

Understanding Determinants of Government and Consumer Behavior Relative to Product Safety:

*An Application of the Theory of Planned Behavior to China and
the United States*

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Abbreviations

China Consumers' Association (CCA)

Chinese State Owned Enterprises (SOE)

Compulsory Certification System (CCC)

Economic Research Service (ERS)

Environmentally Friendly (EF)

Foreign Direct Investment (FDI)

General Administration of Quality Supervision, Inspection & Quarantine (AQSIQ)

Genetically Modified (GM)

Government-Organized Non-Governmental Organizations (GONGOs)

Law on Product Quality (LPQ)

Law on Protection of Consumer Rights and Interests (CRIL)

Locus of Control (LoC)

Multinational Companies (MNCs)

National People's Congress (NPC)

Non-Governmental Organizations (NGOs)

Organization for Economic Co-operation and Development (OECD)

Perceived Behavioral Control (PBC)

People's Republic of China (PRC)

Sanitary and Phytosanitary Measures (SPS)

State Administration of Import & Export Commodity Inspection (SACI)

State Bureau of Quality and Technical Supervision (SBQTS)

State Food & Drug Administration (SFDA)

State Owned Enterprises (SOEs)

Subjective Norms (SN)

Technical Barriers of Trade (TBT)

Theory of Planned Behavior (TPB)

Theory of Reasoned Action (TRA)

U.S. Consumer Product Safety Commission (CPSC)

U.S. Food & Drug Administration (FDA)

World Trade Organization (WTO)

Abstract

The following thesis applies Icek Ajzen's Theory of Planned Behavior to explain consumer and government response to safety of Chinese-made products sold in China and the United States. The thesis relies on secondary data as it considers the responses and actions relative to product safety by four different groups: Chinese government, U.S. government, Chinese consumers and U.S. consumers. Increased globalization has heightened the need for a better understanding and agreement about product safety and quality among countries. A comprehensive presentation of laws and factors related to Chinese product quality is made. Each group was considered at the aggregate level. Conclusions were made about the motivations and responses of each group to product safety issues, and propositions were developed to further expand the theoretical model for the theory of planned behavior and thereby evoke a model of planned behavior regarding product safety. These propositions may form the basis for further research into this field. As such, this thesis presents the theory of planned behavior as a viable theory to use in considering issues related to purchase, export and import of safe products. Future primary research is needed to support or reject the concepts and propositions presented in this thesis.

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1. Purpose and Introduction

This thesis concentrates primarily on the safety of Chinese products in the domestic market and as an export to the United States. It considers to a lesser degree multinational organizations operating and selling goods in China. The author uses Icek Ajzen's (1985, 1991) theory of planned behavior (TPB) to explain consumer and governmental approaches and response to product safety in Chinese domestic and foreign markets, specifically the United States.

In this descriptive study, relevant factors relating to behavior at the government and consumer level for China and the United States are reviewed. This thesis considers four main groups through the theoretical lens of the theory of planned behavior and product safety. The approaches and responses of these groups are the Chinese government, U.S. government, Chinese consumers and U.S. consumers. This thesis uses relevant sources to consider the attitudes, subjective norms and perceived behavior control for each group as it relates to actual behavior. As this thesis is a descriptive study, primary research would need to be conducted to support or reject the concepts, propositions and conclusions made in this paper.

Every developed country has struggled with product safety issues as it transitions from being a developing to a developed country (Mihn, 2007). The increase in globalization has added greater pressure than ever before in product safety issues. This thesis is important because it seeks to identify a preliminary theoretical lens that explains behaviors at both the individual and institutional level and may lay the initial groundwork for further empirical testing in future studies. This research could lead to clearer understanding of the effects unsafe products have on trade, purchases and the attitude and influencers of the above mentioned groups.

This thesis contributes an overview and understanding of Chinese product safety and extends the Theory of Planned Behavior for the first time into this area. As such, this thesis develops initial propositions as a foundation that can be used to further investigate one or more of the relationships proposed within the present descriptive study.

China's rapid economic growth and recent accession as a member into the World Trade Organization (WTO) has propelled the country with unprecedented speed into the position of the 4th largest economy (National Bureau of Statistics of China, 2008) in the world. As a result, agencies of institution such as legislative, regulatory, infrastructure and education were forced to grow as in attempt to manage their newfound obligations within this accelerated economic environment. Therefore, the forced rapid development within these agencies of institution has created some dysfunctions that are sensationalized when problems emerge. China's inability to fully regulate and monitor product safety has highlighted an underdeveloped process to maintain and control these types of issues. This is especially relevant as China seeks to sustain and further enlarge export opportunities. Additionally, it has responsibilities as a member country of the WTO. It is also critical, as manufacturing shifts from China to other low-cost manufacturing locations to offset the raised standard of living that has resulted from the fast paced economic growth.

The following sections consider relevant safety definitions, responsible Chinese and U.S. agencies for product safety and recent product safety issues. A latter section considers the interrelatedness of product safety, trade relationships, and country-of-origin. Furthermore, the theory of planned behavior is presented as a viable theoretical lens through which to understand the responses and approaches taken toward product safety and quality. Prior to final conclusions, the author analyzes product safety in relation to the four groups included in this study and proposes several propositions which expand the current TPB model to relate specifically to international product safety issues.

2. Product Safety

2.1 Definitions

To begin the investigation into China's product safety relative to the United States, first it is important to consider the pertinent definitions. Below is a list of the various definitions for product quality and safety. Product quality is defined here since it is used as a broader category of which safety is but one element.

- **Product Quality:** Performance, features, reliability, conformance, durability, serviceability, aesthetics and perceived quality (Garvin, 1987).
- **Quality:** A subjective term for which each person or sector has its own definition. In technical usage, quality can have two meanings: 1. the characteristics of a product or service that bear on its ability to satisfy stated or implied needs; 2. a product or service free of deficiencies (American Society for Quality, 2008).
- **Quality:** the degree of excellence (Webster, 2008)
- **Product safety:** refers to the physical health and safety of citizens with regards to non-food products, such as toys, household appliances, cars and cosmetics. It is designed to reduce the number of injuries and fatalities caused by non-food products across the EU (European Commission, 2006).

The definition that will be the starting point for this descriptive study is a combination of the above definitions. Therefore, product quality refers to the characteristics of the product and its ability to satisfy stated or implied needs, including its capability in performance, reliability and durability while remaining free of deficiencies. The emphasis of this definition for this thesis is a product free from defects. Product safety would be a more fundamental definition, which refers to the product's ability to not cause harm or injury to the user of the product. Consequently, product safety would ensure that the product meets a safety level that will not cause harm or injury to the user(s). It is product safety upon which this thesis focuses most narrowly.

At the macro level creating a definition of these two terms generates little controversy. Nevertheless, the application of these definitions in different cultures

and economies becomes more challenging as the degree of harm caused by a component of a product can be a point of disagreement among countries. The World Trade Organization is responsible for determining international standards for products and services as noted in section 2.3. Developing countries often lack the resources in both capital and technical knowledge as well as in institutional pressures to create and test products to the same degree as developed countries. Another point of contention revolves around the ability of developing countries to compete at the same standard of product quality and safety as that used in developed countries.

2.2 Challenges and Research Direction/Summary

As mentioned previously, this thesis is a descriptive study considering the safety of Chinese products in the domestic market and as exports to the United States. As the first use of the theory of planned behavior for this specific topic, this application will be descriptive and rely on secondary data. Propositions are identified to focus future empirical research to test the conclusions made in this thesis.

Issues are presented that seek to support the overall thesis topic while remaining free from bias as much as possible. Therefore, topics included relate to current events about product safety, culture, infrastructure and politics and considers product safety effects on trade relationships. The study considers all of these elements at a governmental and consumer level both for China and the United States.

The need for this type of study becomes more relevant as the process of globalization continues. Trade among countries is increasing and in particular the United States' dependency on China as an importer of Chinese goods is a development that will only grow stronger in the coming years. Moreover, it becomes increasingly important for more transparent international product standards to be established to ensure the ease of trade between China and the United States for safe products.

According to previous research that applies the theory of planned behavior (TPB) and which is presented in section 3, this application of Icek Ajzen's TPB is the first to this subject matter. Additionally, a literature review is presented of the most relevant and related topics the theory has been applied to in previous research. Therefore, as this is a descriptive study, further research would need to be done to test the conclusions presented in this thesis.

The challenges faced by the author included presenting balanced materials from Chinese and U.S. based sources. Therefore, the author attempted to accomplish this in three ways: (1) draw from several Chinese news media sources, (2) utilize journal articles by Chinese authors related to the subject, whenever possible, and (3) equally consider sources based on their content rather than the bias of the article's author. Additionally, this thesis focuses more broadly on products in general with particular focus or highlight given to those most recently in the news. Future primary research would need to focus on one particular product category to more accurately test this research. Lastly, the author is not able to read Chinese and therefore could only utilize information sourced in English. However, the publication of news and information in English from Chinese sources can further support the goal towards understanding China's impression management. Therefore, it reveals the impressions China would like those outside the country to have on topics such as product safety.

2.3 Institutional Forces

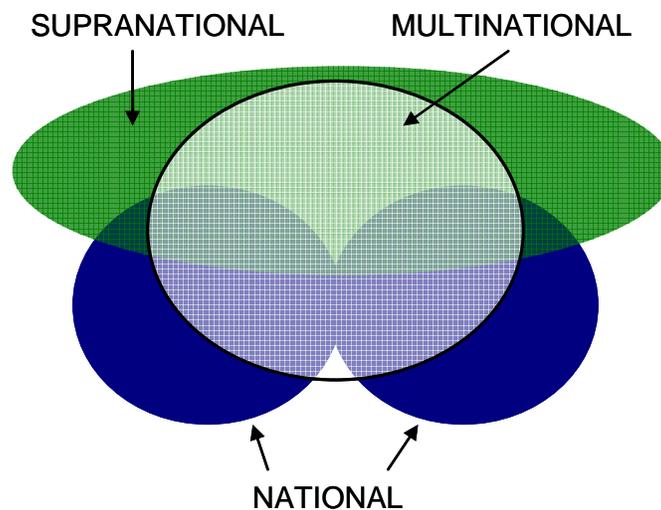
This section identifies the significant institutional forces driving product safety at a national and supranational level. It concentrates only on those organizations having relevance to this thesis topic. Therefore, concentration is focused on institutional forces affecting the United States and China.

For this thesis institutional forces are divided into three main groups: national, supranational and multinational. Many nations use the regulations of economically stronger nations as the basis for their safety and quality standards. The regulations of the supranational institutions overreach into national regulations. Multinational

institutions are not only MNCs, but also nonprofits and other international organizations operating simultaneously at national and supranational levels. They must comply with the regulations at all levels and often times initiate organizational specific regulations.

Based on the above descriptions of the three types of institutional forces involved in product safety, the author drew concentric circles to illustrate their interaction and influence with one another.

Illustration 1 – Institutional forces concentric circles on product safety



Significant National Safety Institutions

Each nation has its own set of safety and quality standards. Many countries adopt the regulations of other larger countries or use them as a foundation for their own regulations.

China

China has numerous institutions and agencies relating to quality, inspection and standards of products, food and imports/exports. Below is a listing and description of the most significant Chinese institutions. They will be referred to again in later sections.

General Administration of Quality Supervision, Inspection & Quarantine (AQSIQ) – This government organization establishes and controls the rules and regulations for China's Compulsory Certification System (CCC). AQSIQ reviews, updates, overseas

and approves all items listed in the *Catalog*. This is the *Catalog of Import Commodities*, which dates back to 1989. It shows a listing of all products requiring inspection and/or licensing. This agency is predominantly concerned with products being sold within China; however, the institution's influence can also have spillover effects to exported products (McDaniels & Singer, 1997; Simcom, 2008).

State Food and Drug Administration (SFDA) – This institution is under the jurisdiction of the State Council and is responsible for food, drug, cosmetics and health food in setting and monitoring standards and safety (State Food and Drug Administration, 2008).

State Administration of Import & Export Commodity Inspection (SACI) – This institution is under the jurisdiction of the state council. It is concerned with issues of standardization and quality control. The institution also has supervisory and law enforcement capabilities (Simcom, 2008).

State Bureau of Quality and Technical Supervision (SBQTS) – This institution is under the jurisdiction of the State Council. It has law enforcement and supervisory responsibilities. This institution is also concerned with quality control and standardization (Simcom, 2008).

United States

Similar to China, the United States also has numerous agencies, governmental and non-governmental, related to product safety and quality. The two most significant government agencies are listed below.

U.S. Food and Drug Administration (FDA) – This government agency is responsible for the quality and safety of food, drugs and cosmetics as well as health food and animal food for domestic and imported products (U.S. Food and Drug Administration, 2008).

U.S. Consumer Product Safety Commission (CPSC) – This government agency is in charge of monitoring products to ensure they meet proper quality and safety standards. The goal of the CPSC is to reduce the number of injuries and death due to unsafe products. The CPSC has over 15,000 products under its jurisdiction (Consumer Product Safety Commission, 2008).

Supranational Safety Institutions

World Trade Organization – The WTO has many responsibilities relating to international trade. It is also responsible for setting international product standards to ensure safety and quality among WTO countries. There are two different multilateral agreements relating to product quality and safety. The first is the Technical Barriers of Trade (TBT) agreement. This agreement applies to all products both industrial and agricultural. The second agreement is the Application of Sanitary and Phytosanitary Measures (SPS) agreement. This SPS agreement applies to products' technical regulations and standards and is concerned about human, animal and plant health (Mathis, 2006).

Multinational (MNCs) Safety Institutions

There are no specific safety and quality institutions particularly for multinational companies collectively. However, multinational companies operate within their own set of ethical and safety standards. For each multinational the basis for these standards may vary slightly; but, in a general sense, they are based on a combination of international and home country standards. Multinational organizations must operate within the laws and regulations of the countries they operate; however, they may choose to go beyond the minimal standards. These organizations generally have the capital, reputation and relationships to demand clearer processes that will ensure improved product safety. It is more costly for them to work above the minimum standards of a country; however, in the long-run, this can be seen as a wise investment. For example, as many multinationals have invested large amounts of capital in China, it is worth it for these MNCs to establish their own processes alongside national and supranational regulations (China: Product Quality, Reform and Rule of the Law, 2007).

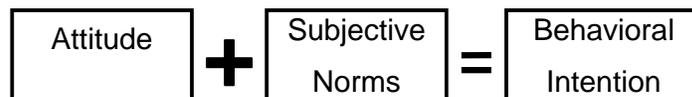
The interaction of these institutions influence product safety at all levels. Globalization has increased the interdependence between these institutions. The influence of these organizations is further examined in another section. The next section continues the development of the foundational elements of this thesis by explaining the theory of planned behavior and its application to a range of topics.

3. Understanding Product Safety from a Theoretical Standpoint: A Theory of Planned Behavior

3.1 Introduction and History to the Model

The theory of planned behavior (TPB) is rooted in the theory of reasoned action (TRA). Both theories are based in social psychology and are attempts to understand and predict behavior. The theory of reasoned action dates back to 1975 and was developed by Fishbein and Ajzen as a way to predict behavioral intention. The goal of the theory is to predict and understand human behavior. The theory is based on the notion that intention is the result of two determinants: (1) the individual's thoughts, either positive or negative, toward performing the action and (2) the person's perceptions and social pressure to perform or not perform the behavior. These two determinants are referred to in the TRA and TPB as "attitude toward the behavior" and "subjective norm" respectively (Ajzen, 1985).

Illustration 2 – The theory of reasoned action (Ajzen, 1985)

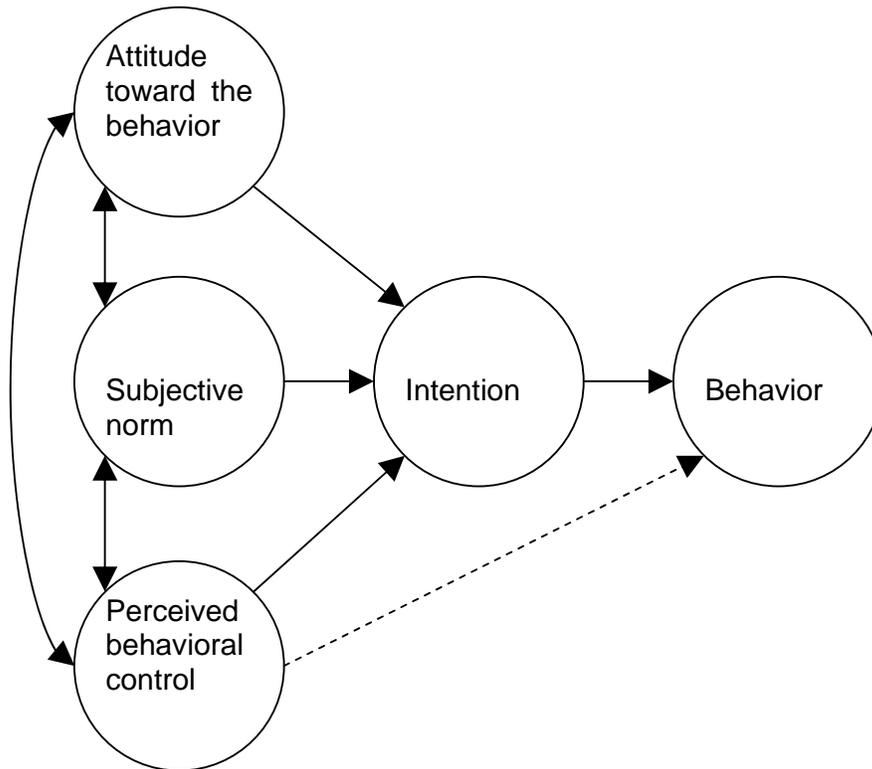


Ajzen (1985) pointed out that the weight and importance of attitude and subjective norms can differ based on the person and/or behavior being evaluated. The TRA is further explained in the next section as it is relevant to understand the theory of planned behavior. Ajzen identified the main difference between the two theories in the following statement. "The modified theory, called 'a theory of planned behavior,' differs from the theory of reasoned action, in that it takes into account perceived as well as actual control over the behavior under consideration (Ajzen, 1985, pp. 12)."

Therefore, the TPB utilizes most of the same components of the theory of reasoned action with the inclusion of perceived behavioral control (Ajzen, 1991). Ajzen suggested (1985) that the TRA can predict intent to perform a behavior; however it

cannot predict actual behavior. He realized that sometimes things that are out of the person's control can get in the way of someone performing an intended action. Below is an illustration of Ajzen's theory of planned behavior.

Illustration 3 - The theory of planned behavior (Ajzen & Madden, 1986; Ajzen, 1991)



The addition includes perceived behavioral control to account for those situations when the behavior is not under volitional control (Ajzen, 1991). The next section further explains the theory of planned behavior. Additionally, relevant aspects from the theory of reasoned action are presented as they are applicable to the TPB.

3.2 Description of the Model

In order to understand the theory of planned behavior completely, it is important to understand the theory of reasoned action, both in its similarities and differences to the TPB. The TRA operates on the notion that all circumstances are under volitional control. According to Ajzen, (1985) behaviors that people can easily control if they choose to, are considered to be volitional control behaviors. Therefore, Ajzen and

Madden (1986, pp. 455) suggested that “a behavior may be said to be completely under a person’s control if the person can decide at will to perform it or not to perform it.”

As mentioned earlier the two primary determinants are “attitude toward the behavior” and “subjective norms (Ajzen, 1985).” Attitude toward a behavior can also be referred to as *behavioral beliefs*. A person forms *salient beliefs* about a behavior based on the outcome expected as a result of the behavior (Ajzen & Madden, 1986). Therefore, the person’s evaluation of potential outcomes and the strength of this belief make up a significant portion of the *attitude toward a behavior* (Ajzen & Madden, 1986). Subjective norms are reliant on normative beliefs. Each person has individuals or groups that they look to as they select to perform an action or not. The person’s belief that these other people may or may not think favorably to the person’s choice to perform the action will influence their intention (Ajzen, 1985).

In the most basic sense it is the person’s attitude toward the behavior and the subjective norms that will equal intent to perform a behavior. However, whether the person actually performs the behavior can be influenced by time. As more time passes it is more likely the person will change their intention to perform a behavior (Ajzen, 1985). Furthermore, as time goes by it is more likely a person will focus on the potential negative outcomes of the behavior as opposed to the potential positive outcomes. This relationship is considered *salience of beliefs*. Additionally, as more time passes it is also possible that the person will be exposed to new information that may cause them to change their mind about performing the behavior (Ajzen, 1985). If a person holds a great deal of confidence in an intention to perform a behavior then, even despite new information, it is less likely the person will change their intention. The reverse is then also true (Ajzen, 1985).

In the long term, it is difficult to consider individuals’ behavior with much accuracy as time will likely influence outcome. Therefore, Ajzen (1991) suggested that more accuracy can be seen when using the principle of aggregation when predicting future behaviors. Although individual’s intention to perform a behavior can change due to time or new information, there is higher validity within an aggregate group. It

is more likely that the different behaviors of individuals will balance out to maintain the predicted outcome (Ajzen, 1988).

Perceived behavioral control (PBC) is found in the TPB and distinguishes it from the TRA. First, it is important to consider the factors that affect control. The issue as stated before is that the TRA is for instances when the ability to perform the behavior is under volitional control. There are both internal and external factors that affect someone's level of control to perform a behavior (Ajzen, 1985). Internal factors include:

- individual differences in people's ability to exercise control,
- the information, skills and ability of a person can limit or allow them to have more control over performing a certain behavior,
- the willpower of an individual
- and the emotions or compulsions of an individual can limit their control (Ajzen, 1985).

External or situational are also factors that limit someone's control over performing a behavior. The two primary factors are time/opportunity and dependence on other people (Ajzen, 1985). The factor of time/opportunity means that a person has already decided to perform a behavior and is attempting to do so; however, an external change in opportunity forces the person to change his plan. The example offered by Ajzen (1985) is a man who has chosen to see a particular movie; however, upon arriving to the theater, he finds out that the movie is sold out. In this change he did not choose to reconsider his intention because of internal factors; instead he was forced to change his plan because of external factors. Dependence on others is another external factor that affects behavioral control. This concept is easily understood to mean whenever someone depends on another to perform a certain behavior then they have less control over the situation (Ajzen, 1985).

Behavioral control became important to address the instances when a person has limited control over performing a behavior. Ajzen and Madden (1986) pointed out that it may appear people have control over most behaviors; however, actually even the most common to life behaviors can be out of a person's control. They suggest control can be seen as a continuum with one extreme being behaviors with little to no issues of control relevant and on the other extreme are behaviors where people

have little control (Ajzen & Madden, 1986). Perceived behavior control is not the actual control someone has over performing a behavior; rather it is “the person’s belief as to how easy or difficult performance of the behavior is likely to be (Ajzen & Madden, 1986, pp. 457).”

The concept of perceived behavioral control is based on Albert Bandura’s concept of perceived self-efficacy dated from 1977 (Ajzen, 1991). Ajzen pointed out that Bandura’s self-efficacy concept influences a person’s choice, preparation and actual performance in activities. Ajzen and Madden (1986) suggested that resources, opportunity and past behavior are the underlying components that make up someone’s perception of their control to perform a behavior. In Illustration 3 there are two lines drawn from perceived behavioral control. These represent two versions of the TPB. In the first version perceived behavioral control has a direct effect on intentions separate from *attitude toward the behavior* and *subjective norms*. However, these two other variables also as shown in the illustration have an influence on intentions. In the second version one can see in the illustration a dotted line drawn between perceived behavioral control and behavior (Ajzen & Madden, 1986). The second version of the theory is dependent on two issues: (1) the behavior in question is not under volitional control and (2) the perceptions of the behavioral control relate very closely to actual control over performing the behavior (Ajzen & Madden, 1986). Empirical studies done by Ajzen and Madden (1986) found good support for both versions of the theory.

Ajzen (1991) wrote that empirically in order to predict behavior using intentions and perceptions of control; one must assess a particular behavior and the context must remain the same in which the behavior will be performed. Anything that disrupts the context will have effects on the results.

The theory of planned behavior has been used in a number of topics. Much of the earlier research done using TPB related to regular non-commercial human behavior. The following list is a sample of the behaviors previously researched with the TPB and comes from Ajzen’s *The Theory of Planned Behavior* article (1991).

- Search for a job
- Participate in an election
- Lose weight
- Get an “A” in a course
- Limit infants’ sugar intake

In the last decade the theory has been utilized to understand behaviors having a stronger correlation to the commercial sector. The next section provides a literature review of the TPBs use in subjects more related to the topic of this thesis.

3.3 Summarized Literature Review

There are numerous articles that involve the theory of planned behavior. This section includes a review of a selected number of those articles that represent the range of application of the TPB. Additionally, articles were selected due to their proximity in subject matter to product safety. Based on background research review, to the author’s knowledge, this application is the first time the theory has been recommended for use in understanding determinants of intentions and behavior in relation to product safety.

Previous studies have been done that utilize the theory to understand purchase behaviors towards genetically modified foods (Spence & Townsend, 2006; Bredahl, Grunnert & Frewer, 1998) and organic foods (Tarkiainen & Sundqvist, 2005). Although these topics are, relatively speaking, far from the topic at hand and revolve only around studies related to food, the author believes these may be the closest use of the theory to the topic of product safety. These two topics appear to be the closest to product safety in that at some level they address a person’s perception of safety of organic/genetically modified foods.

This section is organized to provide a short summary of relevant research related to each reviewed article with a summary at the conclusion of the section. The articles are organized into four main themes and the articles will be presented in this order. The themes are: buying intention, perceptions of modified/specialty food, cultural /

economic and general. The conclusion includes an illustration to better understand the relevance from each theme for researching product safety.

Buying Intention

Wang, Chen, Chang & Yang (2007) utilized the TPB to understand to what extent attitudes, subjective norms and control beliefs affect consumer online shopping behavior intentions. This study did not measure actual behavior only the intention to perform the behavior. The goal was to better understand the relevant factors involved in the consumers' intent to shop online. Through this understanding businesses could better address sources that would normally deter consumers from shopping online. The study tested three hypotheses, each corresponding to the three components of the TPB. The results showed that perceived behavioral control was the highest determinant to a person's behavioral intention to shop online with a regression coefficient of 0.42. Attitude towards shopping online was second with a regression coefficient of 0.34 and subjective norms were not found to have a significant influence on intention with a regression coefficient of 0.05. Therefore, they concluded that businesses need to do more to increase consumers perceived behavioral control in regards to online shopping (Wang et al., 2007). This research considered behavioral intention of consumers concerning route to purchase, which can provide insight related to availability of products and its relation to product safety.

Perceptions of Modified/Specialty Food

Spence and Townsend (2006) examined British consumers' behaviors toward genetically modified (GM) chocolate using the TPB. The study included a measurement based on the participant's actual behavior. As a result, they were able to measure not only intention but actual behavior. The research was useful for government and industries making choices about the introduction of GM foods in Europe. Spence and Townsend included three additional factors alongside the TPB based on similar factors used in previous GM research. These factors included moral norms, emotional involvement and self-identity. According to previous GM research Spence and Townsend (2006) noted that attitude has consistently been a significant factor in predicting intentions while subjective norms and PBC have received varied results. The three added factors tested have also had varied results

in the past and Spence and Townsend suggested there could be potential overlapping between the three added factors and subjective norms (SN). This assumption was based on the fact that SN was found to have little influence on intention through their research. Interestingly, their study found that PBC negatively influenced intentions. Consequently, the more perceived control the participant felt, the less likely they were to choose to try to GM chocolate. The study found that, generally speaking, participants were willing to purchase GM food; however, the more control they perceive to have through, for example, product labeling the less likely they would be to purchase it (Spence & Townsend, 2006). This research is useful to the topic of product safety because the perception of genetically modified foods could include issues of safety.

Tarkiainen and Sundqvist (2005) made use of the TPB to study Finnish consumers' intention to purchase organic foods, specifically bread and flour. The study modifies the TPB slightly by focusing on the influence of subjective norms on attitude to purchase. Therefore, their study suggests an indirect relationship between subjective norms and intention. Additionally, they choose to further specify Ajzen's perceived behavioral control in their research to two particular issues based on prior research that tend to limit consumers' intent to buy organic foods. Both issues: *importance of price* and *perception of availability* are linked to a lack of consumers' control of them (Tarkiainen & Sundqvist, 2005). Consequently, the modification is merely a matter of further specification of the PBC in this study. The findings showed that the modification between subjective norms to attitude and attitude to intentions was supported, and further testing showed that the modification was supported by the results. Therefore, the research found that rather than attitude and subjective norms (SN) both having an effect on intentions; SN had an effect on attitude, which had an effect on intentions (Tarkiainen & Sundqvist, 2005). They found that price and availability (PBC) had no significant effect on intentions. Tarkiainen and Sundqvist (2005) speculated that this could be attributed to the relatively low price premium of organic bread and flour as well as high levels of availability in the hypermarket the research was conducted in. This research could be useful as it relates to perception of product quality. Although this study was not able to test the significance of product availability, that could be an interesting aspect to consider for product safety.

Bredahl, Grunnert and Frewer (1998) attempted to present three different theoretical models for research related to consumer attitude and buying behavior in regard to genetically modified food. They used the TRA and the TPB and a combination of the Elaboration Likelihood Model and the Social Judgment Theory. The focus here is on their research as it relates to the TPB. At the time of the research the use of genetic engineering in food production was still very new and therefore consumers did not have the exposure to these types of products as they do today. They used Fishbein's TRA to explore consumer attitudes and Ajzen's TPB to explore buying behavior (Bredahl et al., 1998). Using Fishbein's theory, attitude is split into attitude towards the *product* and towards the *process*. Further, each is split into perceived risks and benefits. The path of these attitude determinants leads to the attitude towards genetic engineering in food production (Bredahl et al., 1998). In reference to Ajzen's TPB the study seeks to identify consumers' *intentions to buy* and *intentions to avoid*. Perceived behavioral control was recommended to split into two constructs (perceived control and perceived difficulty) in order to better understand the differences between internal and external factors of control on buying behavior of genetically engineered foods (Bredahl et al., 1998). In this study no research was performed merely suggestions presented for useful models and constructs for future studies in this topic. Perceptions about genetic engineering in food could relate to perceptions of safety. Another interesting aspect of this research is the split between intention to buy and intention to avoid. This concept may be interesting to consider in relation to consumers' purchase intentions regarding product safety.

Cultural / Economic

Cabanero-Verzosa (2002) investigated determinants of behavioral intentions for developing governmental institutions and development assistance agencies throughout Africa. Her research extended the use of the TPB to organizational settings and developing country contexts. Both of these elements are relevant for the use of the theory in this thesis. Cabanero-Verzosa (2002) sought to understand determinants for training relevance and intention behavior in post-training settings. Additionally, she includes this concept of "face" within the research, which is linked to self-identity. Her research found that attitude, subjective norms and PBC were all predictors of behaviors among employees of government institutions. Additionally,

Cabanero-Verzosa (2002) found that among government employees positive face was more important than negative face. Cabanero-Verzosa's research showed the viability of the TPB model to understand the behavior intentions of governmental institutions and agencies. Furthermore, her research shows that the TPB can be used in a developing country context. These issues directly relate to the topic of product safety in China.

Kalafatis, Pollard, East and Tsogas (1999) used the TPB to research the determinants involved in consumers' behavioral intention to buy environmentally friendly (EF) products within the United Kingdom and Greece. They wanted to better understand the phenomenon that although people are more concerned about the environment; purchasing of EF products had declined. They choose two different markets that varied considerably in attitude and awareness of EF products. The conclusions from the research found that the TPB was an appropriate theory to utilize in understanding determinants that effect consumer intentions to buy EF products. The TPB proved a better fit within the UK data as opposed to the Greek data. It was suggest that the difference for the theory's effectiveness between these two markets could be linked to the maturity of the markets for EF products as well as their awareness and debate of environmental issues (Kalafatis et al., 1999). The study found that within the UK social norms linked to subjective norms had a direct effect on intention and in the Greek data PBC had a direct effect on intention. Again the varied results can be linked to the varied maturity of the two markets in regards to EF products and issues. The study also found that the TPB was a useful tool in discovering cross-cultural market differences (Kalafatis et al., 1999). This research could be helpful in considering the cultural differences related to the U.S. and China regarding product safety.

Cherry (2006) studied Taiwanese and American businesspersons normative influence using the TPB and locus on control (LOC) on ethical judgments. The study highlights the simultaneous divergence and convergence of East and West cultures in terms of business practice and ethical reasoning and behavior. The research used the TPB with some adaptations. For example, subjective norms are split into two groups: normative influence of peers and normative influence of superiors. Additionally, LOC replaces PBC because of its proven construct, linkage to ethical

judgments and proven previous use in the TPB and as a measure of PBC. Lastly, ethical judgment is included as another potential influencer of intention (Cherry, 2006). The research results for the U.S. respondents showed that ethical judgments were a function of attitude and normative influence of superiors. Furthermore, intentions were the function of ethical judgments and attitudes. For Taiwanese respondents, the ethical judgment was derived by the normative influence of their superiors. Furthermore, they would select a behavior intention even if it went against their own attitude (Cherry, 2006). There were mixed results in relation to the locus of control between the two groups, which Cherry (2006) speculated could have been due to limitations in the design of the study. The research done by Cherry showed the TPB is a viable model to use for understanding cultural differences in decision making.

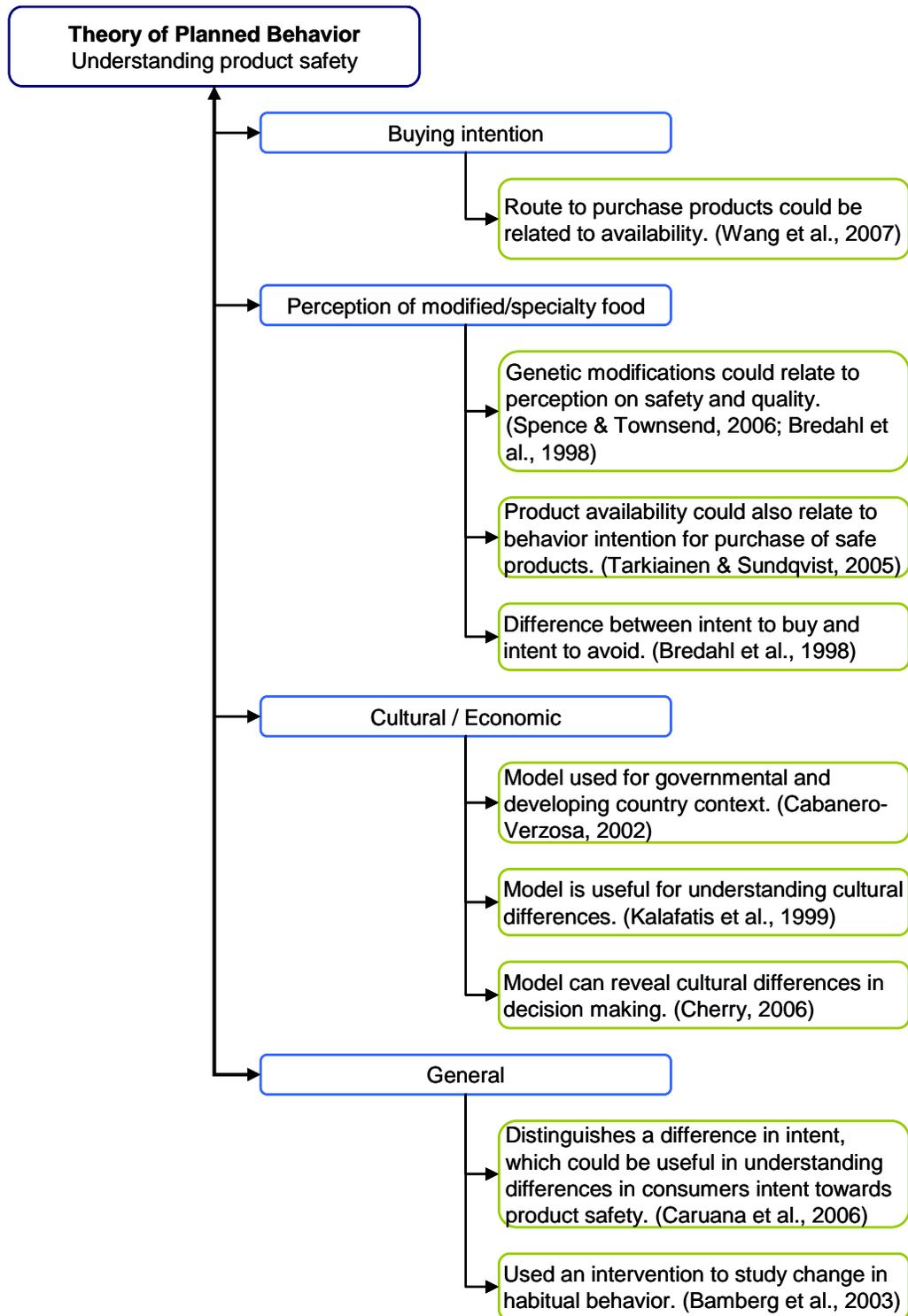
General

Caruana, Cohen and Krentler (2006) studied the effect of corporate reputation on shareholder intentions using the TPB. The study is focused on investors. Corporate reputation is investigated using a *belief-based* and an *attitude-based* construct that influence behavioral intentions. They suggested that *attitude-based* is a direct measure of corporate reputation whereas *belief-based* is an indirect measure (Caruana et al., 2006). The overall goal of the research was to provide a more concrete construct to evaluate corporate reputation in terms of shareholder behavior as compared to attempts in prior research. They found that in the direct measure relating to attitude of financial strength, communication, shareholders' perceptions of employees and company potential were all significant. The last was found to be the most significant measure of shareholder behavior, which makes sense as shareholders are making choices about future outcomes when choosing to invest. The indirect measure (belief-based) was separated into two constructs intent to buy and intent to sell. The first was found to have a significant effect in relation to corporate reputation while intent to sell did not (Caruana et al., 2006). This research again shows a separation of intention by considering intent to sell and intent to buy. This finding could be interesting in understanding consumers' intent related to product safety and relatedness of the different intentions.

Bamberg, Ajzen and Schmidt (2003) utilized the theory of planned behavior in a longitudinal study regarding choice of transportation mode, in this case bus transportation among college students. Their research attempted to offer an intervention that would effect a change in behavior. It stands to reason that if they can cause a change in one or more of the three areas that effect behavioral intention then the intervention will cause a change in behavior. They tested whether past behavior or habitual behavior such as driving a car to school were better indicators of future behavior then the TPB. Their hypothesis was that after the intervention of the semester pre-paid bus card past behavior and habitual behavior would decline sharply as indicators of future behavior. The intervention of the prepaid bus made a significant change in the number of students driving to school from 46% to 31% (Bamberg et al, 2003). The research provided solid evidence that the theory of planned behavior can be used in studying the selection of travel mode and the use of an intervention to change behavior. Furthermore, their research used the intervention to measure a change against habitual behavior. Buying regularly used products can also be considered a habitual behavior. Therefore, it could be useful to consider an intervention that would relate to product safety in relation to habitual buying behavior.

The above summarized research points to the validity of the TPB's use in understanding consumer behavior and other commercial related topics. These articles also support the possibility that the TPB could be used to better understand determinants related to consumers' behavior in markets where product quality and safety is an applicable issue. The illustration below shows a summary of the relevant information from the themes reviewed in this section.

Illustration 4 – A summarized relevance, by the author, of the reviewed themes



It is relevant to point out particularly new and useful components of the research discussed above, as it pertains to the topic of this thesis. The TPB is a flexible

theory that allows for adaptations and additions in the determinants and model in order to address various research topics (Cherry, 2006; Caruana et al., 2006; Tarkiainen & Sundqvist, 2005; Bredahl et al., 1998; Spence & Townsend, 2006). The TPB can identify differences in determinants' influence on behavior within cross-cultural market studies (Kalafatis et al., 1999). The use of an intervention can be used in conjunction with the TPB to test its capability to change behavior (Bamberg et al., 2003). The TPB has been used to understand influences on behavior in organizational settings and in developing country contexts (Cabanero-Verzosa, 2002). The use of the TPB in these research settings reveals that the theory could be well fitting to the topic of consumers' behavior in markets where product safety is an applicable issue.

After reviewing the relevant literature of the TPB in relation to product safety, it is important to consider the current context of product safety in China. The following section considers the history and other relevant factors that effect product safety in China. Several propositions are brought forth in the coming sections that provide a modification and extension of the TPB. The application of the TPB in the context of China will be presented in a latter section.

The model is adapted and two versions of it are proposed that address the government and consumer level as brought forth in this thesis. Therefore, the model is adapted to understand behavior at the governmental level for the export / import of safe products. At the consumer level, the model is adapted to understand purchase of safe products by consumers. Illustrations 5 and 6 show the adapted versions of the TPB at both levels. The proposed propositions will be further added to the adapted model in a latter section.

Illustration 5 – Adapted theory of planned behavior model at the governmental level

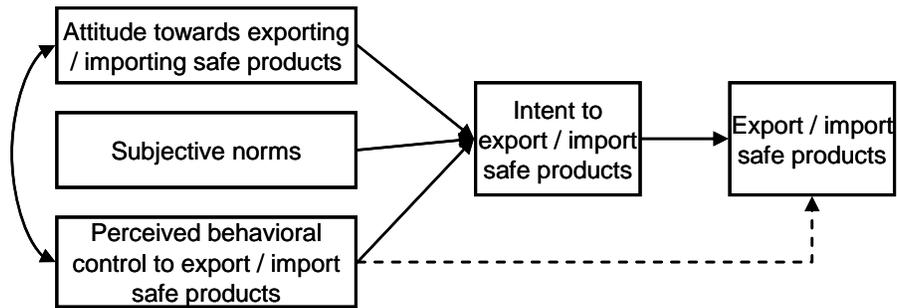
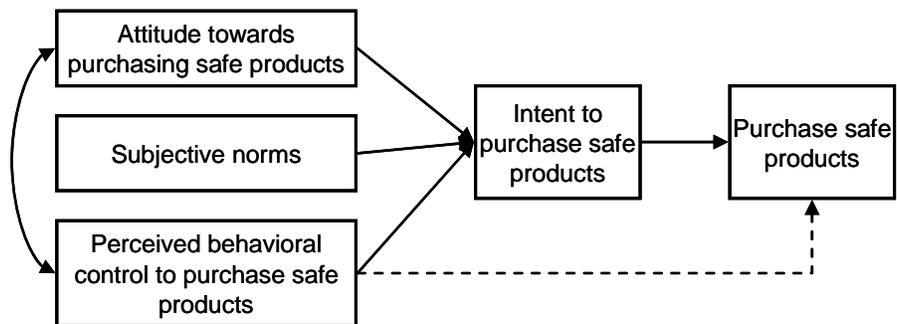


Illustration 6 – Adapted theory of planned behavior model at the consumer level



4. Product Safety in the Context of Contemporary China

This section focuses on product safety as it relates to China. It begins with an understanding of the historical events related to consumer rights and product safety within China. In addition, this section considers the Chinese associations and regulatory agencies that impact or control product safety. A summary of the numerous recent product safety issues between China and the United States provide the conclusion for this section. Relevant research propositions applying the theory of planned behavior to the Chinese context are identified where appropriate.

4.1 History of Consumer Rights in Relation to Product Safety: 1979 to Present

The changes witnessed in China over the last several decades are a phenomenon that is unprecedented by another country. It continues to be considered a developing country and yet it is difficult to compare it with other developing countries. Simultaneously, it cannot be compared with the developed countries of the world either. As a result, China is in a truly unique class because of the rapid pace of the changes and the sheer size of the country's population. This section considers the relevant historical events since the country's market liberalization that began in 1978 in regard to product safety and consumer protection. This section also addresses the cultural and geographic factors that impact product safety as well as significant political and economic factors.

The understanding of the word consumer is a very recent concept for China (Overby, 2006). Prior to 1978's move towards market liberalization China was a planned economy. Therefore, the state was responsible for discerning the perceived needs of the citizens and for meeting those needs (Overby, 2006). Chinese citizens did not have choices in regards to products, which is a minimum right afforded to those in market economies due to competition. Chinese State Owned Enterprises (SOEs) were motivated to reach quantity rather than quality goals. Consequently,

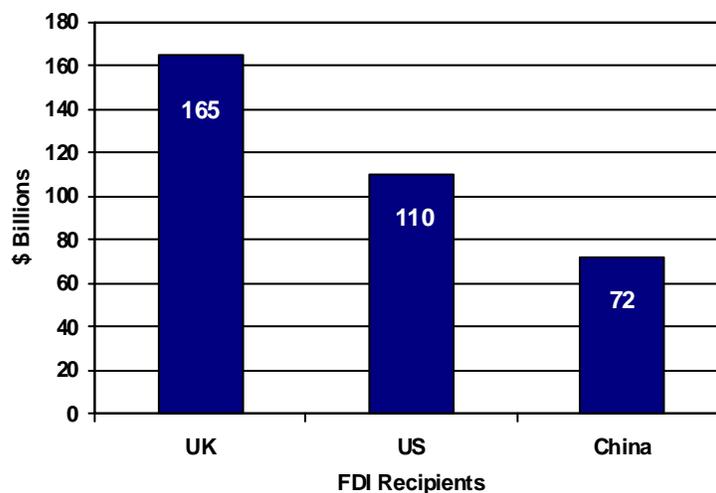
any focus on product quality was normally considered unproductive (Lin & Germain, 2003).

In less than three decades China has moved from an economy with seemingly no recognition of consumers to the world's largest consumer market. The creation of new needs such as the development of laws and regulatory agencies that can monitor and control product safety is a result of the rapid economic changes. Chinese consumers are still learning about their newfound opportunities for consumption of a broader range of products than they have had before, due to competition. According to Overby (2006) China's Consumer Rights Day was established as early as March 15, 1986. The transition is accompanied by a process of learning about their rights as consumers and their ability to voice complaints and seek compensation for damages when necessary. Therefore, the following proposition is set forth:

Proposition 1: The more developed a consumer market is the more awareness and ability consumers have to choose among products of different safety levels. (Attitude towards the behavior)

China is still in the infancy stage of capitalism (Mihn, 2007). The infancy stage is marked by a rapid economic boost, increased technology and increased competition. China is going through a similar process that many other countries now considered developed have gone through in their past (Mihn, 2007). For China, this beginning stage has moved at an explosive pace due to the acceptance of foreign direct investment (FDI). In 1979 China opened its door to FDI. Overall inflows of FDI to China have continually increased since 1979 with fluctuations throughout due to economic, legal and political reasons. According to the OECD, FDI inflows to China in 2005 have placed China in third place behind the United Kingdom and United States as a recipient of FDI ("FDI Soars," 2006).

Chart 1: Top three recipients of FDI 2005 (“FDI Soars,” 2006; Christiansen & Bertrand, 2006)



The involvement of FDI in China's economy has further launched the advancement of the economy and put added strain on the Chinese government, courts and regulatory agencies to establish, interpret, and monitor product safety laws. As China opened its economy to the outside world, through FDI, several companies entered seeking higher profits by decreasing operational expenses and a new consumer market. Nearly fifteen years after China's market liberalization, national laws were established to govern product safety and consumer rights. In the mid- to late 1990s four national laws were established related to consumer protection. This was a strategic time for China to establish such laws as a testimony of their intention and ability to protect their consumers amidst anticipation of the country's entry into the WTO (Overby, 2006).

The four laws established were: "(1) the Law on Protection of Consumer Rights and Interests, (2) the Product Quality Law, (3) the Advertisement Law, and (4) the Contract Law (Overby, 2006, p352)." The Law on Protection of Consumer Rights and Interests (CRIL) was adopted on October 31, 1993 and became effective in January 1994. This law established the basic rights of consumers and is a foundational statute. It cites that the basic rights of Chinese consumers include:

“(a) the right of inviolability of personal and property safety; (b) the right to obtain true information regarding the goods and services received; (c) the right of free choice of goods and services; (d) the right of a fair deal; (e) the right to demand compensation when personal injury or property damage occurs; (f) the right to form public organizations for the maintenance of consumer’s legitimate rights and interests according to law; (g) the right to acquire knowledge concerning consumptions and concerning the protection of consumer rights and interests; (h) the right that their human dignity, national customs and habits are respected when purchasing and using goods and when receiving services; (i) the right of supervision, including the right to raise charges against state organs and functionaries and to raise criticism of and proposals for protections of consumer rights and interests.” (Overby, 2006, p353)

The limitation of the CRIL is its inability to address the legal consequences when businesses fail to comply with the Law on Protection of Consumer Rights and Interests (Overby, 2006).

The Law on Product Quality (PQL) is an additional law aimed to specifically deal with the regulations for product quality and safety. The law was adopted in 1993 and later amended in 2000 (Overby, 2006). At the base of the law, it adds pressure to producers and sellers to provide and distribute products that comply with state and industry standards (Kremzner, 1994). The law places more liability on the seller in an effort to create a self-regulation system amongst producers and sellers. Article 14 of the Product Quality Law of the People’s Republic of China states:

“Producers shall be liable for the quality of the products they produce.

The products shall meet the following quality requirements:

(1) being free from unreasonable dangers threatening the safety of human life and property, and conforming to the national standards or trade standards safeguarding the health or safety of human life and property where there are such standards;

(2) possessing the properties and functions that they ought to possess, except for those with directions stating their functional defects;

(3) conforming to the product standards marked on the products or the packages thereof, and to the state of quality indicated by way of product directions, samples, etc.” (Product Quality Law of The People’s Republic of China, adopted February 22, 1993)

In the years following the establishment of these initial laws, China has instituted a significant number, 17,000 by the close of 1995, of standards related to safety and

quality of products. More than 23% of these standards are parallel to international standards (McDaniels & Singer, 1997). The challenge that China has had is in consistent enforcement of these safety and quality laws/standards. The growth rate of the economy is significantly higher than that of the legislative and governing bodies within China. The laws established by the National People's Congress (NPC) are very general and require further definition through various departments of local, provincial and national government (Kremzner, 1994).

There is a struggle between the development of China's local, provincial and national laws. In many cases national laws emerge from the roots of local laws (Ying, 2007; Overby, 2006). However, it is necessary for the local, provincial and national authorities to work together towards improved compliance and clearer definition to previously established laws. Frequently local and provincial authorities look to and rely on Beijing to set and control issues related to product quality and safety. This behavior could be due to the country's long history of centralized control at the national level; however, significant changes require all three levels of government to work in harmony to one another (Ying, 2007; Overby, 2006).

China's accession into the World Trade Organization (WTO) in 2001 was the conclusion of 15 years of negotiations. As a WTO member, they are entitled to fair treatment in the trade of goods and services with other WTO countries (Tong, 2006). The negotiations and accession of China into the WTO reveals potential unequal conditions often imposed on developing countries by developed countries. Despite the negotiation struggles, China's accession has led to its status as the third largest trading country (Tong, 2006). This development has guaranteed that China will continue to grow as an ever important player of trade in the global economy. This reality adds to the pressure that China must meet international product safety standards and expectations. As China has a strong share of the world trade it is feasible that the country could become a formidable presence in relation to the establishment of future international product standards.

4.1.1 Cultural and Geographic Factors

Cultural Factors

China's culture also influences the country's perspective on product quality and safety. Geert Hofstede is recognized for his foundational research in cultural differences where he utilizes 5 dimensions to understand and interpret behavior. The five dimensions include: power distance, individualism versus collectivism, masculinity, uncertainty avoidance and long-term orientation (Itim International, 2007).

The results of China in this study are specifically significant in relation to long-term orientation, individualism and power distance. The results in these areas differ even among the averages of other Asian countries. China's highest ranking factor is long-term orientation. The country ranked lower in the individualism factor compared to the average among the Asian countries. China's ranking in power distance is significantly higher than the other Asian countries (Itim International, 2007). Hofstede hypothesized that the rationale for these results could be attributed to the country's long collectivist history. The vast difference in power between the Chinese population and the government contributed to an acceptance of the inequality of power distribution. This cultural factor could be a contributing factor for limited involvement by Chinese to challenge their government.

The last two and a half decades of changes in China intertwined with the cultural perspective have created an evolutionary experience as these concepts further develop. One example has been in the hesitation of the Chinese people to question agencies or institutions with greater power than the individual. As noted earlier Chinese were not familiar with the concept of consumer, furthermore that they had rights as consumers. Although the Chinese government enacted product safety and consumer rights laws, it was the responsibility of the consumers to utilize and exercise these laws.

The transparency of the new laws left much to be desired and brought about activists such as Wang Hai. He played a considerable role in communicating these

rights and laws to the Chinese population. He is a consumer activist that discovered the newly enacted laws in the mid 1990s and sought to challenge them. In the beginning of his pursuit to challenge these laws the public were outraged at his behavior ("A Shopper's Friend," 2001), which reveals the cultural challenge of the societal shift towards a consumer market. Wang Hai's actions however, were some of the beginning steps leading to the creation of other Non-Governmental Organizations (NGOs) in China. During this phase the lack of information provided to the Chinese population would have resulted in a different intention. According to Ajzen (1985), new information such as this type influences attitude towards behavior and subjective norms. Therefore, prior to this product safety enlightenment phase it is unlikely that Chinese consumers would have strong attitude and intentions toward purchasing safe products. As a result, the following proposition is set forth:

Proposition 2: The more enlightened consumers are about product safety issues the greater the influence the topic will be on their behavioral intentions.
(Attitude towards the behavior and intentions)

The Chinese Communist Party has in several ways encouraged the development of NGOs as a demonstration of the countries concern for the public, to provide further evidence towards its inclusion into the WTO ("A Shopper's Friend," 2001). Additionally, the Chinese Communist Party saw the benefits these types of organizations could have within China by alleviating some of the responsibilities formerly held by the central Chinese government ("They're Organizing," 2003). Though the government has encouraged the creation of such groups, it remains concerned that these organizations do not become too powerful. The Falun Gong is an example of one such group that decided to demonstrate its power through a ten thousand man sit-in. The government saw this action as an attempt to grab power and banned the group from organizing further ("They're Organizing," 2003). This cultural dynamic could be linked to China's political history where the national government had all sovereign power.

Geographic Factors

China, like many geographically large countries must try to avoid inequalities within the country; however the immense size coupled with a varied geographic landscape and economic investment has pushed the regions further apart. These regional

inequalities are affected by differences in the distance to the world market and, more importantly, the focus China made on developing the coastal regions. The hope of the Chinese government was that there would be spillover effects that would help minimize the inequality (Ögütçü & Taube, 2002). Although the central and western regions of China have seen some spillover effects, they are not significant enough and several are negative. For example, the inner regions have experienced the effects of considerable brain drain to the coastal regions (Ögütçü & Taube, 2002). Therefore, one can consider the illusion of two separate countries within China, economically speaking. This factor is important in relation to product safety that is further elaborated upon later.

There is a major difference between the urban and rural areas, which have specific geographic boundaries. This difference results in a significant disparity in standard of living between the eastern coastal regions and elsewhere. The rapid growth in wages, infrastructure and increased education is predominantly characteristic for one-third of the Chinese that live within the east and southeast regions of the country. For the remaining two-thirds of the country, the economic advances have done little to affect their standard of living (Overby, 2006). These differences in standard of living, education and infrastructure create varied effects as it relates to product quality and safety both in relation to production and consumption. In relation to consumption, a study by the U.S. Department of Agriculture found that as the income of Chinese consumers increase so did their demand for higher quality food (Gale & Huang, 2007). Therefore, as income is highly geographically separated within China, one can deduce that the acceptance level of quality is on an adjustable continuum.

The geographic differences also influence production in China. The organization and geographic landscape of the agriculture sector in China makes it difficult to sanction and control safety procedures. This is a relevant issue as China is trying to produce food for trading on the world market. China has as many as two hundred million farms with each farm representing approximately one to two acres with an average of five to seven workers per farm (Calvin, Gale, Hu & Lohmar, 2006). The farmers are given only usage rights to the land and therefore have little motivation to initiate safety procedures (Calvin et al., 2006). The geographic spread and diversity of

China have created significant differences within the Chinese population. These differences are further elaborated on within the next section and are a point to be considered throughout this thesis.

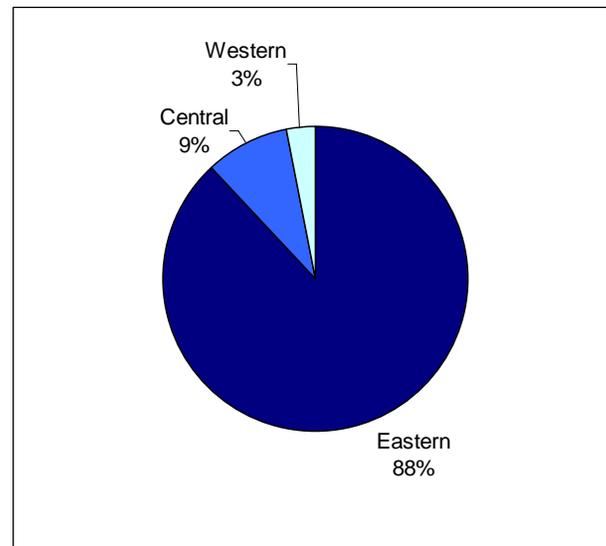
4.1.2 Economic and Political Factors

Economic Factors

The changing economic landscape of China is largely attributed to the growing inflows of Foreign Direct Investment (FDI). These inflows have been the fuel China needed to propel forward towards active involvement in the world market. Gang Wang in a paper titled Foreign Direct Investment of China and Canada (2001) cited four stages that characterize the inflow of FDI into China since 1979. The first stage was the stage of experiment (1979 – 1983). At this stage investors were apprehensive to enter China having little knowledge from within. Many waited to see how the country developed before choosing to invest. The second stage is the stage of initial development (1984 – 1986). FDI increased during this stage as a result of increased FDI legislation as well as further reforms in China's domestic economy. The country had become even more opened to the world economy. Wang categorizes the third stage as steady development (1987 – 1989). This stage followed a decline in FDI from the end of the previous stage. In order to ensure a recovery of the FDI inflows the government became increasingly positive in their attitude towards FDI. This resulted in additional regulations at all levels of the government that were favorable for FDI and a general relaxation of the business environment. The last and current stage is that of large-scale development (1992 – present [2001]). The effects from the Tiananmen Square event of 1989 had worn off by the start of this stage. Additionally, the FDI policies including entrance and operation had become more favorable towards foreign investors thus resulting in the largest FDI inflow rates the country had seen (Wang, 2001).

As discussed in the previous section the inflows of FDI have not been evenly distributed throughout China. This continues to cause issues within China's economy. The following pie chart shows the regional recipients of the inflows of FDI between 1983 and 2001 (Ögütçü & Taube, 2002).

Chart 2 – Regional recipients of FDI inflows to China between 1983 and 2001 (Ögütçü & Taube, 2002)



The increase in FDI has enabled China to increasingly interact in international trade. However, past problems with product safety to neighboring countries has resulted in negative economic effects. As an example, problems related to imported seafood from China have emerged in the recent past with South Korea, Japan and Singapore (Ying, 2007). Therefore the following proposition is set forth:

Proposition 3: Product safety problems involving other trading nations will have a negative effect on subjective norms and perceived behavioral control relative to the originating country at the government and consumer level. (Subjective norms and perceived behavioral control)

A product safety situation that continues to have negatives effects for China involves the export of frozen spinach from China to Japan. Japanese companies in the early 1990s began foreign investment in the vegetable industry in China. Initially this was a very successful venture. However, at the end of 2001 Japan performed tests on the Chinese based product, which revealed residues of a pesticide called chlorpyrifos (Calvin et al., 2006). Japan had not established an allowable limit of the pesticide in frozen spinach. Consequently, the Japanese government urged businesses to stop importing the product. Quickly the market witnessed a spillover effect from the negative publicity to all Chinese vegetable imports. Japan attempted

to reopen the market, although further tests revealed the same problems with the pesticide. The market was then shutdown for over a year while Japan and China worked out agreeable procedures. This event has proven to be disastrous for the Chinese frozen spinach market. As a result of the numerous safety problems, consumers and import companies are nervous to purchase the product despite the safety measures that have been implemented. The Chinese frozen vegetable market, though taking a dive initially, did recover. However, the frozen spinach market continues to struggle (Calvin et al., 2006).

The Chinese government understands how important it is to maintain a positive image as it can have serious effects on the economy. Steps have been taken to improve safety and one positive example is an agreement between China and Hong Kong. Since 2005 Hong Kong Health, Welfare and Food Bureau has been working closely with the Guangdong Provincial Food and Drug Administration to establish agreements for the import of certain foods to Hong Kong (Ying, 2007). More specifically, they have made agreements related to vegetables, eggs, egg products and aquatic products. The products must only come from a limited number of registered farms and fisheries. The products must always be accompanied by proper certification and origination information. It was quite difficult to establish the process and the Hong Kong government had to continually check that the procedures were being adequately maintained. In the beginning of the process, Chinese authorities proposed eighteen fisheries to Hong Kong officials. Representatives from the Hong Kong government went to inspect them and found two abandoned, two with revoked licenses and six that could not be located (Ying, 2007). Hong Kong, having improved the process, still must maintain close supervision over the entire process. China has several product safety laws as well as various related responsible agencies. A significant problem is that the legislative system has not developed at the same speed as the economy, which creates a lack of responsibility and punishment for those that disobey one of the several product safety laws (Mihn, 2007).

Political Factors

The Chinese government has experienced major changes in the last couple of decades. The move from a command economy toward a market economy has had its effects on politics. The government has shifted from a focus on industrial production to regulation and governance. The number of bureaucratic entities as well as their responsibilities has been significantly reduced. The government has started to allow and recognize social organizations, known in the West as Non-Governmental Organizations (NGOs), to exist. A newly developed third sector after the government and private business has been created through these approximately 136,000 social organizations ("They're Organizing," 2003). Legally, these organizations are significantly limited in power out of fear from the government that the NGOs could become powerful enough to challenge the Chinese political system. The government sees these organizations as extensions of the government that can provide social welfare assistance as well as legal aid and consumer rights awareness ("They're Organizing," 2003).

As a result of some organizations that appeared to challenge the government, there are increased requirements for setting up NGOs. They must be supported by an official governmental department. That department becomes responsible for all political actions of the organization, however can receive no benefits from them. Therefore, of the 136,000 organizations as of 2003, 80 to 90% of them are now known as Government Organized Non-Governmental Organizations (GONGOs) ("They're Organizing," 2003). The increased link with the government of the social society has further limited the effectiveness of these GONGOs. However, the fact that they can exist at all is a significant change in the structure of the political system. Despite the changes and sometimes mistakes from the Chinese government, the Chinese people trust the government more than private business and associations. This is likely linked to the universal power of the government for all things in the previous command economy ("They're Organizing," 2003).

As the Chinese government shifts from a position of complete power it is understandable that the shift towards decreased power is a major adjustment for the government as well as other entities. The Chinese media has been very reluctant to question or point out mistakes made by the government. Specifically related to the

issues of product, food and drug safety they often maintain a defensive nationalist approach (French, 2007). In many instances the standpoint of the Chinese news media is to push everything back on the United States. They cite the reasons for the U.S. to criticize Chinese product, food and drug safety as an effort to affect the unbalanced trade between the two countries. However, the Chinese news media is not efficiently communicating the similar product safety problems associated with Chinese products that are affecting Japan, European Union and several Southeast Asian countries. Therefore, the media does not provide the full coverage of the situation for the Chinese population, which creates further confusion for Chinese consumers (French, 2007). Additionally, the accuracy of the Chinese news media coverage has also been in question. For example, after the reports of the toxic additive in Chinese-made toothpaste, called diethylene glycol, the Chinese news media mixed up the additive with another one that is widely used, accepted and safe (King & Blumenstein, 2007). In future research about product safety it is important to consider the influence of the media as one component of subjective norms. Furthermore, the accuracy and consistency of the news from the media should also be evaluated. Therefore, the following propositions are set forth:

Proposition 4a: The openness of the national media to challenge the government positively affects subjective norms at the government level.
(Subjective norms)

Proposition 4b: The openness of the national media to challenge the government positively affects subjective norms at the consumer level.
(Subjective norms)

In the midst of the product safety concerns with China, the government has said more than in the past. Normally, the Chinese government would make no response to the outside world related to negative situations. The government is worried that the numerous reports of unsafe food, medicine and products will further negatively effect the "Made in China" image (King & Blumenstein, 2007). Perception is a key issue related to product safety. The effect of poor perception is clearly a motivator for the Chinese government. Therefore the following proposition is set forth:

Proposition 5: Poor perception about product safety negatively affects subjective norms at the governmental level. (Subjective norms)

China cares a great deal about its image in the world. They realize image is something that can jeopardize their interaction in the world market. There has been increasing actions taken by Chinese officials in Washington D.C. to speak out against the reports of unsafe products. One such fact sheet that was distributed by Chinese officials in Washington D.C. claimed that in 2006 the Food and Drug Administration turned away only 1% of Chinese food imports to the U.S., a rate that matched the amount of U.S. food products turned away from China (King & Blumenstein, 2007). Whether the information and statements by Chinese officials are correct or not, it shows a shift and vested interest of the Chinese government in the views of the world market.

4.2 Product Safety Associations

Product safety associations, or associations of any kind, are a recent development in China. These associations are a major contributor to the development of a third sector or social society of China. They involve private citizens and are ideally separate from government and business. These associations have been forming over the last 2 decades. After the implementation of the Chinese product laws in the early-to-mid 1990's, product safety associations began to emerge ("They're Organizing," 2003).

The NGOs and the government organized, non-governmental organizations (GONGOs) have very limited powers due to limitations imposed on them by the Chinese government. In 1998, the Regulations on the Registration and Management of Social Organizations established strict rules requiring organizations to be closely tied to an "authorized department" of the government ("They're Organizing," 2003). The purpose was to make that governmental department responsible for the actions of the organization. In this way close watch of organizational actions could be managed and controlled in a more dispersed way as needed.

Additionally, organizations have to be linked to the appropriate level within the government. Only national organizations can use "China" in their name. This meant that provincial level organizations needed to be linked at the provincial level of government. The government also made restrictions that multiple organizations for

the same interest area could not be at the same level of government (“They’re Organizing,” 2003).

Wang Hai, the product safety activist mentioned earlier, has done a lot to increase awareness of the problems with product safety. He went on to create a business called Wanghai Online Information & Consulting. As a result of the work he has done several other organizations and associations have started or been given further attention (French, 2007).

China Consumers’ Association (CCA) was established in 1984 and is the oldest established association related to consumer product safety rights (Overby, 2006). This government sponsored group, like all associations, has limited power (“A Shopper’s Friend,” 2001). Since the establishment of the CCA there are now more than 3,000 consumer associations at or above the county line (China Consumer Association, 2008). The CCA worked to establish March 15th as Consumer Rights day, beginning in 1986 (Overby, 2006).

At the close of 2001 China Consumers’ Associations including its local associations has received over six million consumer complaints. The associations collectively claim to have been successful at settling 96% of those cases (China Consumer Association, 2008). The reluctant vocabulary of the previous statement is due to the observation that according to the associations’ home page the most recent news is dated over a year and a half earlier. The China Consumers’ Association is the largest product safety association in China. The provincial and local associations along the coastal region are highly involved because of the elevated concentration of manufacturing within that region.

4.3 Infrastructure and Regulatory Agencies

The changes in China’s economy have had a significant effect on the culture, infrastructure and legal system. These other areas must move quickly to catch up with the economic changes and in many cases are struggling to do so. The legal and regulatory systems have not evolved enough to handle the demands of the

newfound economic system. The Chinese government has established numerous laws and regulations; however, many of them need to be further updated or better defined (Ying, 2007; Kremzner, 1994). This will be a key area for improvement in the next phase of development. It is crucial that the Chinese government develop infrastructure and regulatory agencies that can more efficiently enforce product safety (Overby, 2006). Therefore, the following proposition is set forth:

Proposition 6: The more developed a country's product safety infrastructure and regulatory agencies are the fewer product safety problems will exist.
(Perceived behavioral control)

There is some infrastructure established and there are regulatory agencies; however, the effectiveness of these bodies cannot maintain the high demand of the ever growing Chinese economy. As cited in the beginning of this thesis China has several regulatory agencies responsive for product safety. China's AQSIQ, SFDA, SACI and SBQTS have responsibilities for making standards as well as supervisory and enforcement capabilities.

China is often credited as a success story with its enormous changes in such a short period of time. However, the size of the economy and population along with the rate of change has made it difficult for China to match that growth in all other areas. They are going through the process from a developing to a developed nation in record time. Every country that has gone through this process has also struggled with product quality during the time when motivation for economic gain outweighed potential for enforcement and punishment of wrongdoing (Mihn, 2007). Often the number of human resources available within the regulatory agencies is insufficient to properly handle the demand brought by the combination of the economy and population. For example, The Beijing State Environmental Protection Administration office employs approximately 300 people (Ewing, 2007). They are responsible for issues pertaining to environmental protection that potentially involves 1.3 billion Chinese citizens. In comparison, the equivalent agency in the United States of America called the Environmental Protection Agency has over 17,000 employees for a population of only 300 million (Ewing, 2007).

Another major concern for the regulatory agencies is the diversification of many industries in China. For example, the agricultural industry is made up of over 200 million household farms with fewer than ten workers. This creates a logistical challenge for the regulatory bodies both in prevention and tracking of quality and safety issues (Calvin et al., 2006).

4.4 Recent Events: China and U.S. Product Safety

Since the beginning of 2006 there has been mounting pressure between China and several other major economies throughout the world including European Union, Japan and the United States of America to monitor and reduce unsafe products. This thesis focuses specifically on this topic in relation to China and the United States. Consequently, this section primarily focuses of the recent events between these countries, though a few examples related to other economies may be mentioned as supplementary information.

As of November 2, 2007, China was the origin country of nearly 65% of the total U.S. recalls during calendar year 2007. United States and Taiwan were second and third in country-of-origin for recalls with 14.3% and 5.3% respectively (Brandt, 2008). The mandatory and sometimes voluntary recalls have been issued for products ranging from toothpaste, tires, toys, pet food, and seafood. The issue of product quality and safety of Chinese products is not a new issue; however, as the number of U.S. imports from China continues to increase, the issue becomes evermore prevalent. According to a report created by the U.S. Consumer Product Safety Commission between 1997 and 2004 the percentage of Chinese-made consumer products imported to the U.S. rose by 293%. In 2006, 40% of all imported consumer products to the U.S. originated from China (Consumer Product Safety Commission [CPSC], 2007).

China has captured large percentages of more specific markets as well. For example, approximately 50% of the world's vegetables come from China (Timiraos, 2007). The city of Dongguan near to Guangzhou has more than 5,000 toy factories

(Spencer & Casey, 2007). This area is responsible for manufacturing between 70 to 80% of the toy imports to the United States (Lipton & Barboza, 2007).

Despite the frequency of the recalls of Chinese made products, the country has seen no significant threat to overall exports figures (Leow, 2007). Although many companies have investigated other manufacturing markets for their products few want to risk losing out on China's large consumer market (Timiraos, 2007). While Chinese exports continue to grow despite safety and quality issues, Chinese officials have greater trepidation that the numerous recalls could create long-term damage on the country's reputation as a manufacturer. The "Made in China" words have already been interpreted to mean poor quality by many, as several newspapers cite. This is one of the significant motivators for China to add tighter controls on food and product safety (Leow & Chao, 2007).

A more significant issue is the potential for a trade war over food and product safety issues between China and the U.S. As the U.S. stopped Chinese imports at the borders citing safety and quality concerns, China was also stopping U.S. imports citing related reasons. For example, China's food safety association stopped the import of U.S. based products such as raisins, dried apricots and Tyson meat products citing safety and quality for its reasons (King & Blumenstein, 2007). Certainly, all countries including the United States can have problems from time-to-time with food and product quality. It is common for developing countries to experience a stage where product and food safety are of higher concern (Mihn, 2007). China, at various times, has made the point that 99% of their export products are safe and meet international safety standards (King & Blumenstein, 2007). However, at other times China has admitted they do have issues with product quality and safety (French, 2007; "China's Food and Drug Situation," 2007). The issue of product safety and its effects on trade is further investigated in section 5.

The product recalls related to toothpaste and toys have seen more significant media coverage. Both situations reveal different issues within the Chinese manufacturing market. In the case of the toothpaste made with a chemical used in antifreeze, this reveals the risks of product safety issues for the domestic Chinese market. In

relation to the toy recalls, this highlights issues related to foreign companies operating in China under increased price pressures.

In 2007 the United States FDA recalled several brands of toothpastes manufactured in China; however, it suggested that consumers should consider avoiding any toothpaste marked as “Made in China” (Fairclough, 2007). The FDA announced the recall because the products contained diethylene glycol, which is a chemical used in antifreeze products. The U.S. and many other countries have already established the serious health hazard of this chemical. As a result of the FDA recall, the Chinese government banned the use of this chemical in toothpaste; however, it allowed for the tubes of toothpaste to remain in store stock, estimated to be in the millions, and to continue for sale until product stock was depleted. China’s leading authority on product quality, the General Administration of Quality Supervision, Inspection and Quarantine claimed that consumers are not at risk despite the 15.6% levels of the chemical present in the toothpaste sold domestically (Fairclough, 2007). The rationale provided by the industry was that as consumers do not eat toothpaste there would be very little risk from the chemical. The Chinese toothpaste industry first began using this chemical as a cost reduction in production and it soon became the industry standard.

The toothpaste incident has created a problem in Chinese consumers’ confidence of domestic products. A survey that was conducted by the Xinhua News Agency of China in the first half of 2007 found that 92% of the respondents were “concerned about food safety”. Moreover, 78% of total respondents stated that the regulatory and enforcement agencies for safety regulations were “not good” (Fairclough, 2007). Some local Chinese citizens’ response was to buy products from larger stores and even seek products by foreign manufacturers. Fairclough (2007) noted similar causes for the product quality issues cited by other publications. The article pointed to the widespread issue of corruption in China and division of manufacturing and food production to millions of small companies or farms. This adds to the complexity of the Chinese government to control and manage food and product quality (Chang, 2007; Fairclough, 2007). The issue of control both perceived and actual, is a relevant issue to consider with the theory of planned behavior for the Chinese and

U.S. governments related to product safety. Therefore the following proposition is set forth:

Proposition 7: A high level of dispersion in the manufacturing and production industries significantly decreases a government's control of the production of safe products. (Perceived behavioral control)

The frequent toy recalls in 2007 from two different companies, Mattel and RC2 Corp., highlight issues related to how foreign companies interact with their Chinese manufacturers. Additionally, it reveals more information about the way both governments interact in relation to product quality. Overall the number of product recalls in the U.S. has been on an increase. In 2006, the total number was 467, which is a record high. However, recalls of Chinese-made products in the last five years has doubled. The toy industry imports between 70 to 80% of Chinese-made products to the U.S. (Lipton & Barboza, 2007).

Early Light Industrial of China is the largest toy manufacturer in Asia. It is virtually unreachable to the external world by having no website or email addresses. It produces toys for export for more than 20 companies worldwide including Mattel, Hasbro and MGA Entertainment. This was one of the manufacturers involved in Mattel's products recalls (Zamiska & Casey, 2007b).

As the total number of recalls in 2006 was cited earlier, roughly 60% of those recalls in 2006 (Lipton & Barboza, 2007) and 65% in 2007 (Brandt, 2008) are for Chinese-made products. Some reasons for the upward recall trend include the sharp increase in imported products made in China and the limited resources of U.S. regulatory agencies. The U.S. toy industry is primarily self-regulated. The U.S. Consumer Product Safety Commission (CPSC) sets product safety standards; however, with as few as approximately 100 field investigators nationwide, most industries including the toy industry are self-policed. The CPSC is responsible for the inspection of over \$22 billion worth of toys (Lipton & Barboza, 2007) as well as nearly \$600 billion of other goods. (CPSC, 2007) They must rely on the pressure on companies to maintain good public opinion to acquire continued profits in order for the CPSC to work effectively. In China the situation may be even worse. An internal Chinese government auditing agency estimated that 20% of the toys being sold in

China were unsafe for children to use (Lipton & Barboza, 2007). Therefore, the following proposition is set forth:

Proposition 8: The higher the ratio between regulatory resources and products for a country are, the lower the percentage of resulting product safety problems. (Perceived behavioral control)

Mattel was at the center of a number of recalls in 2007. They placed a recall on four different items which, amounted to 1.5 million toys. In all four items lead paint was the cause of the recall (Casey & Zamiska, 2007). Furthermore, Mattel recalled millions more in toys sold over the past four years because they contained powerful small magnets. The issue with the magnets was discovered to be a design flaw from the company; however, the issue of the lead paint did lead to manufacturing done in China (Casey & Zamiska, 2007). Mattel previously had difficulties with Chinese factory owners and their compliance to Mattel's business regulations. Outside regulations can be imposed successfully only if the foreign company has people working daily onsite. Random audits are not enough as in most cases the Chinese manufacturers find out in advance and can make preparations to ensure a smooth audit by the foreign company (Zamiska & Casey, 2007a).

Immediately after the large recall, Mattel quickly worked to further strengthen and enforce safety regulations in their Chinese facilities. Their initial response pointed the finger at their Chinese manufacturing partner and later recanted that statement taking full responsibility. They created a large public relations campaign to combat potential negative effects of the recalls prior to the holiday season (Casey & Zamiska, 2007). Although Early Light Industrial produces for 20 other international toy companies, no evidence was found that these other companies had related problems. It seems that the manufacturer responsible for the lead paint laced toys was a third party used by Early Light Industrial; for this reason Mattel chose to continue manufacturing with their primary manufacturer in China (Zamiska & Casey, 2007b). This specialized occurrence does raise some speculation as to why Mattel was the only company affected. It could be one or a combination of two reasons. Either Mattel was imposing unfair manufacturing pressures on Early Light that caused them to have to outsource to a third party for paint or that the supplier was only used for the Mattel account.

Chinese manufacturers and suppliers routinely face pressures from foreign companies to cut costs and be more productive in order to increase profits. This type of pressure often leads to short cuts in quality in order to meet quotas (Zamiska & Casey, 2007a). The owner of the factory that was the third party involved in the lead paint recall killed himself shortly after the news of the recall was made public. It is suggested that the factory owner must have been under a large amount of pressure as he took his life at his company's site. Additionally, in the Chinese culture it is an issue of losing face within the government and business environment when these types of accusations are made (Zamiska & Casey, 2007a).

As shown above, these types of events can be a matter of life and death for Chinese employees; however, these types of recalls can often times have little affect on large toy manufacturers. This is evident based on Mattel's survival of previous recalls. For example, in 2006 the company recalled approximately 2.4 million toys from the Polly Pockets brand; however, sales were not affected and as a result the company was able to expand the line (Casey & Zamiska, 2007). It could be because buyers see Mattel as a U.S. brand without realizing it is manufactured elsewhere. The brand has enough strength on its own that even when consumers are made aware of foreign manufacturing processing, they still trust in the brand.

There was a very different effect for a smaller toy producer called RC2. This is the company that makes Thomas Train and it has been significantly affected by recalls due to lead paint in 2007. The company witnessed a 20% drop in their stock price after the recall announcement. In the case of large toy companies such as Mattel, it is difficult for consumers to boycott the company and still purchase toys. However, for a smaller company with less market dominance the customer can more easily switch brands without a major effect on daily life. Furthermore, RC2 did not utilize public relations to handle their situation, which was a smart choice for Mattel. This minimized negative effects from the recalls (Casey & Zamiska, 2007).

One of the most stunning events in 2007 from the U.S. perspective was the execution of China's former drug watchdog ("Drug Watchdog Executed," 2007). The execution was a clear message by the Chinese government that it is serious about

product safety. Between 2006-2007 China's State Food and Drug Administration revoked licenses for production of five drug manufacturers ("China's Reputation at Risk," 2007) and revoked the certificate of Good Manufacturing Practice (GMP) of 128 drug manufacturers ("China Tightens Quality Control," 2007). This event was a serious message to the world and to other Chinese officials and their citizens that the country will not tolerate bribery and other bad practices that compromise the quality and safety of products. The Chinese do not want to jeopardize their country's perception in the world market.

5. Product Safety Effects on Consumer Relationships, Company Responsibility and International Trade: The Case of China

5.1 Overall Role of Product Safety on Trade Relationships

In the new world economy safety and quality standards are quickly replacing tariffs and quotas as sources of trade barriers. As the World Trade Organization continues to establish trade policies it becomes more difficult for countries to use trade barriers and quotas as a way to exercise unfair trade practices. Safety issues have become a significant issue in terms of trade and one that is more challenging to determine and control (Baston & Etter, 2007).

As the Chinese economy is expected to continue to grow and a wider trade surplus established this adds pressure to other nations, particularly the United States. A majority of the exports to the U.S. from China are from foreign owned companies, many of which are American (Hughes, 2005). They have switched production to China to respond to growing price pressures from consumers. The largest and most well-known example of this has been U.S.-based retailer Wal-Mart. The company's extensive manufacturing in China has made it China's eighth largest trading partner, which gives it more clout than a number of major countries (Hughes, 2005). Therefore, this shift in manufacturing to China over the last three decades has renewed the issues of product safety and quality and a source for trade barriers, which historically has not been an exclusive concept to the United States and China. The reoccurrence of this type of trade barrier results from increasingly more global trade pacts, which means nations must find other ways of blocking or controlling trade. The challenge in discussing safety and quality of products as a kind of trade barrier is that it is a technically complex subject. Therefore, it is complicated to determine to what extent a country is using it as a trade barrier as opposed to a means of protecting human, animal and plant health (Baston & Etter, 2007). This is especially a key topic in relation to China and the United States. They extensively rely on one another for trade and with the WTO many other forms of trade barriers

are not allowed, however safety issues create many problems between both countries. Although there is an effort within the WTO to establish more international product safety standards it is a slow process.

The difficulty of controlling this type of trade barrier can be more easily understood when examining the WTO food safety committee cases. Over a ten-year span the committee has resolved only 27% of the food safety issues it has been presented with (Baston & Etter, 2007). The dispute often comes from different safety standards used globally. The challenge becomes which standard to use. For example, in 2006 China established a zero tolerance policy related to all pork and poultry imports, which banned the use of growth hormones and certain pathogens. It is anticipated that China will become the largest exporter for chicken products to the United States. In the U.S. it has been determined to be safe and commercially acceptable to utilize growth hormones and certain pathogens in meat production. Therefore, this unequal determination of what constitutes safe poultry products between the U.S. and China results in trade barriers between the two countries (Baston & Etter, 2007).

The WTO has considered technical barriers to trade as far back as 1980 at the conclusion of the GATT Tokyo Round Standards Code. However, with the increase in international trade this topic continues to be revisited. The Technical Barriers to Trade agreement (TBT) has been further updated. Limitations of this agreement involve its exclusion to cover sanitary and phytosanitary measures to protect food, plant and animal health as this is to be covered by another agreement within the WTO (Mathis, 2006). The Sanitary and Phytosanitary Measures committee of the WTO is the entity that has yet to resolve 67% of the issues investigated over a ten-year time period (Baston & Etter, 2007). Therefore, one can understand the difficulty the WTO has in controlling these types of technical trade barriers.

Last year China's economy was expected to finish with a trade surplus of nearly double the year before. This would be a leap from \$177.47 billion in 2006 to as high as \$300 billion in 2007. This has caused added pressure on China from the world economy (Baston, 2007). As mentioned before, it is difficult to determine whether issues are truly product quality and safety related, or attempts at technical barriers

of trade on behalf of China and the United States. However, if the product safety and quality issues in 2007 were an attempt by the United States to utilize technical barriers of trade, which would be difficult to identify, then one can see from the Chinese economic figures that there was little to no effect on Chinese exports (Baston, 2007).

There are two potential reasons for the slim to no effect on Chinese exports. First, the two main product categories affected by recalls were agriculture and toys. These two areas in the larger scope of China's exports make up an insignificant portion of China's total export value. The total export value of the toy/games and food/agricultural sectors is 1.9 % and 2.7 % respectively (Leow, 2007). Second, as the Yuan continues to appreciate at only 4 to 5% a year it continues to remain devalued against the dollar (Baston, 2007). This continues to allow labor to remain cheap and, as a result, most international companies are not motivated to switch country of production nor can they switch easily. It is the exports of these large international and multinational companies that could have significant effects on China's export figures. In fact, approximately 60% of China's exports to the U.S. are from foreign owned companies. Many of those companies are American owned (Hughes, 2005).

The product safety and quality issue between China and the United States has the ability to turn into a trade war in a tit-for-tat retaliation (King & Blumenstein, 2007). These actions have already been seen as both countries have placed bans on one another's products such as seafood from China and poultry from the U.S. The challenge felt from both sides is that it is difficult and costly to determine whether each of the safety claims is in fact true. The effects of using technical barriers of trade, as seen in the example of the United States and China, is that it could have an effect in the minds of consumers on products made by another country (i.e. Made in China). However, it would likely reap greater damage on the companies and consumers involved rather than China's overall exports (Hughes, 2005). Therefore the following proposition is set forth:

Proposition 9: Product safety problems will have little effect on the overall export or import of a country. (Attitude towards the behavior)

5.2 Country-of-Origin Effect

Country-of-origin is an important factor to consider for governments, companies and consumers. Studies have shown country-of-origin does play a role in consumers' choice to purchase products. In relation to companies and governments, country-of-origin is important because perceptions of product safety and quality linked to country can affect purchases. This section explores domestic versus foreign companies with an emphasis on China as the place of production and operation. It also considers the differences related to products both manufactured and sold in China versus those that are manufactured in China and exported to the U.S.

5.2.1 Chinese Companies

As China moves from a planned to a market driven economy they must make strong adjustments both in the professional mindset of production and attitude towards customers. As mentioned previously, the concept of consumer is still relatively new in China (Overby, 2006). Additionally, one can look at the behavior of the Chinese SOEs before and after the economic system change in China as an indication of the shift in focus on production in Chinese companies.

During the planned economy SOEs were focused on quantity rather than quality. They were required to produce at a certain quota. Therefore, quality of products was of minor importance as long as the product met minimum standards. Any attention given to quality concerns were seen as a waste of time. Thus, numerous products of poor quality were produced. Now as China has shifted into a market driven economy, the SOEs have been forced to be concerned with quality (Lin & Germain, 2003). They understand that now Chinese consumers can choose a foreign made product if the quality is better. This change has caused greater pressure on product quality.

Chinese companies must actively remember several key issues when choosing to do business. First, they must consider whether they are selling products domestically or also internationally. If a Chinese company exports products

internationally then it must comply with the product and safety laws of that country. Failure to comply with international and national laws of the importing country can result in legal action and loss of profits. For example, in 2007 a suit was brought to court against a Chinese-based company responsible for producing the pet food that contained melamine. The suit sought damages for the harm and injuries to pet owners caused after pets died from the affected pet food. The lead attorney in the case stated that the Chinese based company should be held liable regardless of its location ("Class Action Complaint," 2007). This lawsuit is the first of its kind; however, could grow into a trend.

According to information published by China Law & Practice it is possible this type of lawsuit could be awarded. The article stated that normally U.S. courts would not have jurisdiction over companies incorporated in another country. However, the article states that should the foreign incorporated company be involved to a large enough extent in the U.S. market it could be considered that the courts do have the right to exercise jurisdiction. Examples of involvement are considered to include: sending representative to trade shows, visiting companies and regular electronic messages to the country receiving the exported products (Luk & Wong, 2007).

Chinese companies must also consider product quality when producing for their domestic market. As mentioned in a previous section, China's regulatory system has not grown to match the speed of economic development. Consequently, there is an incentive for some companies to work around the laws for an opportunity at faster profit. However, in the long-term, Chinese companies need to consider that they must also compete against foreign made goods. Additionally, the Chinese government has become much stricter with companies found to be producing poor quality products (Dickie, 2007). In a survey done by CSR Asia, it found that 38% of Hong Kong consumers had reduced their purchases of Chinese made products. Food and toys were the two sectors hit the hardest. This shows the spillover effect unsafe products have on other products from the same country (Blecken, 2007).

The percentage of young manufacturers in China is significantly higher than in the U.S. This is no doubt because of the changes in the Chinese economy from command to market over more than three decades. A survey done in 2007 showed

that approximately 22% of the manufacturers were less than five years old. A comparison to the U.S. shows only 4% of manufacturers with a comparable established time (Blanchard, 2007). These beginning years are the years to establish a business and earning profits is a matter of survival for the business. Therefore, it is important that these manufacturers look to long-term success rather than quick profits. Private Chinese companies are more likely to produce poor quality and unsafe products. According to a report by the State Bureau of Quality and Technical Supervision (SBQTS) the quality of products produced by state-owned and foreign companies was higher than private Chinese companies ("Product Quality Stable," 2001). This discovery suggests that many of the younger private owned manufacturers are looking to make quick profits in hopes that they are not caught by the Chinese government.

5.2.2 Foreign Companies Operating and Selling in China

Foreign owned companies that operate in China must consider factors relating to manufacturing and selling. As shown earlier the rate of foreign direct investment into China has been unprecedented since it began with China's market liberalization. The motivation for companies to enter China was a combination of the following: cheap labor for manufacturing and a large population of 1.3 billion potential consumers. Many foreign companies utilized joint ventures as a way to enter China's market. In the beginning it was difficult for foreign owned companies to enter China; however, with continual changes in the process and laws, it has become easier.

In the 1990s, after China had established several of its product quality and safety laws, foreign companies found it difficult to navigate through the inspection, regulations and licensing procedures China established for certain product categories. Foreign companies found that the process lacked transparency and that often there were double standards for domestic versus foreign companies (McDaniels & Singer, 1997). Outsiders claimed that China was using these practices as a way to slow trade liberalization through the use of technical barriers of trade. One reason for this complicated process could relate to the motivation of the inspection agencies. China's internal inspection agencies were required to raise

their own funds, which may have slightly altered these agencies number one objection from safety to entrepreneurial fundraising. As China entered into the WTO these types of issues were among a long list that were addressed relating to product safety and fair trade (McDaniels & Singer, 1997).

On the negative side, some foreign companies may try to use more relaxed standards for products sold to China consumers. Multinational and foreign companies must be aware that although China's regulatory system is behind, the government encourages the news media to publish cases of abuse of the consumer right's law (Yang, 2005). Consequently, it is more likely that poor quality products from foreign companies would be brought to the attention of the China government. As a result, foreign companies should work to comply with Chinese and international product standards.

On the positive side, foreign companies can compete in China on the basis of quality and country-of-origin reputation. Through increased market liberalization China is filled with foreign made products. Country-of-origin does play a role in consumer purchase choice. The importance of country-of-origin is partially affected based on the other cues chosen by the consumer. Generally, consumers prefer domestic made products unless they believe the quality, product benefits and country-of-origin to be valued higher as compared to the complementary domestic-made product (Nooh & Powers, 1996).

According to research done by the Economic Research Service (ERS) from the U.S. Department of Agriculture in 2007, it found that as the income of Chinese households increased so did their demand for higher quality food (Gale & Huang, 2007). This finding, coupled with the research done by the Xinhua News Media that showed 92% of the respondents were concerned with food safety, reveals the demand for quality products among Chinese consumers (Fairclough, 2007). The ERS report also showed that the desire for higher quality food by the growing middle to upper class translated into higher safety standards (Gale & Huang, 2007). As a result, foreign companies could have a good opportunity to gain a solid market share for their products within the world's largest consumer market.

6. Application of Theory to Chinese and U.S. Response to Recent Product Safety Issues

The purpose of this section is to apply the theory of planned behavior to explaining the behavior of both the level of government and consumers. This section considers two groups in relation to understanding behavior: government and consumer. Both of these groups are considered at an aggregate level, which Ajzen (1985, 1991) claims is easier in understanding and predicting behavior than at the individual level. Additionally, both groups are considered from a Chinese and U.S. perspective. As it is the first time the theory has been suggested for this topic, this section seeks to identify issues and influencers that affect each group using the framework of the determinants of the TPB.

The goal of the author is to propose the relevant issues that should be considered for future research on product safety using the TPB. While this descriptive study seeks to identify whether and how the TPB can be used to understand behaviors at aggregate and individual levels, future research will need to more fully refine its application with respect to each of these groups and issues. At the conclusion of this section the fully modified versions of the TPB are shown for the government and consumer level. This provides a solid foundation for future studies related to the application of the TPB on this topic.

6.1 Chinese and U.S. Governments

This section considers the attitude, subjective norms and perceived behavioral control of the Chinese and U.S. governments in relation to export and import of safe products. The government is considered at the aggregate level. In considering the government at an aggregate level, the author recognizes that the actions of a government are a compilation of actions of different branches and government officials. Therefore, the aggregate level of the government is the overall actions of each government that may be based on numerous individuals' actions of different branches and officials within that governmental body.

6.1.1 Behavior of Chinese Government to Export Safe Products

6.1.1.1 Attitude and Intent of Chinese Government to Export Safe Products

Ajzen's (1991) suggests that attitude towards the behavior "refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the behavior in question (Ajzen, 1991, pp.188)." In this section *person* is considered to be the Chinese government, based on Cabanero-Verzosa's (2002) research that used the TPB in relation to the behavior of developing country government institutions. Therefore, this section considers the Chinese government's attitude toward exporting safe and quality products.

Based on the information presented earlier, it can be concluded that the Chinese government has a strong interest in exporting safe products of high quality as demonstrated in the following areas: communication, reputation, regulatory actions and international agreements. In the past the Chinese government would not generally comment on issues internal or external to the country (King & Blumenstein, 2007). The government has spoken up on many occasions concerning product quality and safety. This has included interaction with news media as well as increased communication within Washington D.C. (King & Blumenstein, 2007). It has become common for Beijing to make comments about general and specific product quality issues. Although at times its remarks have been contradictory (Chang, 2007; French, 2007; "China's Food and Drug Situation," 2007) nonetheless the willingness to communicate shows China's interest in the issue on a global scale. Therefore the following proposition is set forth:

Proposition 10: The more a country communicates about product safety issues, the more positive the attitude toward buying safe products and the stronger the intent to purchase safe products. (Attitude towards the behavior and intention)

Reputation is another major motivator for the Chinese government in its attitude to export safe products. It wants to export safe products with high quality in order to ensure the reputation of China is not damaged in the world market. The fear is that

as many newspapers have already published links between made in China and poor quality products that people will begin to believe this statement. The government wants other nations to see that it is serious about taking action to protect and ensure product safety (Dickie, 2007; Gairdner, 2006; King & Blumenstein, 2007; Leow & Chao, 2007; Li, 2007).

Regulatory actions that have been taken by the Chinese government also make it clear that it is interested in exporting quality products. For example, the Chinese government has forced the closure of manufacturers that are discovered to be making poor quality products (Chang, 2007). In a more severe action the Chinese government executed, Zheng Xiaoyu, former director of the State Food and Drug Administration (SFDA) in July 2007 ("Drug Watchdog Executed," 2007). This action was no doubt to signal that the Chinese government would not tolerate people that allow poor quality products to be made.

China has also made attempts to establish international agreements in an effort to prove its intent to export safe and high quality products. China has had talks with several countries, including the United States, about product safety standards. Some examples include agreements made with the U.S. Consumer Products Safety Commission (CPSC, 2007), agreements with Japan on food safety (Calvin et al., 2006) and agreements made with Hong Kong (Ying, 2007). This shows the willingness of the Chinese government to work collaboratively with other nations to determine proper levels of safety throughout various product categories.

6.1.1.2 Subjective Norms for Chinese Government

From Ajzen (1991) subjective norms "refer to the perceived social pressure to perform or not to perform the behavior." Certainly the Chinese government is influenced by subjective norms. These social pressures add to the government's commitment to take the issue seriously.

The subjective norms that add pressure to the Chinese government include: WTO, U.S. and other trading nations as well as companies and consumers. The WTO is pushing for a more comprehensive agreement on products quality and safety

standards for all WTO countries. This has been a difficult process and has not been completed. Of the two hundred and forty-five food-safety issues tackled by the WTO between 1995 and 2006, only 27% have been completely resolved (Batson & Etter, 2007). In 2007, China's monthly export figure was more than \$100 billion in goods to other countries (Batson, 2007). As China's exports continue to increase at explosive levels, the WTO continues to pressure China for stricter adherence to international products standards. Therefore the following proposition is set forth:

Proposition 11: The higher a country's involvement in trade the more pressure it faces from supranational organizations to follow international product safety standards. (Subjective norms)

Although China is a large country with a trade surplus of nearly \$27 billion in 2007 (Batson, 2007), it is still concerned with the United States and other trading nations. China did not see any difference in demand as a result of the product recalls (Batson, 2007). The reason for the minimal change is that the industries that have been affected by the recalls make up a small portion of the total export value. Toys and games make up only 1.9% of the total export value while food and agriculture another 2.7% (Leow, 2007). However, despite this limited influence of the product recalls, China is interested in trading countries' perceptions of them. Therefore, this interest in perception management adds pressure to China that it can ensure the export of safe products.

Lastly, foreign companies, domestic and foreign consumers also add social pressure to the Chinese government. Foreign companies operating in China want to have confidence in the economy and product standards. This allows them to better compete with domestic companies if the government is enforcing similar standards for all products produced by all companies. Chinese consumers are also adding pressure now as they have an opportunity to voice their concerns unlike in the past. Those in the upper income levels want higher quality products. There are also agencies and businesses representing the rights of the Chinese population. As an example, the China Consumer Association and Wang Hai, a popular consumer advocate, highlight issues in product quality (French, 2007). Foreign consumers also add pressure because foreign consumers' perception of China can influence their local governments in ways that may effect trade or other political relationships.

6.1.1.3 Perceived Behavior Control of Chinese Government

From Ajzen (1991) perceived behavioral control “refers to the perceived ease or difficulty of performing the behavior and it is assumed to reflect past experience as well as anticipated impediments and obstacles.” Although as pointed out earlier, there are a number of reasons the Chinese government has an interest in exporting safe products of good quality. However, its ability to control all the factors involved in consistently performing that behavior is difficult. A number of factors affect the Chinese government’s ability to export safe products.

First, the point should be made that the historic strength of the Chinese government in the old system has now changed. Consequently, the government has less control over its people, business and economy than before. Linked with this transition is the changing cultural mindset of the country. As China opens its doors wider to the outside world, it continues the evolving process of the shift in government and culture of the country. Although laws have been established such as the basic rights of consumers and the Law of Product Quality (Overby, 2006), the regulatory and judicial systems are still underdeveloped. These systems cannot manage the explosive rate of the growing Chinese economy. The government recognizing these problems has developed various five year plans aimed at improved product quality; however the implementation of these plans are still a difficult process (Dickie, 2007; Calvin et al., 2006).

The size and age of the average manufacturer in China also increases the difficulty of the government to implement, control and punish based on product safety laws. According to China’s state media, 75% of the approximately one million food processing plants in China have fewer than 10 employees (Chang, 2007). Additionally, production of food in China is split up among two hundred million farms with fewer than ten workers. Commonly, these workers do not own the land but only the right to use it (Calvin et al., 2006). This makes it very difficult for the established agencies to educate, train and control product safety. Furthermore, a significant number of manufacturers in China are relatively young. Approximately 57% of manufacturers in China have been established for ten or less years as opposed to just roughly 9% in the United States (Blanchard, 2007). These younger

manufacturers may have a stronger interest in making fast profits in order to survive than long term success through quality products. Therefore the following proposition is set forth:

Proposition 12: The more newly established manufacturers a country has the more likely they are to have problems with product safety. (Perceived behavioral control)

6.1.1.4 Actual Behavior of Chinese Government

China's exports in 2006 were valued at nearly \$9.7 billion, which is nearly a 200% increase since 2002 (Foreign Trade and Economic Cooperation, 2008). Considering the total amount of products exported and recalled within or outside China it puts the figure in perspective. The Chinese government intends to export safe products; and the subjective norms that influence the government are also strong. Therefore, based on the author's interpretation of the secondary research it appears that perceived behavior control may have the largest influence on China's actual behavior towards exporting safe and quality products.

Considering the historic stance of the Chinese government in the former command economy, control should not be an issue. The former government maintained control of everything. However, in the changing economic landscape with the effects of a market economy the government is determining new levels of boundaries. Therefore, the government experiences limitations in its level on control. This shift in control will likely change over time to be more balanced, as regulatory and judicial bodies are further developed and agriculture and manufacturing sectors are more streamlined.

The government has taken visible steps towards ensuring safer products for exports. For example, the Ministry of Commerce of China along with U.S. law offices hosted an event to help Chinese businesses better understand the U.S. legal system. It was specifically aimed at communicating a better understanding of U.S. product safety. (Anonymous, 2008) Additionally, the Chinese government, particularly the AQSIQ, has teamed up with the U.S. Consumer Product Safety Commission and signed two agreements. The first is the Memorandum of

Understanding, signed in 2004. It includes agreement of cooperation between the Chinese and U.S. governments on seven specific topics. These topics relate to transfer of information on country product standards, testing and training of inspection personnel for example. (CPSC, 2007) The second agreement was signed in 2005 and is the Plan of Action for Cooperation. The most important part of this agreement is the creation of product industry work groups from both countries. (CPSC, 2007) Additionally, the Chinese government is working with other countries as well such as European Union, Japan and Hong Kong. However, despite these efforts the number of recalls has risen in recent years. Therefore the following proposition is set forth:

Proposition 13: Inclusion of product safety issues in international intergovernmental agreements is positively associated with attitude toward exporting and importing safe products. (Attitude towards the behavior)

Concurrently, China is also exporting some very high end products in various sectors. Some examples include: Haier (household appliances), Lenovo (personal computers) as well as Li Ning, Belle International and Anta Sports Products (shoes and sneakers) (Tucker, 2006; Fowler, 2007). These companies reveal that the potential is there for strong, high quality products that go beyond meeting minimal safety standards. Therefore, as mentioned previously, it seems the factors related to perceived behavior control have the greatest influence in China's behavioral outcome to export safe products. Future research should consider this determinant as a focal point.

6.1.2 Behavior of U.S. Government to Import Safe Products from China

6.1.2.1 Attitude and Intent of U.S. Government to Import Safe Products from China

The U.S. has a high interest in importing safe products from China. As the United States continues to grow more and more dependent on China for products, the U.S. government expects that the products produced are of the same quality expected by

the U.S. government and its citizens. For example, based on different sources the percentage of toys manufactured in China and sold in the U.S. is between 70 to 86% (Lipton & Barboza, 2007; Yang, 2007). The more that a particular product category is imported from a specific country the more that the expected product quality norms are transferred across national boundaries. Therefore the following proposition is set forth:

Proposition 14: The greater the import of a product category from a single country, the lower the perceived behavioral control for product safety at the governmental level. (Perceived behavioral control)

The trend towards increased manufacturing in China is driven by a company's interest in cost efficient production and access to the Chinese consumer market. However, the U.S. government's concern and responsibility is to protect the safety of human, animal and plant health. Therefore, the U.S. government not only has intent but a responsibility to guarantee safe import products from China. The U.S. is also a lead country in setting up many product safety standards that become adopted by smaller countries (Fairclough, 2007). Therefore, the U.S. also has an added interest to remain active in pursuing high products quality standards.

6.1.2.2 Subjective Norms for U.S. Government

The U.S. government also faces social pressures to ensure safe products are imported from other countries. Therefore, the pressures on the U.S. government are both tangible and implied. The U.S. media adds a significant pressure to the U.S. government because they are free to investigate and publish regardless of the topic's favorability towards or against the government. In 2007, newspapers, magazines and television were continually including information about product recalls due to unsafe products. Consumers are highly influenced by media and also add pressure to the government through their combined purchasing power.

Although the U.S. regulatory agencies related to product safety have a great deal of resources, it is still inadequate to handle the ever increasing volume of imported products. Therefore, many industries have self-governing principles related to levels of product safety (CPSC, 2007). This does not fully prevent unsafe products from

reaching store shelves but it does add pressure to businesses to develop sound internal processes. Therefore, companies also add significant pressure to the U.S. government because they want to guarantee fairness in the treatment of all companies that they are held to the same safety standards. This allows for a level point of competition among companies.

Some implied pressures on the U.S. government concerning safe import products pertain to trade and reputation. As the U.S. economy relies heavily on Chinese-made products, it is important that trade relationships are balanced between the two countries. Consequently, the U.S. government must use sound judgment when dealing with product quality issues of Chinese imports. Lastly, reputation is an important incentive. This is implied pressure from other countries, as the U.S. is a leading world economy, its government should have interest and ability to maintain high quality and safety for its consumers. Other countries look to the U.S. as a standard creator for issues related to product safety. Therefore the following proposition is set forth:

Proposition 15: The stronger the world position of the country's economy, the greater the pressure from supranational organizations regarding product safety. (Subjective norms)

6.1.2.3 Perceived Behavior Control of U.S. Government

There is a limitation of the U.S. government to actually be able to control and ensure the import of safe products from China. There are several elements that influence this limitation. First, it is important to consider the rapid increase in import goods to the U.S. Considering only goods from China between 1997 and 2004 there was a 293% increase (CPSC, 2007). As a result, a lack of resources, agents and funds to perform product safety checks limit the government's control. Therefore the following proposition is set forth:

Proposition 16: The more limited the enforcement resources, the greater the product safety problems. (Perceived behavioral control)

Additionally, when unsafe products are discovered it can be very difficult to trace back to the source of the problem in China. The extreme number of manufacturers

in China as well as other factors can make it very difficult to find the source. For example, one of the largest toy manufacturers in all of Asia operates in a relatively low profile way. Early Light Industry has more than 40,000 workers and yet has no website or other forms of outward communication (Zamiska & Casey, 2007).

Accountability is also a limiting factor in the U.S. government's ability to control the import of safe products. It is nearly impossible to prosecute Chinese manufacturers for unsafe products in the U.S court system. Most industries are self regulated, which means companies set standards sometimes even higher than government standards to appeal to consumers. This practice can sometimes fail. Therefore the following proposition is set forth:

Proposition 17: The lower a country's involvement in the foreign market, the more likely product safety problems will result. (Perceived behavioral control)

This practice also adds pressure to the trade relationship with China. As the U.S. is more dependent on both receiving imports and sending exports to China, there is a difficult balance to maintain proper trade channels. As the media has previously published, when products have been held up in the U.S. for safety reasons, shortly following a similar action is taken in China over U.S.-made products (Timiraos, 2007). Another words, China often follows by blocking U.S.-made products citing safety reasons. Therefore, the following proposition is set forth:

Proposition 18: The more two-way trade dependency a country experiences with a trading partner, the more that product safety and quality will be the basis for trade discussions. (Perceived behavioral control)

6.1.2.4 Actual Behavior of U.S. Government

The percentage of recalled products imported from China has increased; however, it is also important to consider the significant increase in overall imported goods from China. As cited earlier this figure has increased by 293% between 1997 and 2004 and is expected to continue in a steep upward trend (CPSC, 2007). Additionally, with the limited resources of the Consumer Product Safety Commission this trend also makes it challenging to proactively identify unsafe imported products before they reach stores shelves. Another major influencer has been the U.S. media that

has sensationalized this issue, which makes consumers more aware and nervous about the problem. The U.S. has made efforts to work with China in setting up agreements for trade for safe products (CPSC, 2007). Overall products sold in the U.S. are safer now than they were thirty years ago, claims the CPSC (CPSC, 2007). The influence of the media brings the topic to consumers' minds. Future research in this area should further investigate the subjective norms that influence the U.S. government's behavior towards importing safe products and its perceived behavioral control.

6.2 Chinese and U.S. Consumers

The consumers in both countries are in a vulnerable state when it comes to product safety. As the national and supranational agencies have difficulty to determine international standards it is even more difficult for consumers in the U.S. and China to understand the complex issues related to safety of products such as lead paint levels and other chemicals used in production. This section applies the theory of planned behavior to Chinese and U.S. consumers at an aggregate level. The purpose of this section is to formulate a foundation for potential future research in this area.

6.2.1 Behavior of Chinese Consumers to Purchase Safe Products

Given China's vast population and extreme regional differences, it is important to consider those influences as it relates to Chinese consumers. This section applies the theory of planned behavior to Chinese consumers, distinguishing between those on the more developed coastal regions and those in the less developed interior and western regions of China.

6.2.1.1 Attitude and Intent of Chinese Consumers to Purchase Safe Products

As previous mentioned research shows, there are significant regional differences within the Chinese population. According to the research by Gale and Huang (2007) as the income of Chinese consumers increases so does their expectation for higher

quality and safer products. Those at the highest income level in China have reached the saturation point for quantity purchased. As a result, their focus is on buying and consuming higher quality products that are guaranteed to be safe (Gale & Huang, 2007). Therefore, one can deduce from this research that the attitude towards the purchase of safe products is different within China and heavily influenced by a person / household's yearly salary. Therefore the following proposition is set forth:

Proposition 19: Intent to purchase safe products is positively related to personal income. (Intention to Purchase Safe Products)

In the coastal regions where the highest GDP per capita is approximately equivalent to \$6,500 and the region average is approximately \$4,500 (Chen & Penhirin, 2004), one can expect that consumers are very interested in buying safe, high quality products. Those households in the highest incomes levels make up approximately 10% of the Chinese population (Gale & Huang, 2007). Consumers living in the interior region have an average GDP of \$1,700 and those in the Western regions have an average of \$1,500. These figures are based on GDP per city of twenty-seven cities in China (Chen & Penhirin, 2004). Therefore according to the research from Gale and Huang (2007) consumers in these regions would be more concerned with buying larger quantities and less focused on the quality of products. The interior and western provinces account for roughly 23% of China's population with the remainder residing in or near the coastal regions (Ögütçü & Taube, 2002). Therefore, the population living in or near the coastal regions makes up a significant consumer base in China. Therefore the following proposition is set forth:

Proposition 20: As country GDP increases, so will the purchase of safer products increase. (Purchase Behavior of Safe Products)

According to research done by China's state-run Xinhua News Agency in 2007, 92% of Chinese respondents said they were "concerned about food safety (Fairclough, 2007)." In 2001, the Xinhua News Agency published that based on a study from the State Bureau of Quality and Technical Supervisions (SBQTS) that out of 9,700 products tested, 78.9% were up to standard ("Product Quality Stable," 2001). Furthermore, in a later study done in 2007 on Chinese-made products it discovered that approximately 20% of the products intended for domestic consumption in China did not meet safety and quality standards (Chang, 2007).

Articles have pointed to the discontentment among Chinese consumers with the quality of products available. Some consumers turn to foreign made products, larger stores and well-known brands with the perception that these products are of a safer and higher quality (Fairclough, 2007). Therefore the following proposition is set forth:

Proposition 21: Consumers are less likely to buy products made by countries with regular product safety problems. (Purchase Behavior toward Safe Products)

The implication of this proposition is an increased opportunity for businesses looking to import U.S. made products to China. Some U.S. businesses have taken this opportunity to attract the percentage of Chinese consumers interested in higher quality goods by importing U.S.-made goods. They can take advantage of the reduced transport costs. In 2007, the cost to ship one container to China was approximately \$900 as opposed to the \$3,000 expense per container from China to the U.S. (Kwong, 2007).

Lastly, cultural and political factors also influence the degree to which, intent to purchase safe products is affected. As pointed out earlier it is clearly linked to salary; however, there is still a cultural transition taking place in China as its population recognizes their rights as consumers. Although consumer rights have come a long way in the last couple of decades, there are still many in China that do not understand their rights. Salary appears to be a significant influencer of intent to purchase safe products. Although income clearly enables people to have greater choice about the quality (and price point) of products that they purchase, the recognition of the institutionally endorsed consumer rights also influences people's purchasing behavior.

6.2.1.2 Subjective Norms for Chinese Consumers

Social pressures that influence Chinese consumers in their choice of products to purchase include: media, government officials and alternate forms of communications. Chinese consumers still do not have total access to information from around the world. Therefore, they must rely on the offering and accuracy of the

Chinese news media. As previously cited, at times the new media has published incorrect information. Such was the case with the unsafe chemical used in manufacturing Chinese-made toothpaste that remained on store shelves (King & Blumenstein, 2007). Additionally, the news media is sometimes still apprehensive to question or challenge the actions of the Chinese government. This hesitation no doubt is remnant from former times. Furthermore, some media outlets have characterized the issues of unsafe Chinese-made products in America as a U.S. plot to keep China down. These media outlets have not accurately published the product safety problems of Chinese-made products that are plaguing other countries around the world (French, 2007). Therefore, it is difficult to understand the exact message that is conveyed to Chinese consumers.

Chinese officials are also an influencing factor for consumers based on the historic background of the country. However, even in this area consumers hear different reports of product safety. For example, Chinese officials have claimed on different occasions that either 80% (Chang, 2007) or 99% (King & Blumenstein, 2007) of products are safe. This creates additional confusion for consumers. Therefore the following proposition is set forth:

Proposition 22: Accuracy and transparency of governmental communication on product safety positively influences subjective norms related to product safety. (Subjective norms that influence attitude towards the behavior)

Word of mouth is also a significant pressure. China is a very community-based relational society. As cited previously, according to Hofstede, China ranked lower in the individualism factor compared to the average among the Asian countries (Itim International, 2007). Therefore, the influence and perspective of consumers' personal network or *guanxi* relationships is an influencing factor. Future research using the theory of planned behavior should consider subjective norms of Chinese consumers towards purchasing safe products as a focal point. Therefore the following proposition is set forth:

Proposition 23: The more relational the culture, the more that relational networks will drive subjective norms. (Subjective norms)

6.2.1.3 Perceived Behavioral Control of Chinese Consumers

Chinese consumers historically are accustomed to having limited control as formerly the government controlled everything related to their lives. However, over the last several decades the Chinese government has loosened its control. The news and information that is released in China is still very internally focused; consequently, Chinese consumers must rely on the accuracy and type of information released through news sources. When incorrect or conflicting information is released it creates confusion for consumers (King & Blumenstein, 2007). As mentioned before, communication of the news media and government officials is a limiting factor on consumers' control to purchase safe products. The following proposition is set forth:

Proposition 24: Singularity of message by the news media with respect to product safety positively affects perceived behavioral control. (Perceived behavioral control)

Regional access and availability to stores and goods is another influencer of perceived control. Access to goods varies throughout China's regions. Therefore, when consumers have a larger selection of goods they also have a greater ability to choose among those goods, both to avoid or select particular products. This relationship would mean that consumers with availability to larger product offerings have more control over purchasing safe products. Therefore the following proposition is set forth:

Proposition 25: Access to and availability of safe products positively impacts perceived behavioral control. (Perceived behavioral control)

A significant factor and in many cases potentially the most important factor is salary. Consumers' salary influences their choice in the types of products they purchase. As mentioned earlier, the higher the yearly salary the more likely the consumer will purchase higher quality products and the inverse is also true.

6.2.1.4 Actual Behavior of Chinese Consumers

For consumers in the interior or western regions with lower salaries they have little choice regarding quality, safe products. Related to the issues affecting perceived behavior control their access to stores selling quality goods may be limited. Furthermore, their low salary puts their focus on buying larger quantities of products. Consumers in the coastal regions are becoming more selective in the types of products they purchase. Although many Chinese consumers have a strong loyalty to domestic brands (Ernst & Young, 2005), many Chinese consumers are intentionally purchasing foreign made products because of safety concerns. Further research should focus on the regional differences effects on choice to purchase safe products. Therefore the following proposition is set forth:

Proposition 26: Country-of-origin will affect intent to purchase, such that consumers in countries with lower reputations for safety among domestic products will have a higher intent to purchase safe products from international suppliers. (Perceived behavioral control)

6.2.2 Behavior of U.S. Consumers to Purchase Safe Products Imported from China

It is difficult for U.S. consumers to avoid products that have been made in China. As roughly 40% of all consumer goods imported to the U.S. come from China (CPSC, 2007) a consumer does not have to search to find Chinese-made products. Moreover, specific product industries have been more influenced than others with regards to imports of Chinese made goods. The following section applies the theory of planned behavior to U.S. consumers' behavior towards the purchase of safe products made in China.

6.2.2.1 Attitude and Intent of U.S. Consumers to Purchase Safe Products Imported from China

According to the UN Human Development Index (HDI), the United States ranks twelfth among one hundred and seventy-seven countries for the HDI (UN Human

Development Index, 2008). As the standard of living is high and average income levels are among the highest internationally, consumers have a higher interest in quality, safe products. Similar to China, however with less extremity is the differences in salaries throughout the U.S. The author points this out as a consideration for future research. As Gale and Huang (2007) discovered that salary is linked to interest and expectation of quality this point is also likely true for U.S. consumers.

There is an assumed expectation among U.S. consumers that the products they purchase are at the most minimum level, safe. To purchase high quality goods consumers expect to pay more, however there is a minimum expectation that all products regardless of their cost are safe. As a result, U.S. consumers have a significant and strong evaluation in their choice to purchase safe products made in China. Therefore the following proposition is set forth:

Proposition 27: Price moderates the relationship between attitude toward buying safe products and intention, such that higher prices of safe products minimizes intention to buy when attitude is held constant. (*Attitude towards the behavior - Intention*)

6.2.2.2 Subjective Norms for U.S. Consumers

U.S. consumers are also subjected to social pressures that influence their favorability towards purchasing safe products. A significant influencer is the U.S. news media and other forms of communication such as television, internet and radio. As mentioned previously, these forms of communication are free to publish information separate from governmental pressures. Certainly, as widely pointed out in numerous articles the “Made in China” issue has been among the primary topics covered in news media in 2007.

A major social pressure for U.S. consumers is in the quality of life and safety of their children, family, pets and self. This pressure is likely rooted in the combination of the individualistic nature of the society and capitalistic focused economy. This cultural pressure could reveal why among some of the more published recalls were those affecting pets and children. Of course word of mouth is an influencer as well.

Consumers are influenced and pressured by what others around them say and think.

6.2.2.3 Perceived Behavior Control of U.S. Consumers

U.S. consumers do appear to have more control over purchasing safe products made in China, from the standpoint of income and availability of products; however their understanding of the situation is limited. Consequently, their control often takes the form of total boycott of Chinese made products or not an active concern for purchasing safe products possibly due to one of the influencers on control below. U.S. consumers perceived behavioral control to purchase safe Chinese-made products are affected by a number of factors. Similar to China salary does influence control. Consumers earning higher salaries can more easily switch to higher quality products or those made in other countries. Consumers earning less money are likely more concerned with buying higher quantities rather than higher quality products. Given the large percentage of imports from China with variances in particular industries, it is difficult for consumers to avoid Chinese-made products. Time is another significant factor related to perceived behavior control. The fast pace of the U.S. society means many consumers do not have time to investigate or avoid Chinese-made products on a daily basis. Therefore, the proposition set forth is:

Proposition 28: Accuracy and comprehensiveness of technical information about product safety by consumers affects attitude toward safe products.
(Attitude toward purchasing safe products)

Information availability, education level of consumers and complexity of the issues are other relevant factors that influence consumers' control to purchase safe products. It is difficult for the average consumer to understand issues related to appropriate levels of lead paint and other chemicals used in production. Therefore, many consumers make a choice to try and totally avoid all Chinese-made products because they do not understand the complexity of the issues or do not have the time to investigate them further.

6.2.2.4 Actual Behavior of U.S. Consumers

Consumers in the United States range in their response from avoiding all purchases of Chinese made products to making no changes in their purchasing activities. U.S. consumers in general are more aware of the concerns over product safety (Thomson West Research, 2007) as a result of the media. Consumers place blame for unsafe products at various levels. Some blame retailers, others companies or U.S. government agencies and others Chinese manufacturing standards. Some consumers are affected by the political history of China as a communist country.

A survey done in 2007 by Strategic Name Development with results at ninety-five percent confidence discovered that only 40% of respondents continued to trust Wal-Mart to sell safe Chinese-made products (Newman, 2007). This survey also found that among the following industries respondents preferred the following products to be produced in India rather than China: pet food, prescription drugs and toys as well as makeup and skincare products (Newman, 2007). This shows the respondents' reluctance to purchase Chinese-made products. Additionally, in another survey that asked U.S. consumers' interest in buying Chinese brands 42% had low interest and 37% had mid-level interest. Some of the more significant reasons cited for low interest in Chinese branded products were: (1) inferior quality, (2) labor laws and treatment of workers and (3) unsure of contamination of food (Tucker, 2006).

The current and previous sections have presented the relevant issues related to product safety at a governmental and consumer level between China and the United States. Several propositions were made that would be foundational for future research using the theory of planned behavior. A summary of these propositions and how they provide an expanded model of the TPB for product safety is presented below.

Illustration 7 – Modified theory of planned behavior model for the government level in relation to product safety

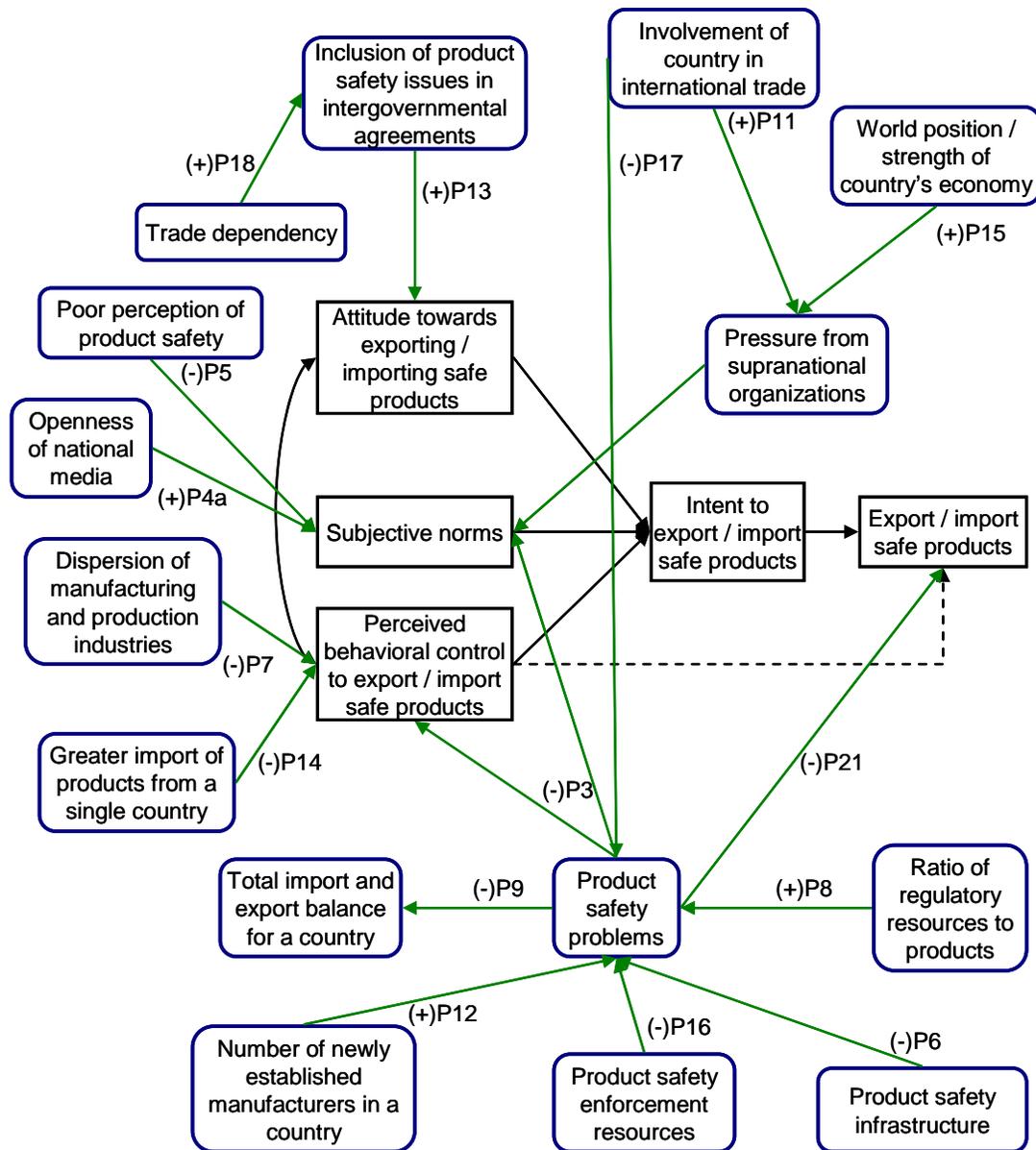
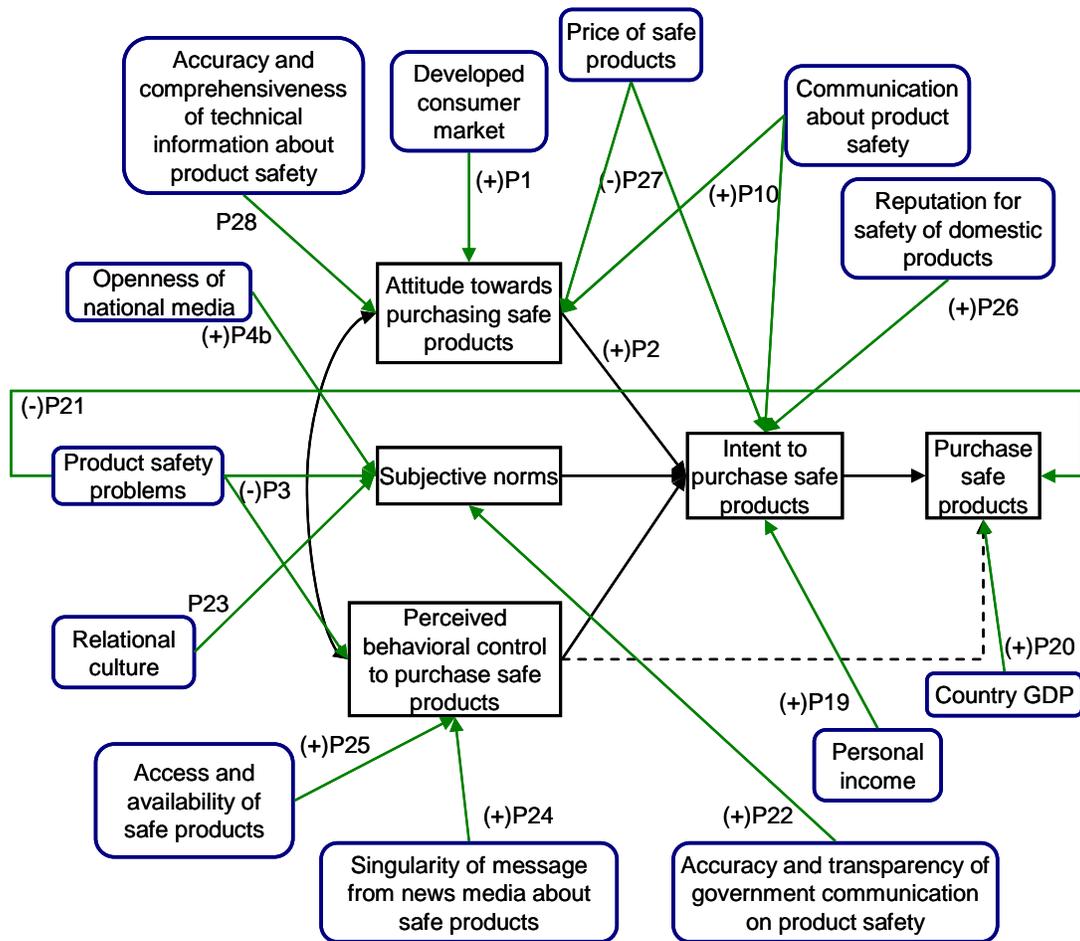


Illustration 8 – Modified theory of planned behavior model for the consumer level in relation to product safety



7. Conclusion

This thesis used secondary research and the theory of planned behavior to develop a descriptive study that sought to provide some preliminary insight into attitudes and behaviors of Chinese and U.S. consumers and government, related to product safety and quality. Attitudes and responses were considered for four different groups: Chinese government, U.S. government, Chinese consumers and U.S. consumers. This thesis was the first time the TPB has been applied to such a topic and therefore the author's goal was to provide a strong foundation for further research in this area. Secondary research was drawn from a number of sources from U.S. and Chinese perspectives including relevant articles that applied the TPB.

This study is extremely relevant at the moment as China's economy continues to grow at a constant 10% annual rate (Christiansen & Bertrand, 2006) and at the same time the U.S. becomes more reliant on products manufactured in China. Additionally, the Chinese consumer market continues to develop and its understanding of its rights as consumers. Lastly, product safety captures the attention of the media because consumers are concerned. Safety of products is a complex issue that is very important to Chinese and U.S. consumers.

The results of this research are two-fold. First, this thesis introduces the possibility of using the theory of planned behavior for the topic of product safety among countries in different developmental stages. Second, it provides a modified TPB model for governmental and consumer level in relation to product safety. The author therefore, proposes that further research should be done to confirm or reject the concepts and propositions recommended in this study.

This thesis can also be used as a foundational piece to understand Chinese product quality laws and influencing factors. The goal of the author was to enable a balanced consideration of the factors that affect government and consumer attitudes and responses to product safety and quality such that efforts to improve product safety and quality can be based on sound fundamental concepts rather than on political rhetoric. Product safety will continue to be a major issue as the process of

globalization continues. The shift to Technical Barriers of Trade has become the new weapon in the trade of products. These technical barriers are very difficult to resolve as mentioned previously. Therefore, the theory of planned behavior can provide a framework to better understand the relevant issues effecting behavior at both governmental and consumer levels. Future primary research should be conducted to support or reject the concepts and propositions presented in this thesis.

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