



Implementing Sustainable Consumption in Civil Society of Urban China

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Survey Report on Sustainable Consumption and Sustainable Supply in Tianjin (2012)

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Project Overview

The project Implementing Sustainable Consumption in Civil Society of Urban China aims at promoting sustainable consumption by urban inhabitants in Beijing and Tianjin, and spreads to whole China by taking sustainable consumption activities in these two cities by participation of stakeholders, awareness training, capacity building and communication between EU and China. The project contributes to promote the development of resource-saving economy and environment-friendly economy. Therefore, it is part of research on climate change in these two cities as laying foundations on the environmental goal of reducing carbon emissions and providing good technical support on sustainable consumption in other cities in China.

China raised advocacy of sustainable consumption and leading concept of healthy living in 2001. There are both harvests and challenges, problem solved and emerged, unification on sustainable consumption and comfortable life in the implementation process during more than 10 years. As unsustainable and disharmonious consumption were existed actually, the project addresses the shortfalls by providing assistance with overcome these contradictions through the implementation of sustainable consumption to build a unity framework. The project's activities are:

- Project preparation and successful practice
- Sustainable supply and sustainable consumption surveys
- Tools development and capacity building for sustainable consumption
- Sustainable consumption advocacy / training / seminars
- Sustainable consumption to promote sustainable supply
- National Policy Dialogue

The project received the support of related personnel from the government, civic associations, universities, research institutes and climate base. The partners from China (Beijing and Tianjin) and Europe implement sustainable consumption. The project will be finished cooperatively by University of Civil Engineering and Architecture of Beijing, Institute for Public Policy Research (UK), The City 2020 Foundation (NL), Nankai University, Beijing Consumer Association and Tianjin Consumers' Association and will support related sustainable consumption and sustainable production activities in each city.

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1 Introduction

1.1 Purpose

The year 2011 is the beginning of China's 12th Five-Year Plan, 'vigorously developing circular economy, promoting development of all aspects of the recycling economy, including production, circulation and consumption, in accordance with the principle of reduction, reuse, recycling, priority of reduction and goal of improving output efficiency of resources, ..., Accelerating construction of resource recycling and utilization system in the entire society'. Also requires 'advocating consumption concept of civilization, conservation, green and low-carbon to promote formation the green lifestyles and consumption patterns that adapt to China's national conditions, ..., encouraging consumers to purchase and use of energy and water saving products, energy saving and environmentally friendly cars and land-efficient housing, reduce the use of disposable goods, limit excessive packaging, control irrational consumption' was mentioned in the *People's Republic of China's National Economic and Social Development Twelfth Five-Year Plan* (hereinafter referred to as the '12th Five-Year Plan'). Currently, the Chinese public consumption accounted for about 37% of GDP. Speed up the process of sustainable consumption in China plays a positive role to build our environment-friendly society and resource-saving society.

China Consumers' Association defined 'green consumer' as three meanings: Firstly, consumer attitudes-- guide people pay attention to environmental protection, conservation of resources and energy, to achieve sustainable consumption, while in the pursuit of life convenient and comfortable; secondly, consumption content-- promote consumer consumption to choose the green products that uncontaminated or contribute to public health; thirdly, focus on waste disposal in the consumption process and post-consumption, to minimize environmental pollution.

In developed countries such as the United States, Germany, Italy, the Netherlands, there are respectively 77%, 82%, 94%, 67% of consumers will consider the ecological environment factors in the purchase of merchandise. In China, sustainable consumption popularization although started, but the proportion is still less than 20%.

Therefore, the purpose of the survey report is designed to be more comprehensive, timely and accurate understanding the situation of residents in sustainable consumption and suppliers in the sustainable supply in Tianjin, analysis of statistical data and provide an initial scientific analysis of Tianjin's market for further researching of the project and the promotion of sustainable consumption and sustainable supply.

The work of assistant issued and withdrew questionnaires in the report from respondents were by volunteer supervisors from Tianjin Consumers Association.

1.2 Principles

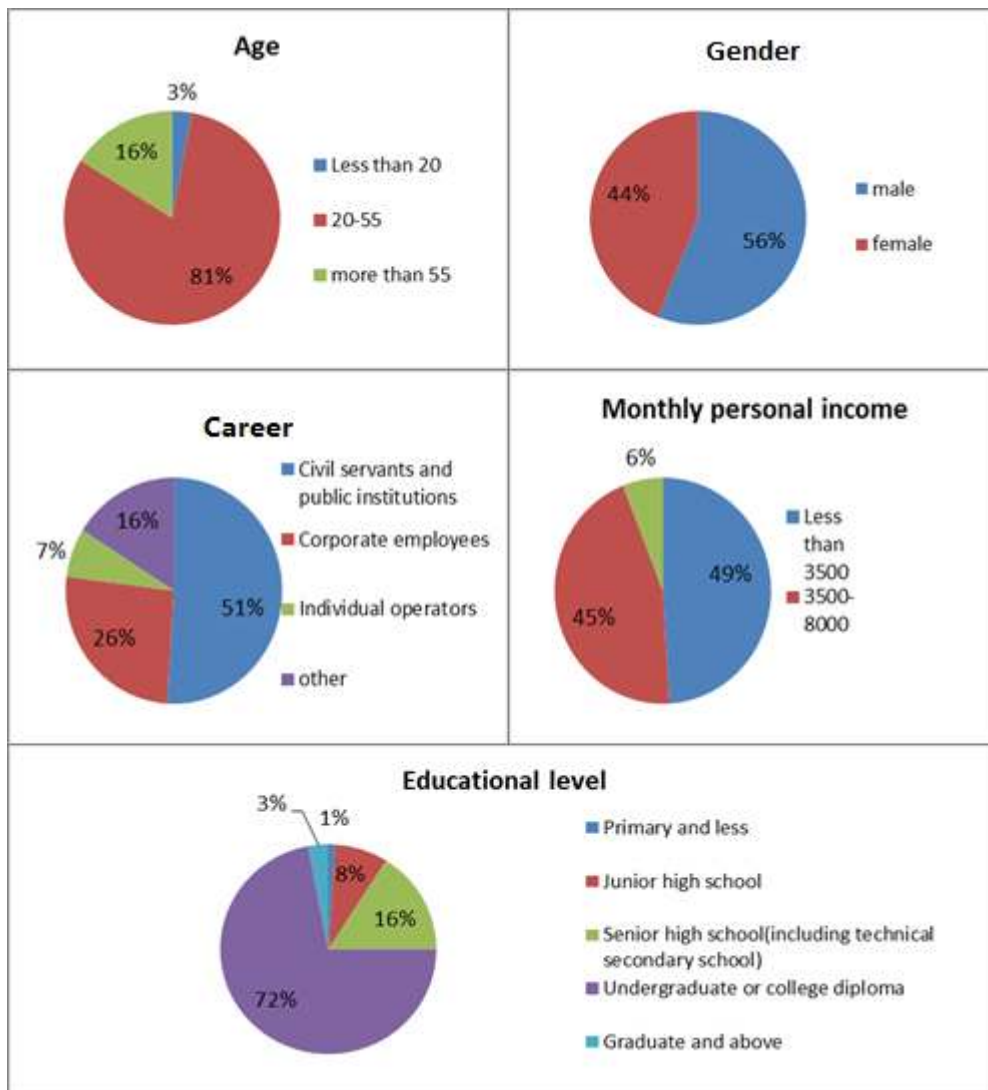
The entire process, from questionnaires design to issue and withdrawal, and then to statistical analysis, always adhere to the following principles:

- Comprehensiveness - questionnaires involving consumer, product and market survey from both consumer and supplier aspects. And range of the survey is around whole Tianjin.
- Timeliness – both questionnaires designed and surveys carried out were in 2012, with strong timeliness.
- Scientific accuracy - questionnaires screening to remove data from unqualified questionnaires so that analysis results are more accurate and scientific.

2 Survey report on the sustainable consumption of the residents

2.1 Survey overview

The survey was carried out within the Tianjin city-wide (Six districts in the city, four districts around the city, Binhai New Area, two outskirts and three counties), we issued 183 questionnaires and recovered 142 valid questionnaires. The effective rate is 77.6%.



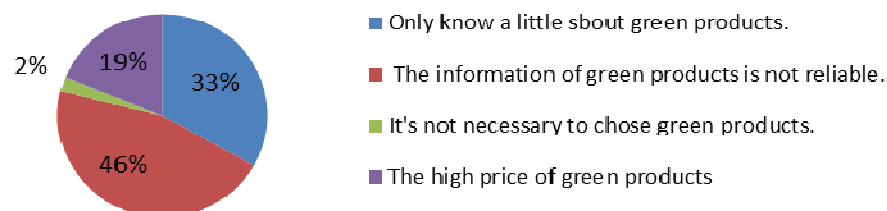
Among the survey objects of Tianjin, 81% of them are 20-55 year-old serving staffs, 16% of them are more than 55 years old and 3% are below 20 years old. Among them, men accounted for

56%, women accounted for 44%. These, 51% of the respondents are civil servants or work in institutions and another 26% of them are corporate employees, 16% of other and 7% of them are the individual operators. From monthly personal income, 49% of respondents are below 3500 Yuan, 45% are in scope of 3500-8000 Yuan, 6% are above 8000 Yuan. From the level of education, 72% of respondents are junior college or undergraduate, 16% are high school students, 8% are Junior high school students, 3% are graduates and primary school students.

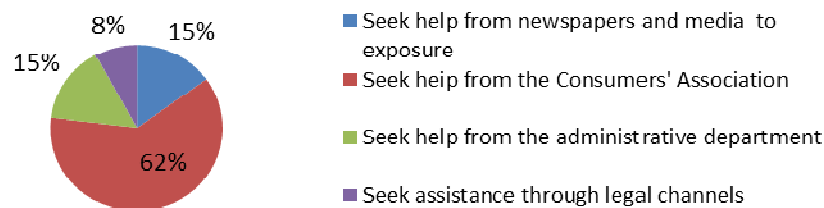
2.2 Survey analysis

2.2.1 Green Products awareness survey

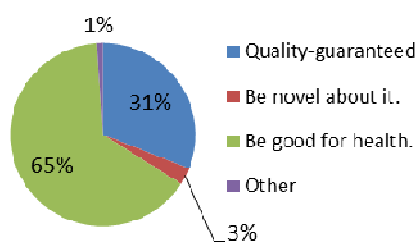
The main reasons why consumer does not specifically choose green products



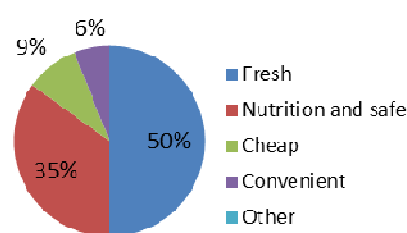
The ways consumers choose when the products or green product that they purchase appear quality problem and Vendors and manufacturers is not addressed



The reason whay consumers buy green food



The focus of the family to buy food



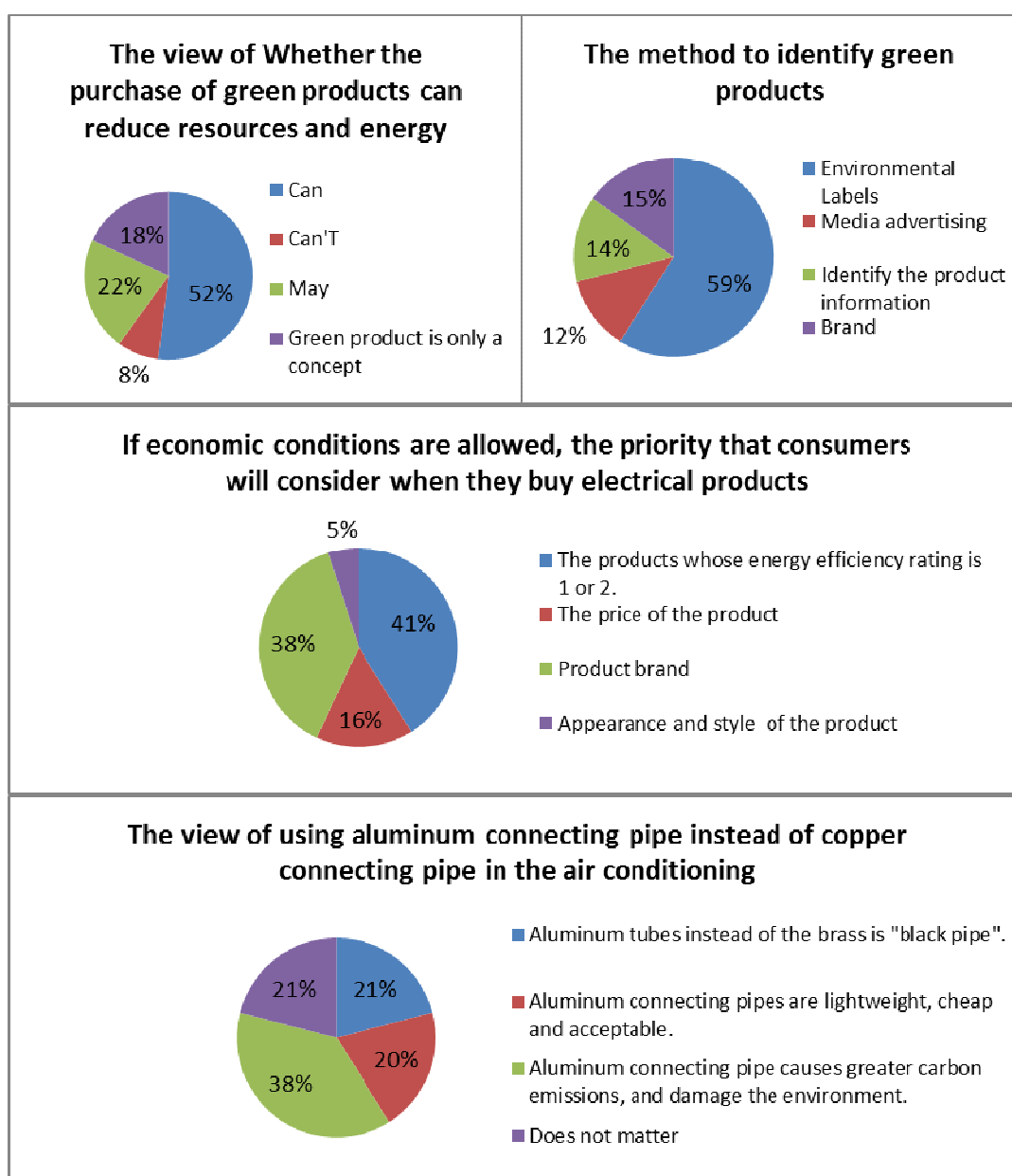
In Awareness of green products, 41% of consumers think green product information is not reliable, so they don't choose green products in the shopping. Another 30% of consumers don't choose green products, because they do not quite understand green products. While 27% of them are for the reason of the high price of green products. The most important reason for consumers to buy green food is green food is good for health(65%). During buying food, consumers focus more on

vegetables' fresh (50%) and nutrition security (35%) .

In addition, when the products or green products we purchased appear quality problem and vendors and manufacturers are not addressed, 62% of consumers went to the Consumers' Association for help, 15% of consumers went to the administrative department, finding the newspapers and media exposure were 15%, and only 8% sought for legal aid.

Consumers concerned more about the health and safety of the products, more dependent on the Consumers' Association. But consumers' recognition of the green product information is not enough. So the authenticity of the green products information requires relevant departments to regulate and supervise.

2.2.2 Green products' environmental attitudes survey



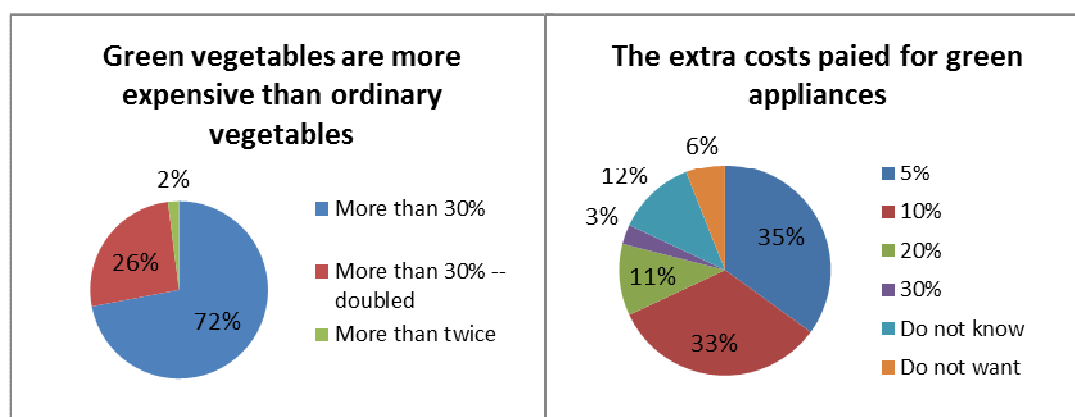
52% of consumers believe that by purchasing green products can reduce the waste of resource and energy. 22% of consumers think that it may be able to reduce the waste of resources and energy. And 30% of consumers harbor a negative attitude of green products' environmental effectiveness. They think green products are just the concept (22%), or can not to reduce waste (8%).

The most important way to distinguish green products for consumers is the environmental labels, this accounts for 59%.15% of consumers identify green products by brand, 14% by product information, 12% by media advertising.

If economic conditions allowed, 41% of consumers will give priority to the products which have 1 or 2 energy efficiency rating when purchase the electrical products, 38% of consumers preferred brand of products. In the views of using aluminum and copper in air conditioners and other cooling products, more consumers (38%) consider that the aluminum tubes to cause more carbon emissions, damages environmental from an environmental point of view.

Tianjin consumers have positive environmental attitude. They are familiar with signs of environmental protection and energy efficiency label. But there are still a considerable part of consumers not understanding the green consumption and related logo.

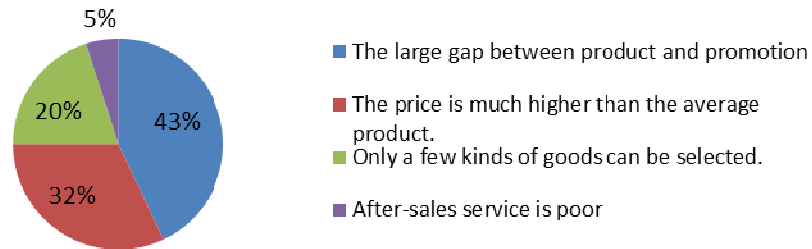
2.2.3 Green product price will survey



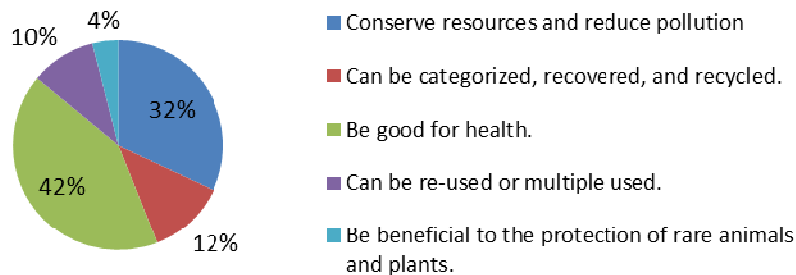
At the aspect of green product price, 72% of consumers willing to pay extra 30% of the price for green vegetables, only 2% of consumers willing to pay more than the double price. But, on the market, the price of green vegetables is usually about three times of ordinary vegetables. 35% of consumers willing to pay 5% more for green appliances, 33% of consumers willing to pay 10% more of the cost, only 3% of consumers are willing to pay 30% more. The consumers in Tianjin willing buy green products, but the high price of green products is the major limiting factor.

2.2.4 Green product development direction survey

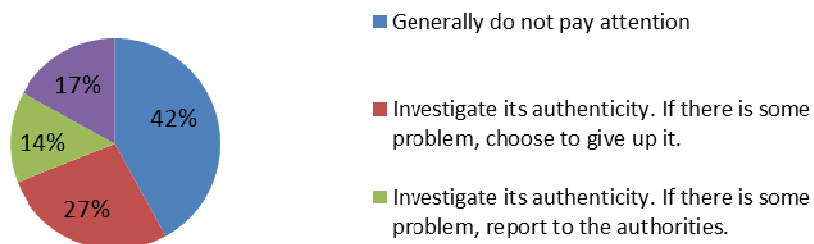
The biggest problem that consumers encountered in purchasing green products



The prominent aspects of environmental friendly products that consumers expect



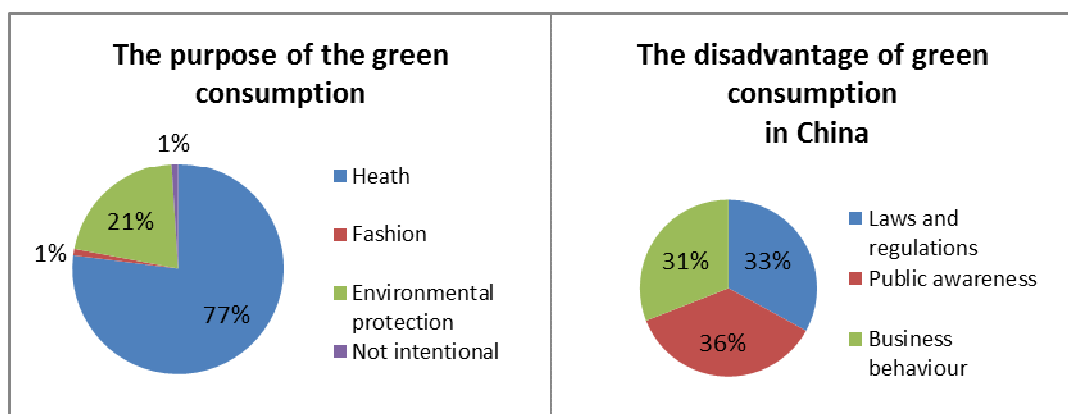
Whether consumers investigate the authenticity of the green products on the market



43% of consumers believe that the biggest problem to purchase green products is the large gap between products and propaganda. The other 32% and 20% Tianjin consumers believe that the price of green products is higher than the general product and less optional types of green products are the restrictions on the purchase of green products. 42% of consumers said that they generally not paid attention to the authenticity of green products in the market. 58% of consumers said they would survey its authenticity, but 27% of them would give up buying when they discovered issues, only 17% of them use the law to protect their interests and 14% will report to the authorities. This shows that the rights awareness of Tianjin consumers is not high, so give an opportunity for the products in question.

At the same time, consumers want environmentally friendly products more healthy (42%) and better to conserve resources and reduce pollution (32%).

2.2.5 Sustainable consumption awareness survey



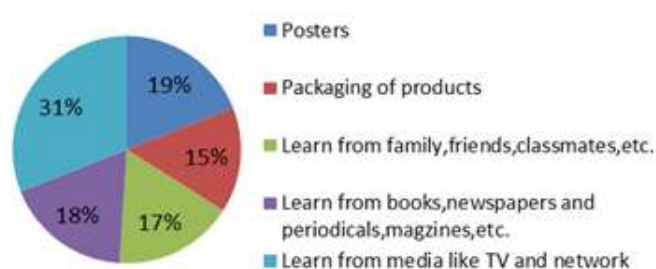
Survey results show that up to 77% of respondents believe that the main purpose of the sustainable consumption is for health. In the remaining 23% of respondents, 21% believe that sustainable consumption is to protect the environment. While only respectively 1% of respondents choose the fashion and unconscious. It can be seen, after China promulgating the relevant policies of sustainable consumption in recent years and increasing the education degree of environmental protection and sustainable development, citizen have been taken a high awareness of sustainable consumption and have the proactive awareness to choose sustainable consumption patterns.

In addition, now there are significant gaps among constructing and implementing laws and regulations system on green consumption (33%), establishing norms of business behavior (31%), and establishing public green consumption awareness (36%).

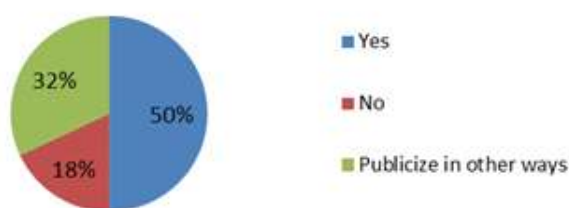
2.2.6 Survey of sustainable consumption knowledge propaganda

With the quickening pace of today's social life and developing of the information technology, digital media, including networks and television are increasingly known as the main source of the information. Also it is the same in disseminating knowledge of green consumption. Nearly 1/3 (31%) of respondents chose television, online media as the main source of green consumption knowledge. The same, 50% of respondents believe that the television and network are effective mediums to share green consumption knowledge with friends and family. This shows that we should choose the mode of transmission which has wide audience and high-impact as the main way, like PSAs and TV network, to propaganda

The way to acquire knowledge about green consumption

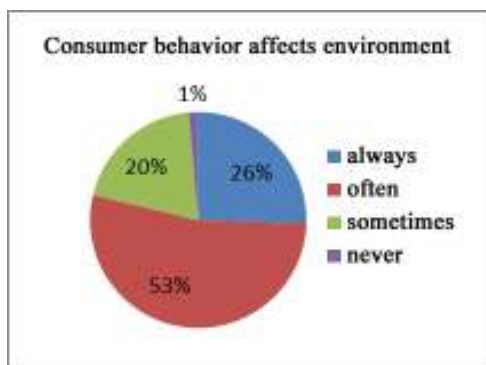


Publicize the concept of green consumption through the network



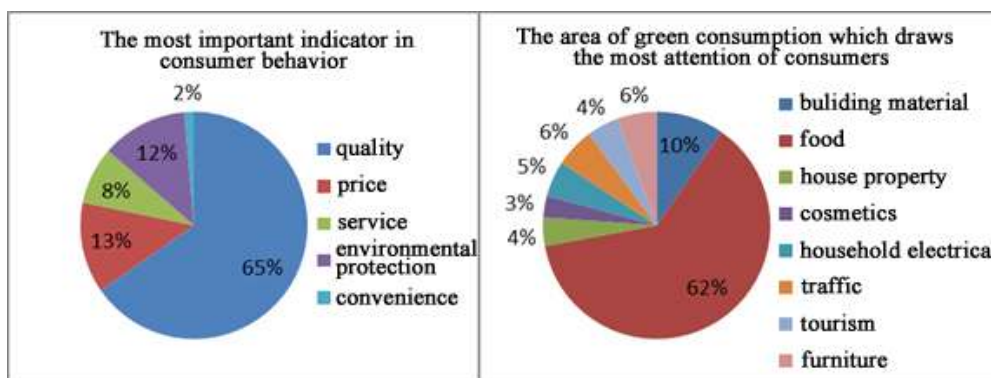
Green consumption. At the same time, we should also note posters, books and magazines, as well as product packaging are and promotional means to popularize and propaganda Green consumerism knowledge. (There were more than 15% of respondents selected.)

2.2.7 Survey of the awareness of sustainable consumption



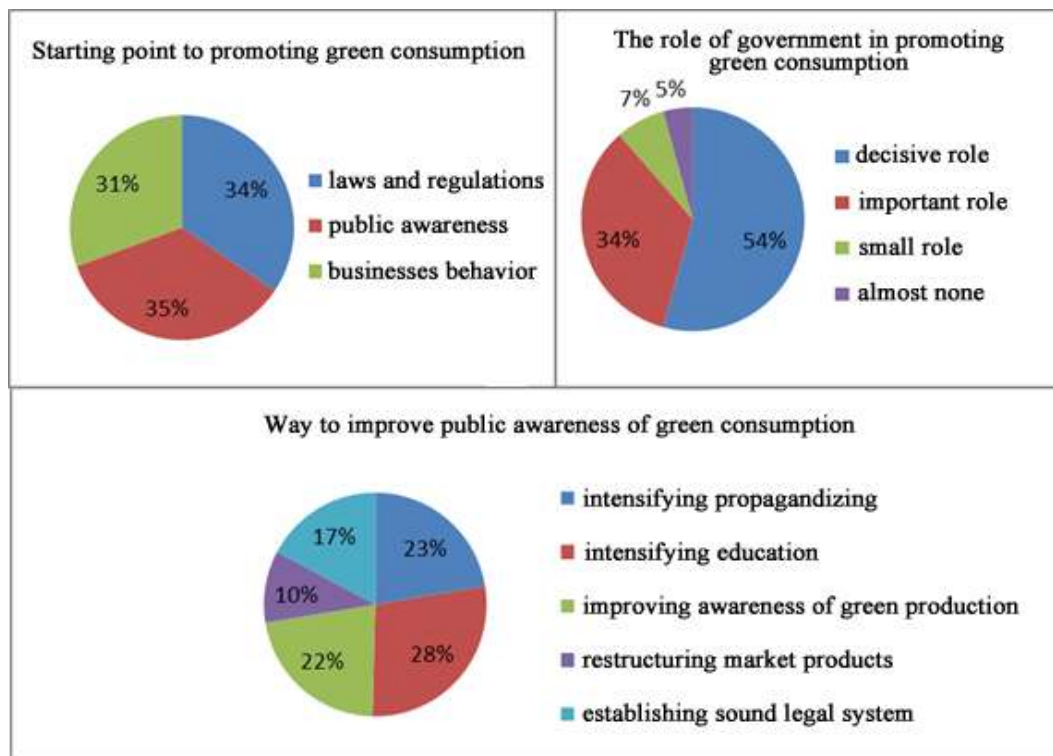
79% of the interviewees pay attention to environment impact of sustainable consumption (53% often, 26% always). It can be seen that the public come to realize that sustainable consumption has great influence with public's own environment and benefit with the implementation of related policies and propagandizing. And the awareness of sustainable consumption may evolve into sustainable consumption behavior which is wider, more effective and more large-scale.

2.2.8 Survey of the Development direction of sustainable consumption



The quality of products has become the most important indicator in consumers' consumption behavior with the improvement of people's material standard of living. 65% of the interviewees in this survey regard quality as the first consideration in consumer behavior. Price and environment protection are in the second (13%) and the third (12%) place respectively. It can be seen that, green products can get considerable development with the support of the environmental protection policy if the development of green products under the premise of quality, create advantages on price through policies such as state subsidies.

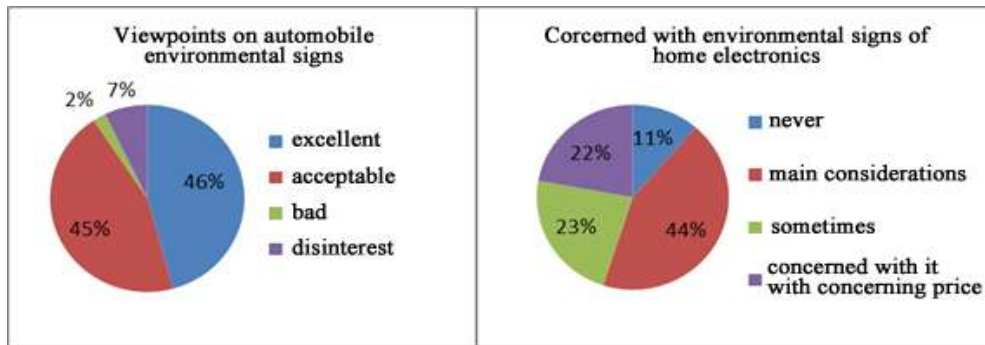
Green food is the area of green consumption which draws the most attention of consumers. Up to 62% of the Tianjin interviewees in this survey chose green food. While interviewees who chose other areas such as green building material are less than 40%.



According to Tianjin consumers, the development of green consumption in China should start from laws and regulations (34%), public awareness (35%) and businesses behavior (31%) three aspects. And government plays a crucial role in the development of green consumption (54% of interviewees chose decisive role, and 34% chose important role). Chinese government played a good role in guiding the development of green consumption by the laws and regulations such as energy-saving appliances subsidy policy and preferential policy for green enterprises. But government ignored the education of the awareness of green consumption for public and enterprises and relied on the manner such as policies and subsidies which is short cycle and has obvious effect too much while ignoring the legal system of green consumption.

More than half of the interviewees think that intensifying propagandizing and education are the most effective ways to improve public awareness of green consumption (28% chose Intensifying education, 23% chose intensifying propagandizing). It can be seen that, establishing a broad mass base and the green consumer awareness in society through propagandizing and education is helpful to making enterprises' development sustainably in the context of that development of China's green consumption is in the primary stage. And it is also the base of the development of green industry and green consumer legal system.

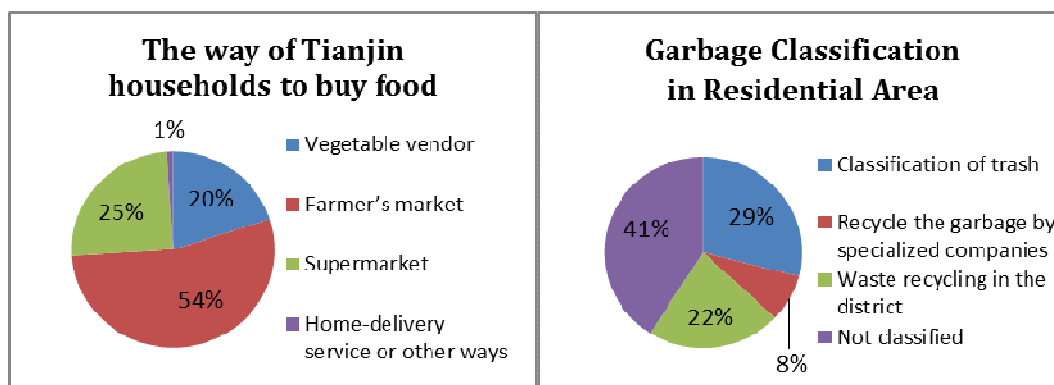
2.2.9 Survey of the awareness of environmental signs



Up to 91% of the interviewees accepted automobile environmental signs (46% think excellent, 45% think acceptable), and only 7% and 2% of the interviewees did not concern or thought bad. 90% of the interviewees can take into account the environment protection and sustainable development, then accept automobile environmental signs and actively cooperate with the sustainable consumption behavior such as eliminating the yellow label car, restricting driving motor vehicle based on license plate number and the promotion of clean energy in the context of that China's vehicle ownership is increasing continuously. It reflects the achievement of the propagandizing in green consumer. Interviewees who didn't concern (7%) or don't accept (2%) automobile environmental signs may have no car or have yellow label cars. It can be seen that parts of people still have dependence on high emission and low efficiency vehicle such as yellow label cars. So phasing yellow label cars out and the subsidies on it will be the key work in the process of popularizing automobile environmental signs.

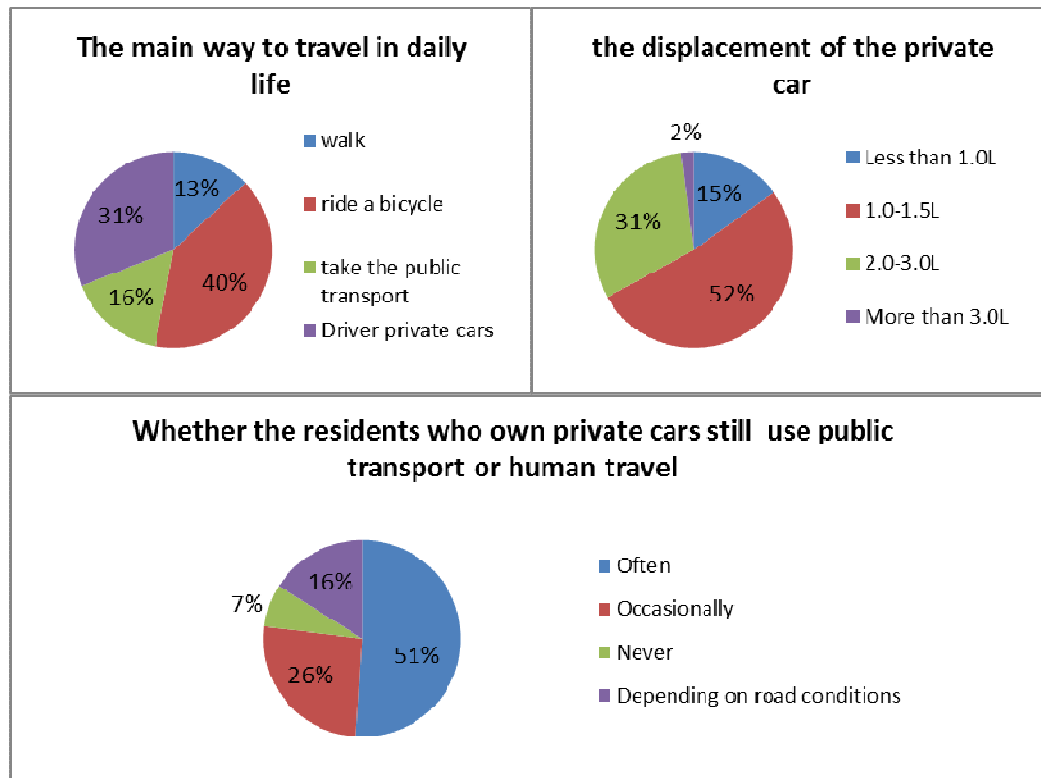
44% of the interviewees concerned environmental signs of home electronics, 22% and 23% of the interviewees will concern it sometimes or concern price respectively. Because of energy-saving home electronics have power saving and environmental protection two advantages, through government's propagandizing and the subsidies on energy-saving home electronics, it is reasonable that Chinese residents would choose energy saving appliances under family conditions permitting with considering household electricity and environment protection from long-term perspective.

2.2.10 Survey of consumer environmental behavior



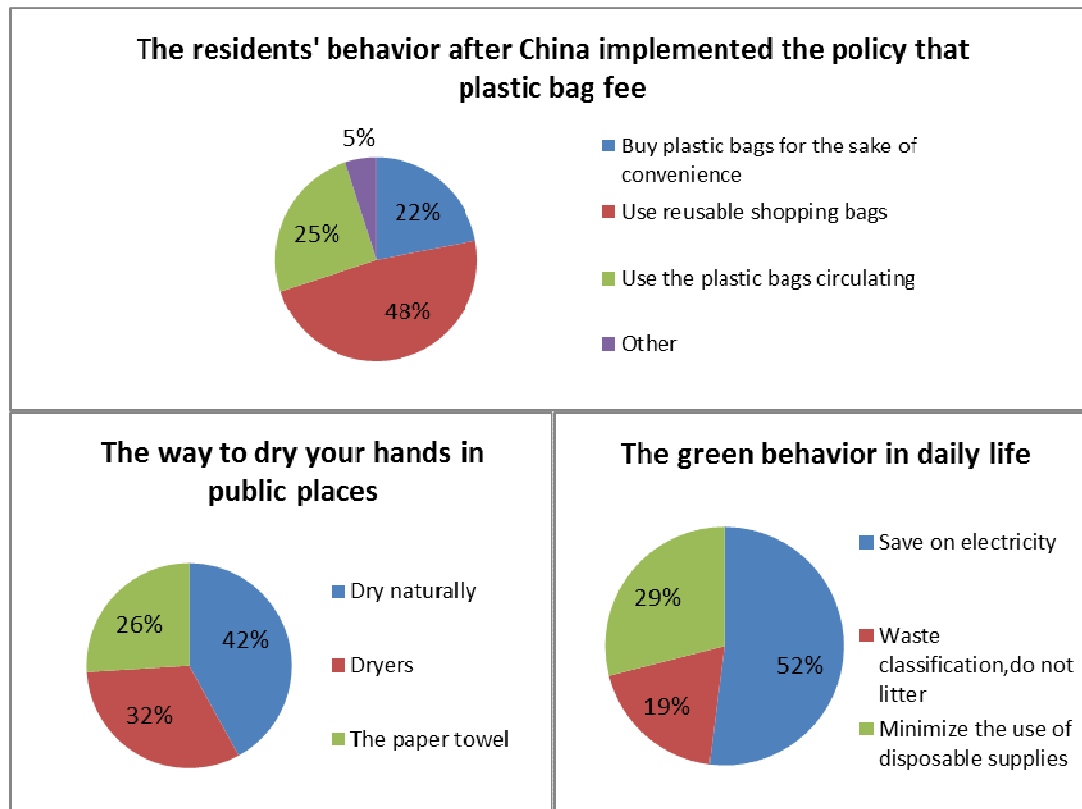
The way of Tianjin households buying food mainly concentrate on the farmers' market (54%),

vegetable vendors (20%) and supermarkets (25%). With the improvement of living standards, food quality and safety are increasingly becoming the focus of the consumer. While the greengrocer is not normative and difficult to centrally manage, so the vegetable's quality and safety are difficult to be guaranteed.



In addition, the garbage in up to 41% of the residential area can't be completely sorted and recycled, and only 8% of the respondents select the way widely used in developed countries that specialized companies go to your home and recycle the garbage.

In recent years, with the development of economy and society, the use of private cars has been greatly enhanced. Although the proportion of the residents using bicycle is declined, it still ranks the first in the various modes of transportation by the proportion of 40%. Private car ranks the second by the proportion of 31%. Both are much higher than public transport which is 16%. This shows that bus, subway and other public transport are in a weak position in Tianjin residents' trip mode. The main reasons include the roads are underdeveloped and unreasonable, the public transport environment is harsh and it is difficult to be on time. However, at the same time, among the respondents who own private cars, there are up to 51% of them often taking the public transportation and 16% of them choose public transport depending on road conditions. And about the displacement of the private car, 67% of respondents' private car are less than 1.5L (less than 1.0L is 15%, 1.0-1.5L is 52%).

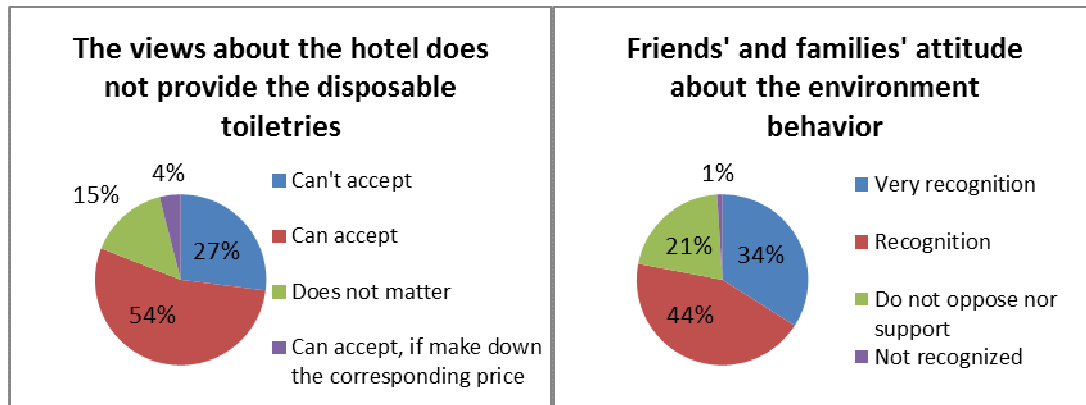


48% of respondents are willing to use reusable shopping bags, 25% of respondents would use the plastic bags circulating, but there are still 22% of the respondents who chose to buy plastic bags from the supermarket for the sake of convenience. Since the implementation of Charging for plastic bags, the reusable shopping bags have been widely used. However, the prominent characteristics of plastic bags are the low price and convenience, which is the important reason why many people choose it. In public places, 42% of respondents choose to dry their hands naturally. However, paper towels and dryers are also used commonly. Among the respondents who choose to dry their hands naturally, a large portion of them are just for trouble, while just very few people consider the problem from the perspective of environmental protection and sustainable development.

In China, the residents' Green consumer behavior can be summarized as: the residents' green consumer behavior is often related to their economic. In the survey of green behavior in daily life, 52% of respondents would reduce waste to conserve electricity, and also 29% of the respondents have to reduce the use of disposable products for the additional fees of disposable products. However, some green behaviors, such as waste separation, renouncing the use of towel paper and so on, are difficult to be implemented, because they do not involve the direct economic benefit of the residents.

2.2.11 Survey of environmental attitudes of consumer behavior

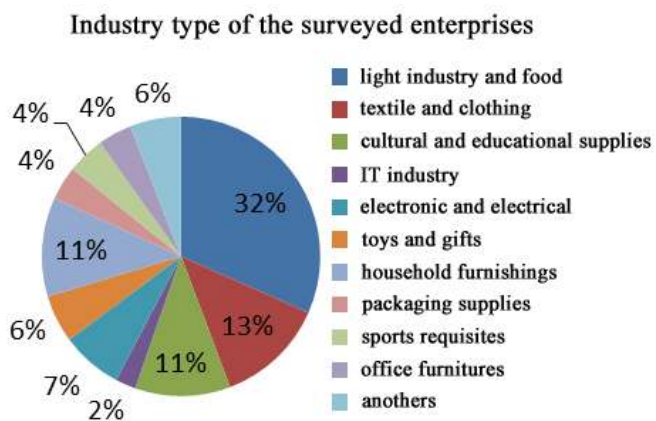
The survey shows 69% of respondents accept the hotel does not provide the disposable toiletries (54% accept, 15% do not matter), but 27% express it's difficult to accept. Although the hotel provides the disposable toiletries, considering comfort and health, a part of the inhabitants are accustomed to bring their own toiletries. In addition to the inconvenient factors, the respondents who express the difficulty to accept think hotels profit at customer's expense if they don't provide the disposable toiletries.



3 Survey of the sustainable supply of suppliers

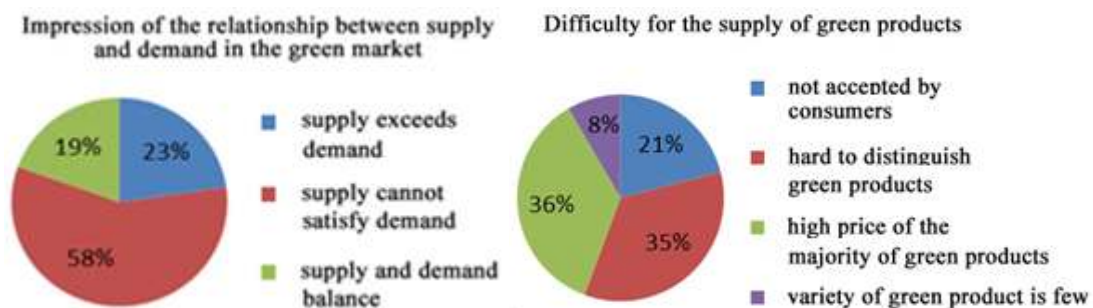
3.1 Overview

This survey was carried out within the Tianjin city-wide (Six districts in the city, four districts around the city, Binhai New Area, two outskirts and three counties). 186 questionnaires were issued, 154 valid questionnaires were recovered, and valid rate was 82.8%. The surveyed enterprises were mainly engaged in ten industries, and the light and food industry had the largest proportion of 32%.



3.2 Analysis

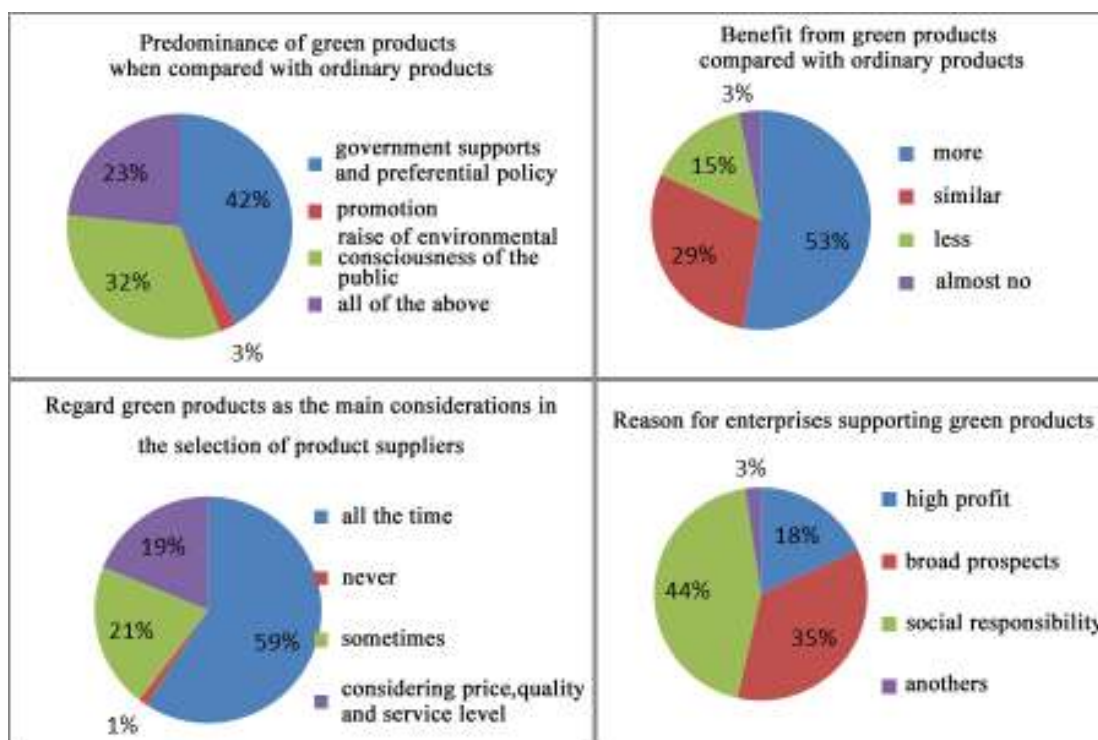
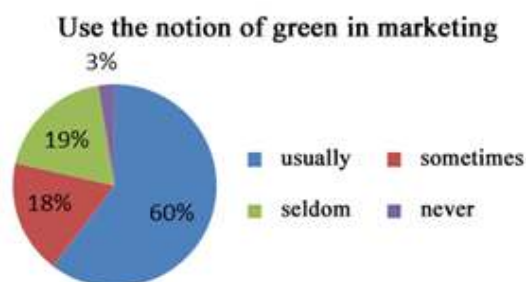
3.2.1 Survey of the awareness of green products



Most of the suppliers in Tianjin consider that the supply cannot satisfy the demand in the green market now (58%). At the same time, 23% of the suppliers are under the impression that supply exceeds the demand and 19% think it is balance between supply and demand. The market conditions is caused by the supply can't satisfy the demand, 36% of the suppliers believe the reason is the high

price of the majority of green products, 35% believe that it is hard to distinguish green products, 21% think that green products are not accepted by consumers, 8% think the reason is the variety of green product is few.

In the surveyed Tianjin enterprises, 60% of them usually use the notion of green in marketing. 18% of them sometimes and 19% of them seldom use the notion of green. The enterprises that never use the notion of green in marketing are only 3%. From this it can be seen that enterprises often use the notion of green in marketing now.



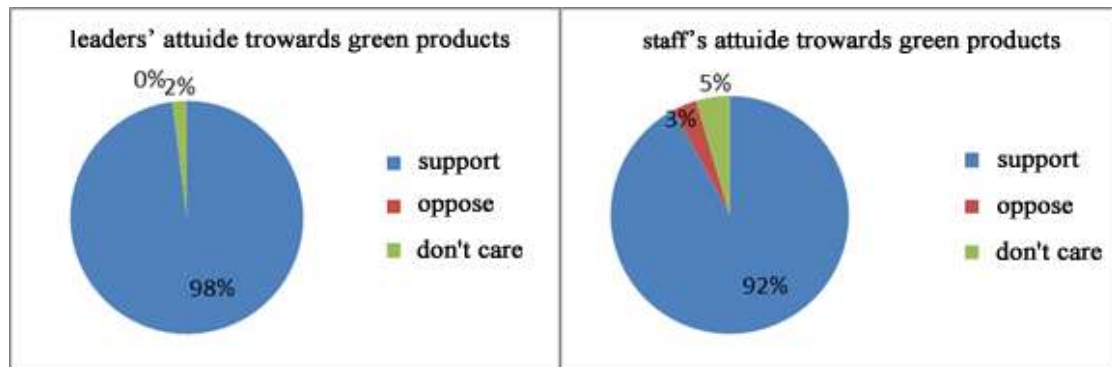
23% of the suppliers in Tianjin think that green products have predominance of government's support, preferential policy, promotion and the raise of environmental consciousness of the public. It means that 50% of the suppliers think government supports and policy of preference are the most important predominance of green products. The next one is the raise of environmental consciousness of the public, has the proportion of 40%.

In economic aspects, 53% of the suppliers think green products can get more profit than ordinary products. It can be seen that green products can benefit both suppliers' and consumers' economic and environmental benefits.

Considering all aspects, 59% of the suppliers will regard green products as the main considerations in the selection of product suppliers at all times, while 21% of the suppliers will do it sometimes, 19% of the suppliers will do it with considering price, quality and service level. Only 1% of the suppliers will not do it. While, 44% of enterprises provide green products because of social responsibility, the broad prospects of green products account for 35% and high-profit of green

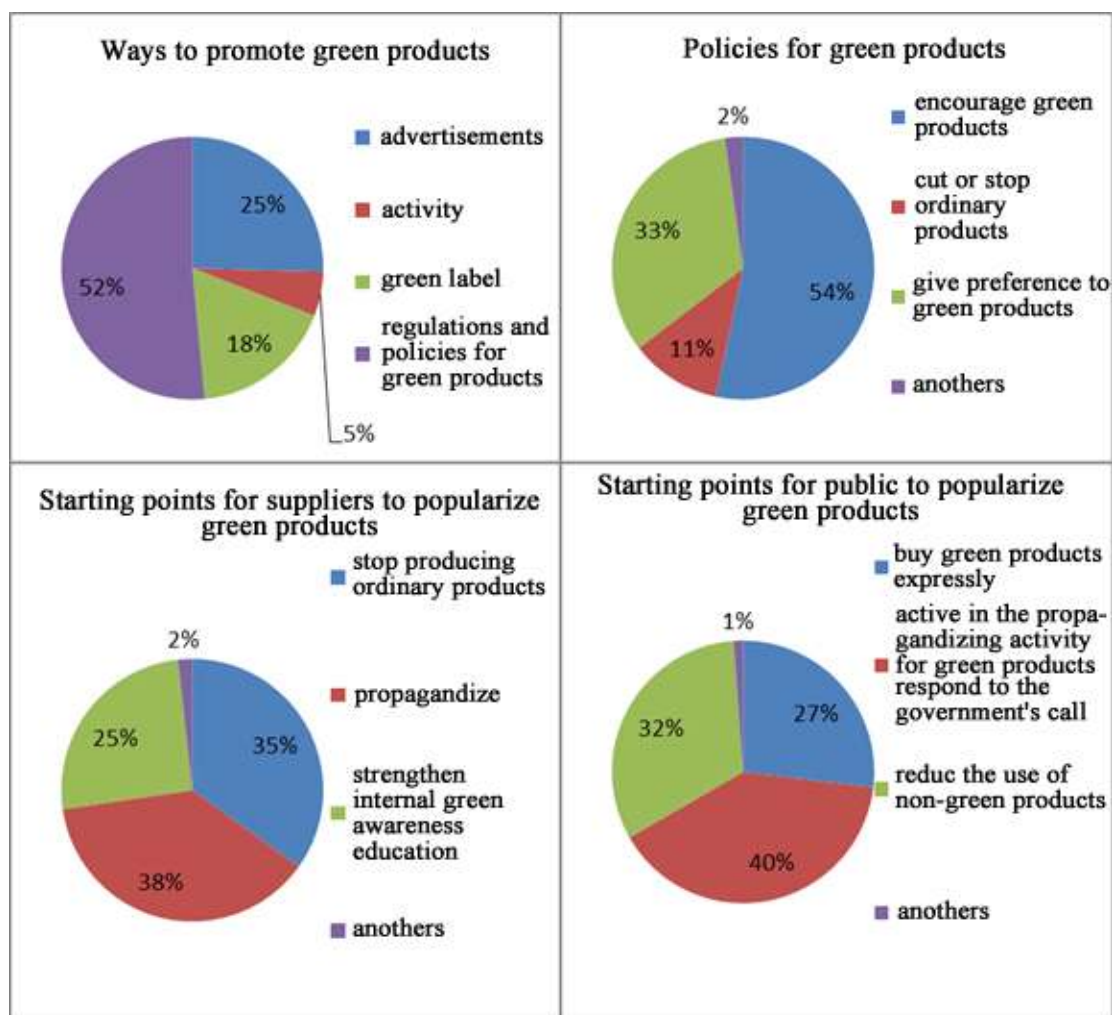
products accounting for 18%. With the enhancement of environmental awareness of the suppliers, enterprises pay more attention on their social responsibility and self-image, which promoting the technology updates.

3.2.2 Survey of the attitude towards green products



From interior of Tianjin enterprises, leadership and staff who support green products have the proportion of 98% and 92% respectively. From this side it can be learned that environmental consciousness of Tianjin public have risen.

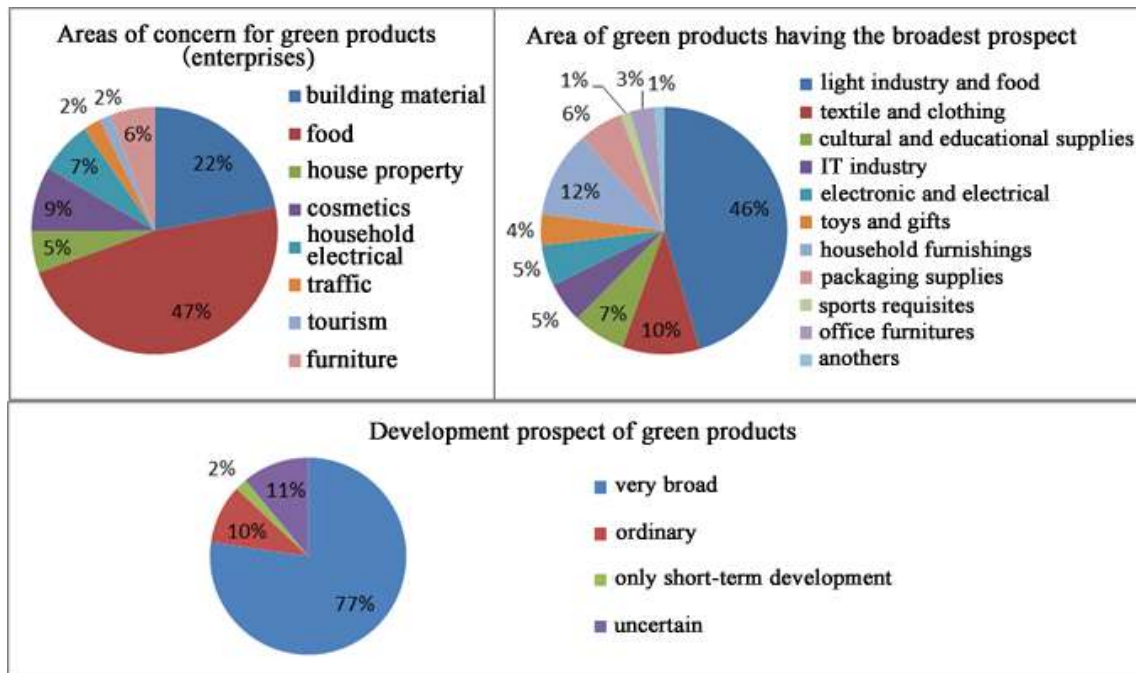
3.2.3 Survey of popularizing green products



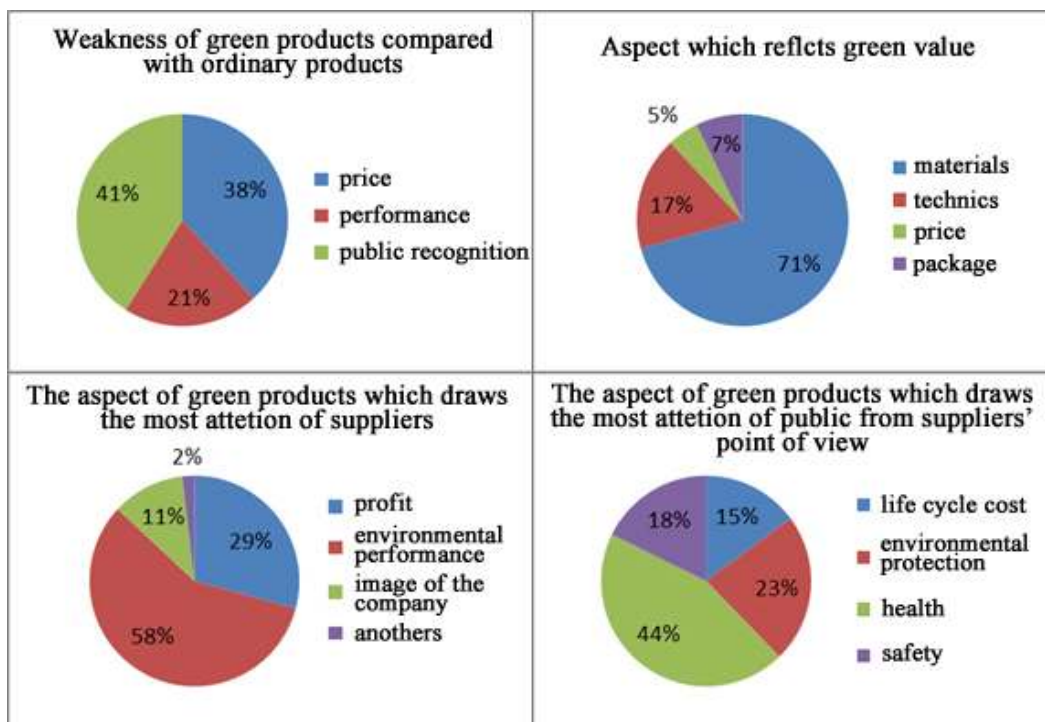
From suppliers' point of view, propagating regulations and policies for green products is the most effective way to promote green products (52%). The following are advertisements (25%), green label (18%) and activity (5%). Towards the policies for green products, 54% of the suppliers consider that promulgation of policies encouraging green products is the most effective, besides, it is necessary to give preference to the production of green products (33%) and promulgation of policies cutting or stopping producing ordinary products (11%).

Now, the main starting points for suppliers to popularize green products are propagandizing (38%), stopping producing ordinary products (35%) and strengthening internal green awareness education (25%). Suppliers are of the opinion that public should be active in propagandizing activity for green products (40%), reducing the use of non-green products (32%) and buying more green products (27%) to popularize green products.

3.2.4 Survey of the Development direction of green products

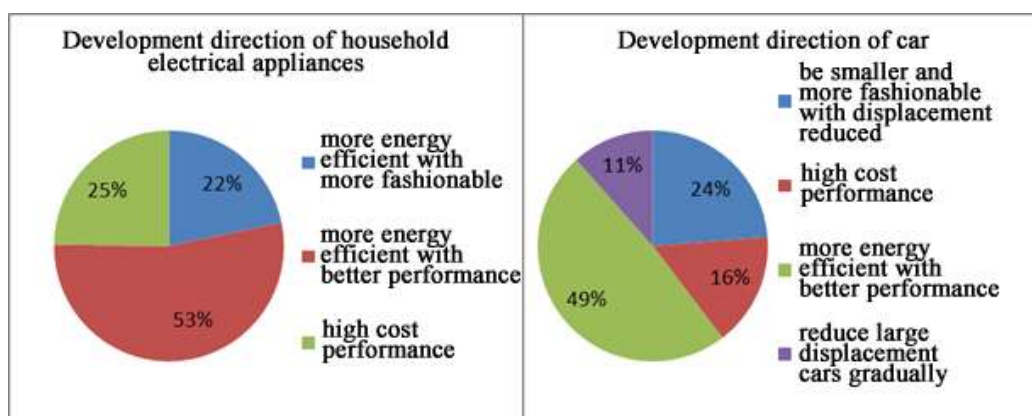


Most (77%) Tianjin enterprises are under the impression that development prospect of green products is broad, and these enterprises pay close attention to green food (47%) and green building materials (22%). Suppliers, at the same time, consider that light and food industry (46%) is the type of green product which has the broadest prospect. It is worth of mention that 32% of the surveyed suppliers are engaged in light and food industry, but the proportion 47% exceeds the industry proportion of light and food industry. It can be seen that light and food industry draws a lot of attentions.



According to Tianjin suppliers, the main weakness of green products is the low level of public recognition (41%), in addition high price (38%) and no obvious advantage in performance (21%). The green value of products is mainly reflected by material (71%). Suppliers should increase public recognition and show the value of green products.

Tianjin suppliers pay the most attention to environmental performance of green products (58%). The second one is profit (29%). Suppliers think that public pay the most attention to health (44%), the following are environmental protection (23%), safety (18%) and life cycle cost (15%). It conforms to the result in the survey of sustainable consumption that consumers pay more attention to health (77%).



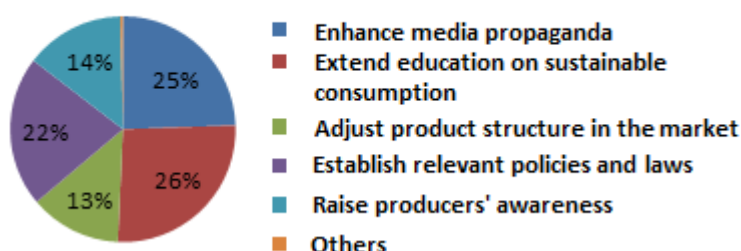
53% and 49% of suppliers are under the impression that household electrical appliances and cars should be more energy efficient in the pursuit of better performance respectively, 25% and 16% of suppliers prefer to cost performance, 11% of suppliers support to reduce large displacement cars gradually. And 24% of suppliers suggest that cars should be smaller and more fashionable when displacement is reduced. It shows that suppliers' expectations of development direction of household electrical appliances and cars conform to the requirements of green products.

3.2.5 Awareness about sustainable consumption

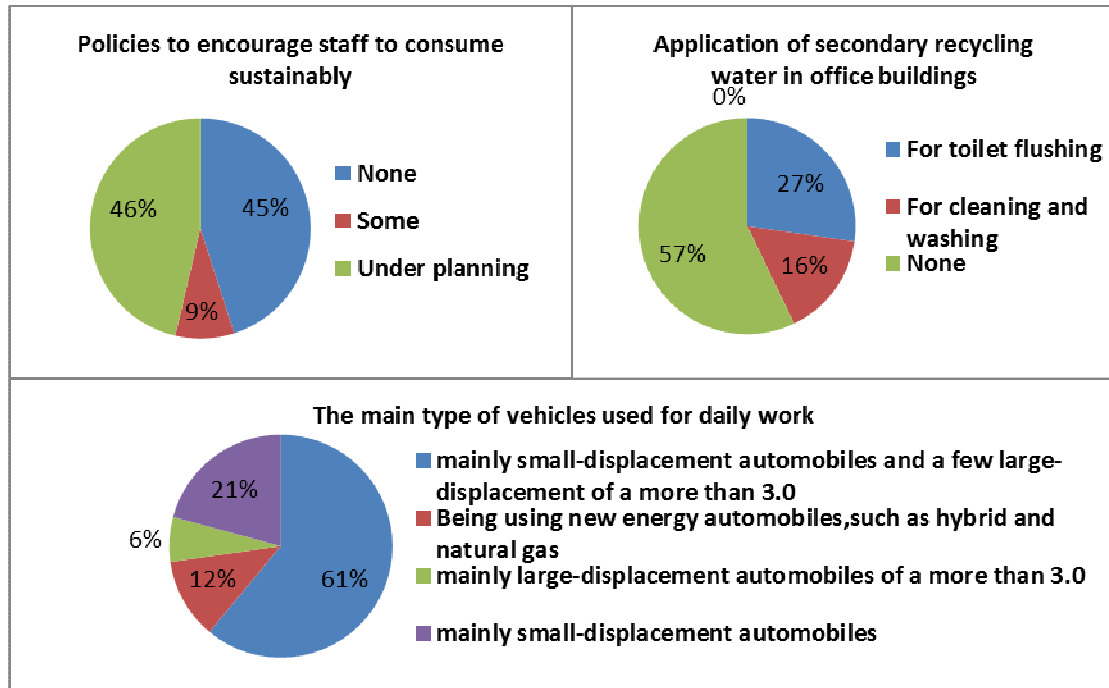
The improvement of consumers' awareness about sustainable consumption which is helpful to expand the demand of green products becomes a major concern of enterprises. So this survey examined the effective approaches to foster the consumers' awareness in

producers' opinion. Responders are likely to believe that it'll be more effective to enhance media propaganda (25%), extend education about sustainable consumption (26%) and adopt more deliberate policies and enforce more stringent regulations, but to adjust product structure in the market (13%) and raise producers' awareness (14%) are less effective.

The ways to improve awareness of sustainable consumption

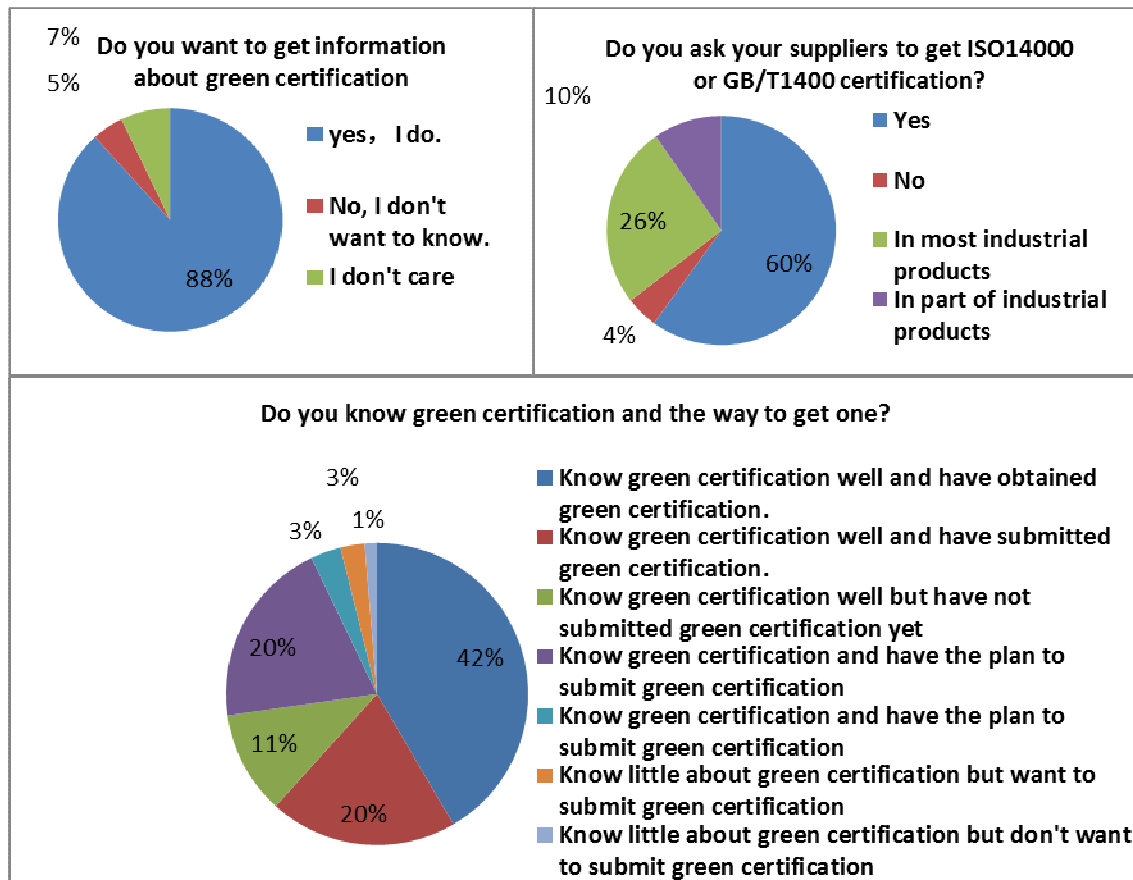


3.2.6 Attitude towards sustainable consuming behavior



Enterprises are the suppliers to green products and in the meantime are the consumers of raw materials, water, energy and intermediate products. Therefore their attitude towards sustainable consumption can not only promote their own ability to supply green products but also affect the consuming concept and behavior of their staff. As our survey suggests, only 9% of the enterprises surveyed in Tianjin have made policies to encourage their employees to consume sustainably and 45% are planning to make such policies. The main type of vehicles companies in Tianjin used for daily work is small displacement and only a minority of enterprises is using vehicles with an output volume over 3.0. In addition, more than 5% only use automobiles with a small output volume and more than 10% are trying new energy automobiles. Roughly 6% respondents, nevertheless, have not applied secondary recycling water to office buildings. Moreover, among the 41% enterprises which are using secondary recycling water, nearly 30% are applying the water to toilet flushing and the others for cleaning staff to wash.

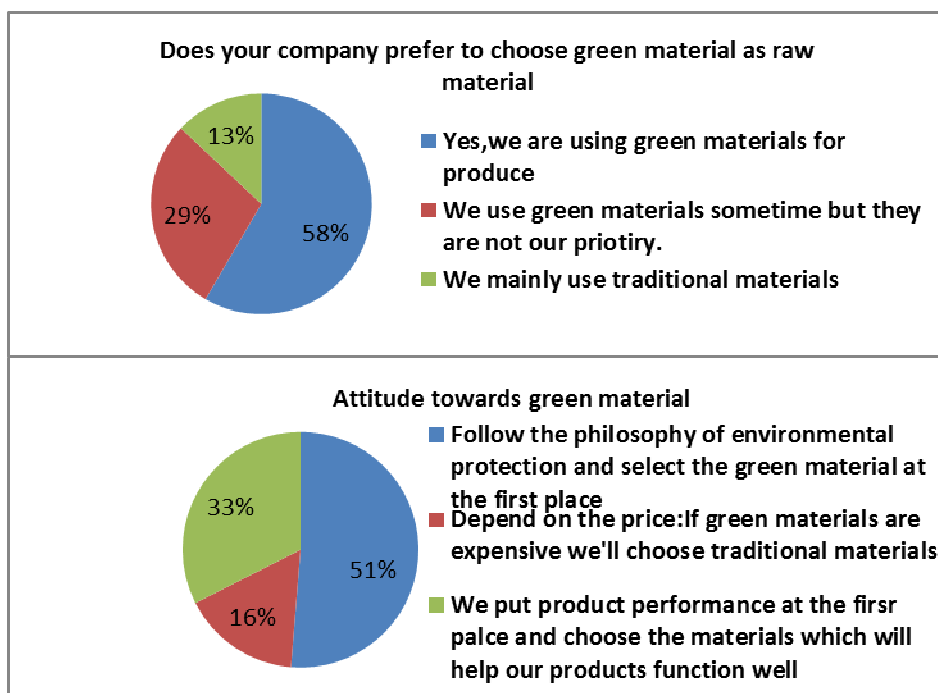
3.2.7 Attitude towards green certification



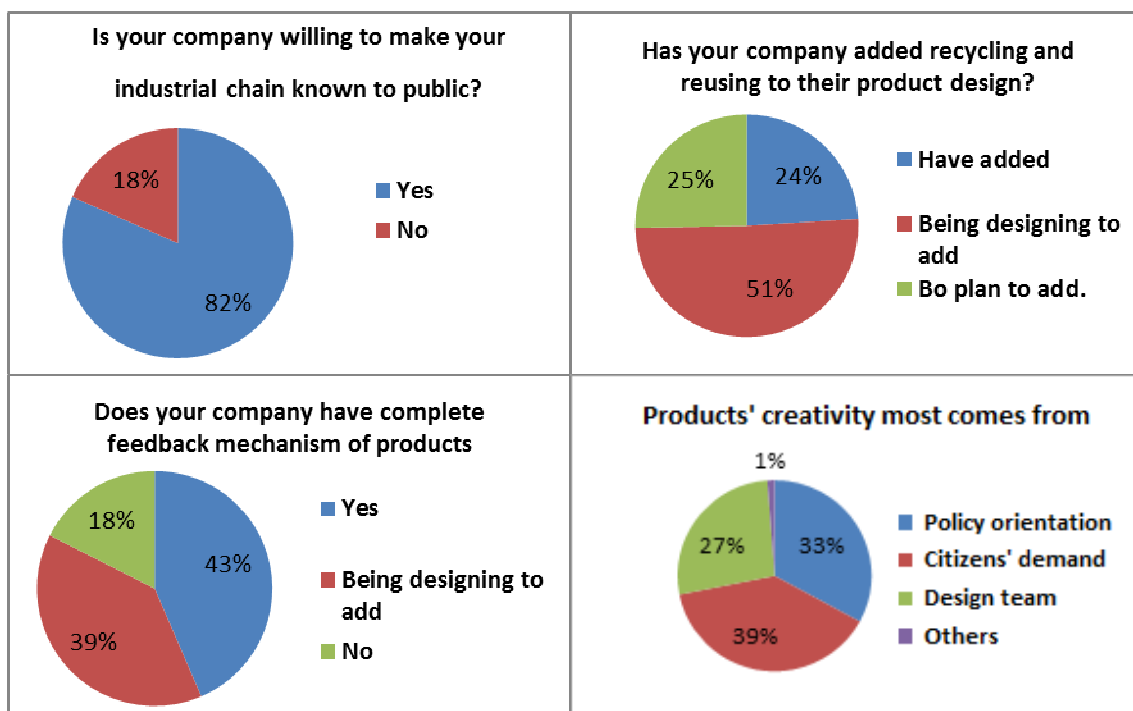
In order to figure out the thoughts enterprises in Tianjin have about green certification, the survey framed questions about the quality of the suppliers, the sources of information related to green certification and cognition about green label. A large majority of the companies surveyed desire to obtain the information about green certification and only 5% showed no interests. Slightly more than 4% of respondents know green certification well and have already been certified. Furthermore, over half are quite familiar with the green labels and are submitting or may submit applications for the green certifications. Only 3% said they neither want to know nor submit a green label. 60% of the companies researched request their suppliers have ISO14000 or GB/T1400 certification. Roughly 4% demand the same quality in main products of certain industry, which is to say merely quite a few don't have such requests.

3.2.8 Attitude towards green production

Green production requests the whole-process control of produce, including raw material selection, product development, industry chain design, recycling and feedback mechanism. This survey covered all the links connected to produce so as to analyze the attitude of companies in Tianjin about green production.

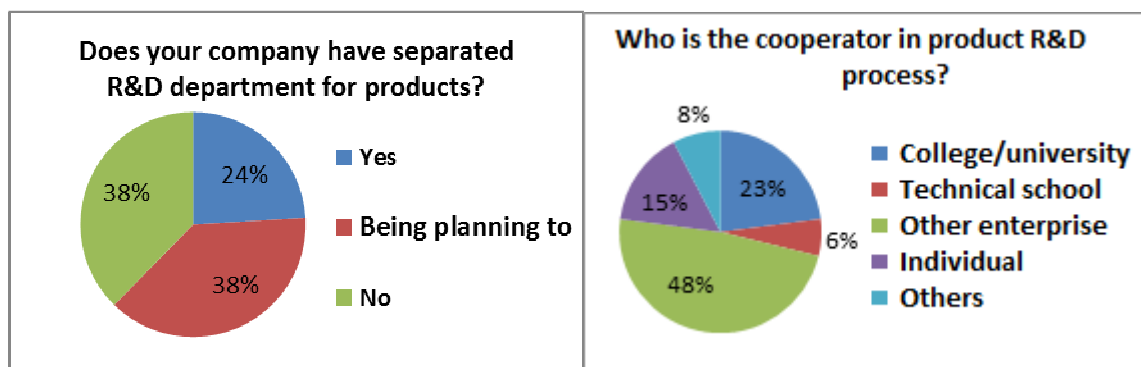


Roughly 60% (58%) of the responding enterprises prefer green materials and have been using green materials for product. 29% would like to choose green materials but they are not the priority. However the others mainly use traditional materials. When asked which factor has the greatest influence on their decision about choosing materials, 51% respondents believe it's the concept of environmental protection. However 16% think the price of the green materials counts while 33% would examine the performance of the materials at the first place to guarantee good function of their products.



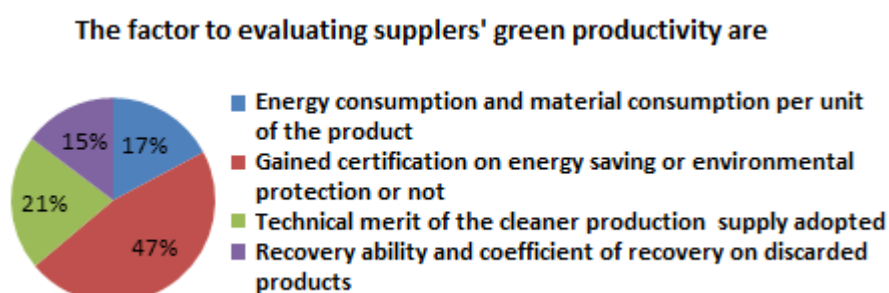
A large majority of companies in Tianjin are willing to make their industrial chain known to public, including raw materials, processing workshop, packaging and so on. While only 24% have

appended recycling and reusing to their product design and nearly a quarter didn't have such a plan, over half are planning to do so. Slightly more than 25% have established product feedback mechanism and nearly other two fifths are planning to. Demand from the citizens, policy orientation and inspiration from design team are the sources of the product development with the proportion of 39%, 33% and 27%, respectively.



Currently less than 25% of the responding companies have established separated research and development department for greening products while 38% are considering. Roughly half are cooperating with other companies for product researching and development, while 23% with colleges and universities, 15% with individuals and 6% with technical schools.

3.2.9 Suppliers' developing orientation



In order to analyze the prospect of the suppliers in the area of sustainable consumption, factors which suppliers emphasize strongly in market competition should be found out. This survey examined the factors suppliers considered when they were asked to evaluate their own green productivity, including certification in green, environmental protection and energy saving, energy and material consumption per unit of product, technical level of clean production and the recycling capability and rate of waste. Almost half (47%) of enterprises surveyed consider certification in green, environmental protection and energy saving as the major element to appraise the green productivity of suppliers while the proportion of the latter three factors are quite close with 17%, 21% and 15% respectively.

4 Prospects

4.1 Improve policies and regulations, play the role of guidance of government

Enacting the necessary policies and regulations to regulate and standardize consumers' activities and behavior, limit and get rid of the irrational consumption, advocate sustainable consumption. Strengthening research and legislative work on sustainable consumption, and protect and promote the popularization and promotion of sustainable consumption. Refining environmental regulations, establishing and using necessary environmental information policy, economic policy, tax policy, fiscal policy and monetary policy, to encourage and foster the development of sustainable consumption. Give the necessary financial subsidies to the production of green products and development of production technology. Formulating standards and quality inspection methods on environmental labels products; gradually restrict and eliminate products of serious pollution in production process, market process and use process by formulating related industries development list.

4.2 Strengthen publicity and education, promote concept of environmental protection

People should first change of mindset as life consumption has specific, family and habitual. Management departments of sustainable consumption should be more emphasis on the power of the media, strengthen cooperation with the media and the propaganda of green consumption in process of spreading the concept of sustainable consumption. Mainly is digital media, such as network and television, and supplemental is promotional materials, such as newspapers and posters. At the same time, knowledge on green consumption and low-carbon lifestyle should be popularized among consumers by establishing green consumption school and green consumption lectures. Develop specific policies to strengthen the residents' awareness of sustainable consumption, specifying green consumer behaviors and culturing residents' sustainable consumption habits.

Enterprises should strengthen the training to staff in sustainable consumption to establish the concept of sustainable consumption, establish regulations to encourage effective sustainable consumption by their employees, not only for enterprises to enhance competitiveness in the market and accumulate a wealth of human resources, but also can better fulfill their social responsibility to improve their corporate image.

4.3 Active green certification, deepening green production

Relevant departments and policies are required to promote and control the popularization of green products, and also the approval and cooperation of suppliers are required. The relevant departments should take positive attitude of the suppliers on green product certification into account and give respond to it, to promote the existing certification system further scientific, standardized and practical. Strengthen the publicity on green product certification, and launch policies to encourage enterprises to upgrade the technique and reduce impact of products on the ecological environment and

human health in the process of production, use and disposal. Suppliers will focus on enhancing their management capabilities according to relevant requirements of environmental management system, in order to achieve the goal of obtaining environmental protection certification and energy-saving certification.

Main obstacle of green materials is the higher prices and lower performance compare with the traditional materials, although it already has a considerable market share. Therefore, it is important to reduce cost of green materials, improve the stability of the performance as well as publicize the environmental effects of green materials. Control all aspects of production and introduce the concept of sustainable development and environmental awareness in product design. Achieve clean production by transformation and innovation of process and equipment technology in production of green products. Improve resource utilization in all aspects, especially recycling aspect.

4.4 Promote information disclosure, strengthen supervision and management

Strengthen the transmission of information and establish the feedback mechanisms among all subjects. Create a network of environmental information from the government level, so that consumers can grasp more information when they choosing green products, and it would guide and stimulate demands on green consumer. Identify green products and then publish authoritative expertise report. Establish an information feedback mechanism to understand dynamic of enterprises timely, and break the barriers of communication and feedback. From the corporate level, the information feedback system is also need to be improved in the after-sale system to increase communication among consumers and materials recovery enterprises, and which is good for popularity of green information and t fight against counterfeit products.

Establish cleaner production and green consumption supervision and management system can promote publicity of enterprises' industry chain, which will benefit to supervision and control of the whole process of production by management departments and public, so as to management the implementation of green production specifically. Strengthen the external supervision and internal supervision from green products sectors to in-depth work of the green product quality inspection and supervision, which can eliminate counterfeit and shoddy products.