准或认证D价格E其他

8. 食品安全事故是否会影响您购买绿色食品？

A会B不会

9. 您是否购买过绿色食品

A是（请回答10 & 11）B否(请回答12)

10. 您购买绿色食品的频率是

A每天B每周C经常但不确定频率D不经常（请回答12）

11. 促使您购买绿色食品的原因

A产品质量可靠

B企业品牌影响力

C购买的人多

D礼品

E响应和促进食品安全宣传

F好奇

G其他

12. 您不购买绿色食品的原因

A绿色食品安全也不一定可靠

B价格过高

C 可选择种类少

D购买不方便

E品牌知名度低

F不感兴趣

G其他

**第二部分**对于下面的描述，您的态度是

1. 我购买食品时检查是否有绿色标志

A 非常不同意 B 不同意 C一般 D同意 E非常同意

2. 我不会购买有信誉风险的企业的食品

A 非常不同意 B 不同意 C一般 D同意 E非常同意

3. 我会尽量购买绿色食品

A 非常不同意 B 不同意 C一般 D同意 E非常同意

4. 我对关于绿色食品产业的报道感兴趣

A 非常不同意 B 不同意 C一般 D同意 E非常同意

5. 我赞同绿色食品企业的绿色理念

A 非常不同意 B 不同意 C一般 D同意 E非常同意

6. 我愿意资助推动绿色食品发展的活动或宣传

A 非常不同意 B 不同意 C一般 D同意 E非常同意

7. 我参加过推动绿色食品发展得活动或宣传

A 非常不同意 B 不同意 C一般 D同意 E非常同意

8. 我建议朋友家人购买绿色食品

A 非常不同意 B 不同意 C一般 D同意 E非常同意

9. 我非常关心食品质量

A 非常不同意 B 不同意 C一般 D同意 E非常同意

10. 我非常关心食品产业的发展

A 非常不同意 B 不同意 C一般 D同意 E非常同意

11. 食品安全问题让人愤怒

A 非常不同意 B 不同意 C一般 D同意 E非常同意

12. 食品安全问题是企业过来不善的责任

A 非常不同意 B 不同意 C一般 D同意 E非常同意

13. 食品安全问题是政府监控不利的后果

A 非常不同意 B 不同意 C一般 D同意 E非常同意

14. 食品安全问题反应了消费者影响力不足

A 非常不同意 B 不同意 C一般 D同意 E非常同意

15. 食品安全问题并不严重

A 非常不同意 B 不同意 C一般 D同意 E非常同意

**第三部分**以下关于绿色食品的描述，您的态度是

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 1. 食品质量安全最重要 |  | | | | |
| A 非常不同意  2. 食品配方最重要 | B | 不同意 | C一般 | D同意 | E非常同意 |
| A 非常不同意  3. 食品营养价值最重要 | B | 不同意 | C一般 | D同意 | E非常同意 |
| A 非常不同意  4. 食品味道最重要 | B | 不同意 | C一般 | D同意 | E非常同意 |
| A 非常不同意  5. 食品生产技术最重要 | B | 不同意 | C一般 | D同意 | E非常同意 |
| A 非常不同意 | B | 不同意 | C一般 | D同意 | E非常同意 |

6. 食品生产环境可靠最重要

A 非常不同意 B 不同意 C一般 D同意 E非常同意

7. 我愿意支付更高的价格来购买绿色安全食品

A 非常不同意 B 不同意 C一般 D同意 E非常同意

8. 我愿意支付绿色食品消费税

A 非常不同意 B 不同意 C一般 D同意 E非常同意

9. 绿色食品价格不一定要比普通食品高

A 非常不同意 B 不同意 C一般 D同意 E非常同意

10. 绿色食品包装不够易于辨识

A 非常不同意 B 不同意 C一般 D同意 E非常同意

11. 食品包装保证食品安全最重要

A 非常不同意 B 不同意 C一般 D同意 E非常同意

12. 目前的食品广告可信度低

A 非常不同意 B 不同意 C一般 D同意 E非常同意

13. 绿色食品的宣传可信度低

A 非常不同意 B 不同意 C一般 D同意 E非常同意

14. 绿色标志可信度高

A 非常不同意 B 不同意 C一般 D同意 E非常同意

15. 绿色标志只是宣传手段

A 非常不同意 B 不同意 C一般 D同意 E非常同意

16. 食品生产企业应开展绿色宣传

A 非常不同意 B 不同意 C一般 D同意 E非常同意

17. 保证在食品的分销和运输过程中的质量安全

A 非常不同意 B 不同意 C一般 D同意 E非常同意

18. 超市或市场应设立绿色食品专区

A 非常不同意 B 不同意 C一般 D同意 E非常同意

19. 绿色食品应开设独立的门市

A 非常不同意 B 不同意 C一般 D同意 E非常同意

20. 目前绿色食品分销点的数量能够满足我的需求

A 非常不同意 B 不同意 C一般 D同意 E非常同意

**Questionnaire for Chinese Consumer Needs for Green Food**

First Part

1. Gender (A) Male (B) Female

2. Living city

3. Age

（A）18-25 (B) 26-30 (C) 31-40 (D) 31-50 (E) 51-60 (F) above 60

4. Educational background

（A）High school (B) Bachelor (C) Master (D) Ph. D (E) Degree abroad

（F）Other

5. Income monthly (RMB)

（A）Below 2000 (B) 2000-3500 (C) 3500-6000 (D) 6000-8000

（E）8000-10000 (F) above 10000

6. To what extent Chinese food industry satisfy your needs

（A）very dissatisfied (B) dissatisfied (C) Neutral (D) Satisfied (E) Very satisfied

7. When you are buying food, what you care most

（A）brand reputation (B) ingredients (C) production standards and certification

（D）price (E) other

8. Food security scandal will impact your decision of buying green food?

（A）Yes (B) No

9. Have you ever bought green food

（A）Yes (please jump to Q10 & 11) (B) No(Please jump to Q12)

10. How often you will buy green food

（A）each day (B) each week (C) many time but not sure the frequency (D) Not so often(Please jump to Q12)

11. What is the main reason you choose green food

（A）Reliable quality

（B）Company image (C) Many other people bought

（D）Just for gifts

（E）As response to propaganda of green marketing

（F）Out of curiosity

（G）Others

12. The main reason you do not choose green food

（A）The quality is not necessarily reliable

（B）Price is too high

（C）Less product diversity and less choice

（D）Inconvenience of buying

（E）Low recognition of the brand

（F）Not interested

（G）Others

Second Part

The answers are from:

（A）Strongly disagree; (B) disagree; (C) Neutral; (D) Agree; (E) Strongly disagree

16. I check green mark when I buy food

17. I will never buy products of company which had security scandals

18. I make special effort to buy green food

19. I am interested in reading reports concerning green food industry

20. I support the green marketing ideology of food industry

21. I will give money to green food propaganda to promote food industry

22. I have participated in activities promoting green food

23. I suggest friends and families to buy green food

24. I am highly concerned on food quality

25. I care the development of food industry

26. I become angry with food scandals

27. Food safety problem is the result of bad management of company

28. Food safety problem is the result of government weak supervision

29. Food safety problem reflects consumer power is still not strong enough

30. Food safety problem is not so serious

The Third Part

The answers are from:

（A）Strongly disagree; (B) disagree; (C) Neutral; (D) Agree; (E) Strongly disagree

21. Food quality is the most important

22. Food ingredients are the most important

23. Food nutrition is the most important

24. Food taste is the most important

25. Food production technology the most important

26. Safe production environment is the most important

27. I am willing to pay more for green food

28. I am willing to pay tax for green food

29. The price of green food is unnecessarily higher than other food products

30. The package of green food is not easy enough to recognize

31. The most important for food package should ensure safety

32. Current advertisements of food are not reliable

33. Advertisements for green food are not reliable

34. Green food marks are reliable

35. Green mark is just marketing method

36. Food industry should carry out green marketing

37. Food safety should be ensure during distribution and transportation

38. There should be special area just for selling green food in supermarkets and food markets

39. Independent stores should be opened up for green food

40. The number of green food distributors currently can meet my demand.