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A comparison of perceived product quality between Bulgarian and Chinese respondents

Abstract

Globalization has reduced trade barriers between countries. One implication of the globalization process is that consumers, who used to be exposed to a limited number of imported products, may now choose not only from products manufactured within their home country but also from a number of alternative products that are not manufactured domestically or had previously not been sold in the domestic market. As a result of globalization, Bulgaria and China are two countries that are expanding trade and investment between the two countries.

The current research reports the perception of the quality of products made in Bulgaria by respondents from Bulgaria as well as respondents from China and the perception of the quality of products made in China by respondents from Bulgaria and by respondents from China. The findings results have strategic implications for managers from Bulgaria, as well as managers from China.

Keywords: China/Bulgaria trade, perceived product quality, country-of-origin.

Introduction

Economic reform and opening to the outside world have become global trends, with international markets becoming important for trade throughout the world. Globalization has been made possible by world-wide foreign direct investment, production and marketing; advances in telecommunication technologies and the Internet; increases in world travel; the growth of global media; and technological advances that have made it easier and quicker to complete international transactions – both trade and financial flows – and to acquire information about other countries (Ozsomer and Simonin, 2004; Steenkamp and Hofstede, 2002; Stremersch and Tellis, 2004; Van Everdingen, Aghina, and Fok, 2005). Moreover, this trend is not limited to developed countries; in an effort to accommodate the movement toward an integrated world economy one sees socialist countries, and some of the developing countries, making an effort to restructure their economies while adopting an open door policy toward trade. One result of economic reform is that consumers are often exposed to products from other countries. Research has demonstrated that consumers form an image of various countries and their products which in turn may affect purchase behavior. For example, studies have found that a consumer's image of the country in which a product is made influences the evaluation and, in some cases, the purchase intention of products from a given country (Bilkey and Nes, 1982; Johansson and Chao, 1983; Johansson, Douglas and Nonaka, 1985; Darling and Arnold, 1988; Han and Terpstra, 1988; Hong and Wyer, 1989; Thorelli, Lim and Ye 1989; Papadopoulos, Heslop and Bamossy, 1990; Roth and Romeo, 1992; Baughn

and Yaprak, 1993; Chao, 1993; Gurhan-Canli and Maheswaran, 2002; Klein, 2002).

The current research examines perceived product quality of products in general, as well as several specific product categories, made in Bulgaria and China by Bulgarian citizens and Chinese citizens. Since China and Bulgaria have been increasing bilateral trade with each other the topic will be of interest to managers involved in international trade.

Country background: Bulgaria. Bulgaria is located on the Balkan Peninsula in South Eastern Europe beside the Black Sea. Bulgaria joined NATO in 2004 and became a member of the European Union in 2007. Based on per capita income, the country is the poorest member of the EU. It will require more than 20 years for Bulgaria to achieve a per capita income that is two-thirds the EU average. Manufacturing accounts for 16.2% of GDP and employs 21.1% of the workforce while agriculture accounts for 6.6% of the workforce.

Until 1990 Bulgaria foreign trade remained a state monopoly, supervised and controlled by the Ministry of Foreign Trade. Ninety percent of the export items before WW II consisted of agricultural products, mainly foodstuffs. The other important items were fuels, machinery, finished consumer goods and raw materials. After WW II and the fall of the Soviet bloc the geographic distribution of trade changed: whereas Bulgaria's foreign trade had centered around Western and Central Europe, after WWII the focus of trade shifted to the Communist bloc (<http://www.mapsofworld.com/bulgaria/economy/foreigntrade.html>). Currently, approximately 50.4% of Bulgaria's export to 3rd countries goes to Turkey, China, Russia, Serbia, Macedonia, and U.S. In dollar terms, Bulgarian exports grew by 36.0% in 2011. Exports to other EU markets amounted to 62.5% of the total in 2011 (Euromonitor International, 2012).

Country background: China. According to a report by Euromonitor International (2012), since the Chinese government launched its “reform and opening-up” strategy in 1978, China has significantly increased its share of world trade, global markets for selected goods and capital flows, and this trend is expected to accelerate over the next five years. China is gaining an ever growing presence throughout the world through its exports and investments and experts expect Chinese companies’ investments overseas to see explosive growth in the next decade, especially with China’s “Go Global” strategy being part of the official 12th Five-year Plan (2011-2015) announced by the government in March 2011.

Strengthening of Bulgaria-China relations. China and Bulgaria are traditional friendly countries. At the beginning of the foundation of the People’s Republic of China in 1949, Bulgaria, after the former Soviet Union, became the second country that established diplomatic relations with PRC (<http://www.ceibs.edu/ase/Documents/EuroChinaForum/2006-06.htm>, retrieved 1/17/2013). Since that time, there has been a strengthening of economic relations between the two countries. For example:

- ◆ Chinese are interested in Bulgarian wine. China imported over 1 million bottles of Bulgarian wine for the 2013 Chinese New Year (<http://blog.radevtrade.com/china-will-import-over-1-million-bottles-of-bulgarian-wine-for-the-upcoming-chinese-new-year/>; retrieved 1/17/2-13).
- ◆ Bulgaria’s Economy Ministry says the country could increase its exports of foods, wines, copper and lead to China. Its data shows that in the first four months of 2010 Bulgaria’s export to China grew by 400% year-on-year (<http://www.investbulgaria.eu/a/en/news-a-events/108-prc-commerce-minister-bulgaria-could-be-chinas-eu-door.html>).
- ◆ According to PRC Commerce Minister Chen Deming, Bulgaria has the potential to become the ‘bridge’ for the transfer of Chinese technologies and investments to the European Union (<http://www.investbulgaria.eu/a/en/news-a-events/108-prc-commerce-minister-bulgaria-could-be-chinas-eu-door.html>).
- ◆ In February 2012, Great Wall Motor became the first Chinese automaker to open an assembly plant in Europe, when it opened an assembly plant near the town of Lovech in northern Bulgaria, together with its Bulgarian partner Litex Motors. The plant aims to produce 50,000 vehicles per year for the whole continent in northern Bulgaria (<http://www.eubusiness.com/news-eu/bulgaria-china.fbp>).
- ◆ A second large Chinese automotive joint venture project in Bulgaria is scheduled for completion around 2015 by BYD Auto Co Ltd of China and Bulmineria of Bulgaria. This plant, about 150 km east of Sofia, is expected to produce 50,000 vehicles annually. The plant will produce electric cars and electric buses with the first sample bus expected to be rolled out in early 2013
- ◆ In November 2012, with the assistance of Office of Trade and Economic Affairs at the Embassy of Bulgaria in Beijing, the Bulgarian-Chinese Chamber of Commerce and Industry delegation established business contacts with the Chinese Golf Association and the first 100 golfers are expected to come to Bulgaria for the “Volva open” tournament to be held in Bulgaria in May, 2013 (<http://bulgariachina.com/en/news/View/47.bulgaria-becomes-an-attractive-golf-destination-for-chinese-golfers.html>).
- ◆ One of Chinese government’s top priorities is the construction of a Bulgarian-Chinese industrial zone near Sofia (<http://bnr.bg/sites/en/Lifestyle/BulgariaAndWorld/Pages/1609china.aspx>; retrieved 1/17/2013).

Increased trade between Bulgaria and China has contributed to increased exposure by Bulgarian citizens to products made in China. Likewise, Chinese citizens have had increased exposure to products made in Bulgaria. For firms from Bulgaria involved in and/or considering exporting to China, it would be beneficial to know the Chinese perception of products made in Bulgaria. And, for firms from China involved in and/or considering exporting to Bulgaria, it would be beneficial to know the Bulgarian perception of products made in China. These results have strategic implications for managers from Bulgaria, as well as managers from China. A brief overview of the research in areas relevant to the current paper is presented below.

1. Relevant literature

Foundational studies related to research on stereotyping of products based on their origin originated over 40 years ago with Schooler’s (1965) foundational study. The country-of-origin effect has been defined as “buyers” opinions regarding the relative qualities of goods and services produced in various countries (Bilkey, 1993, p. 19). The country-of-origin effect refers to consumers’ tendencies to view products from a given country in a consistent fashion, which results in national stereotyping. According to Johansson and Thorelli (1985), this stereotyping must be taken into consideration when determining an appropriate marketing strategy for imported goods since the source country of an imported product will often be a salient factor in the consumer’s evaluation

process. They posit that the effect of country stereotype will be to shift the position of the product within the consumer's perceptual space and thereby alter the overall evaluation of its merits. The final outcome of this process, according to Johansson and Thorelli (1985), is that the competitive strength of the product will be affected by country biases and country stereotyping may help explain differences in perceptions of the quality of products due to country-of-origin (Liu and Johnson, 2005).

The primary aspect of the country-of-origin effect is that consumers form an image of various countries and their products, which in turn, may affect purchase behavior. Research has demonstrated that a consumer's image of the country in which a product was made influences the evaluation and, in some cases, the purchase intention of products from a given country (Schooler, 1971; Bilkey and Nes, 1982; Erickson, Johansson and Chao, 1984; Johansson, Douglas and Nonaka, 1985; Johnson and Thorelli, 1985; Barker, 1987; Darling and Arnold, 1988; Han and Terpstra, 1988; Hong and Wyer, 1989; Thorelli, Lim and Ye, 1989; Papadopoulos, Heslop and Bamossy 1990; Roth and Romeo 1992; Baughn and Yaprak, 1993; Chao, 1993; Gurhan-Canli and Maheswaran, 2002; Klein, 2002; Olsen and Olsson, 2002).

While most authors agree that country-of-origin image has a direct influence on product evaluations, other authors suggest that the country-of-origin image indirectly affects purchase intention through other variables such as product evaluation, brand image, brand equity and perceived value (Hui and Zhou, 2002; Parameswaran and Pisharodi, 2002; Cervino, Sanchez and Cubillo, 2005). Liefeld (1993) documented that the saliency of country-of-origin effects on consumer perceptions may be dependent upon product type. For example, Bandyopadhyay (2001) chose to evaluate consumer perceptions of electrical and electronic products for their relevance as status symbols within India's emerging consumer market. Some research studies have focused on the comparison of multiple product categories within single studies, such as automobiles and blenders from both Germany and South Korea (Parameswaran and Pisharodi, 1994) or Japanese, Canadian and Mexican stereos placed within German and South Korean automobiles (Bluemelhuber, Carter and Lambe, 2007).

Some debate exists about whether product quality images are global in nature or product-specific. Research conducted using the general image of a country's products usually use the approach of Nagashima (1977) which asks respondents to rate "products from country..." Research conducted using the specific-product approach generally

asks respondents to rate specific product categories, such as electrical, or specific products, such as television sets.

2. Methodology

2.1. Research design and sample. The research instrument consisted of a self-explanatory, self-administered questionnaire which contained several independent scales which were used to measure different attributes of the research project. One section of the survey instrument presented respondents with a five point scale (*very low to very high*) asking them to rate the quality of products (i.e., products in general) as well as the quality of mechanical products, food products, fashion merchandise and electrical products. Respondents from Bulgaria rated their country's domestic products as well as their perception of Chinese products while respondents from China rated their country's domestic products as well as their perception of products from Bulgaria. In addition, respondents were asked to indicate 'how likely are you to purchase a product made in Bulgaria' and 'how likely are you to purchase a product made in China on a 7 point scale where 1 = *not at all likely to purchase* and 7 = *very likely to purchase*.

The questionnaire was originally written in English and then translated into Chinese and Bulgarian using two iterations of translation/back translation (Insch and McBride, 2004; Pereira et al., 2002; Sinaiko and Brislin, 1973; Brislin, 1970). The questionnaires were then pre-tested in the two countries. The pretest subjects were instructed to complete the questionnaire written in their country's language and to note any ambiguity in the phrasing in the items of the questionnaire. No major discrepancies in the accuracy of the translations were identified during this process.

This study uses two sampling techniques: convenience sampling and judgment sampling based on the judgment of the individual in charge of data collection in each country. In order to collect the data, one of the researchers worked with a colleague from each of the two countries who is knowledgeable in international trade for their respective country. The colleagues were asked to collect data from respondents who are somewhat familiar with international trade in their country. Respondents from Bulgaria were located in Sophia, Bulgaria while respondents from China were located in Xi'an, China. Thus, for both countries the sample represents a metropolitan population of respondents who have some knowledge of their country's international trade. The study collected data using both online and offline surveys. Respondents were given the option of filling out the survey either electronically or on a paper copy and were also given the option of answering the survey

written in English or in their country's language (i.e., Chinese or Bulgarian). The survey was administered between March and August 2011.

2.2. Respondent characteristics. There were a total of 315 respondents from China and 130 from Bulgaria. For respondents who indicated their gender, there were a total of 109 male respondents from China and 65 male respondents from Bulgaria. There were 135 females from China and 53 female respondents from Bulgaria. Age categories were listed as 18-25, 26-35, 36-45, 46-55 and 56 and older. For those subjects who ranged in age from 18-25 years 42.8% ($n = 130$) were Chinese and 3.3% ($n = 10$) were Bulgarian; 12.5% of the Chinese respondents ($n = 38$) and 10.9% of the Bulgarian ($n = 33$) were in the 26-35 year age category; 4.9% of the Chinese respondents ($n = 15$) and 14.1% of the

Bulgarian subjects ($n = 43$) marked the 35-45 year age category; 1.3% of the Chinese respondents ($n = 4$) and 7.6% of the Bulgarian subjects ($n = 23$) were in the 46-55 year age category and 0.0% of the Chinese respondents ($n = 0$) with 2.6% of the Bulgarian subjects ($n = 8$) were aged 56 or older.

3. Results

3.1. Perception of quality of products in general.

As presented in Table 1, respondents from both China and Bulgaria tended to view the quality of products made in Bulgaria to be of medium quality and respondents from both countries viewed the quality of products made in China to be of medium quality. The ANOVA does not indicate a significant difference between respondent ratings from the two countries.

Table 1. Perceived quality of products in general by respondents from Bulgaria and China

	ANOVA		Means		
	F Ratio	df	Sig.	China	Bulgaria
Quality of Bulgarian products	0.1876	1.384	0.6651	3.2748	3.2358
Quality of Chinese products	0.3687	1.407	0.5440	3.4842	3.4228

Note: 7 point scale: 1 = very low, 7 = very high.

3.2. Perception of the quality of mechanical products. As shown in Table 2, the ANOVA reveals a significant difference between respondents from Bulgaria and respondents from China in their perception of the quality of mechanical products made in China ($F = 8.0402$, $df = 1.400$, $sig. = .0048$). The Chinese respondents rate the quality somewhat higher ($mean = 3.5863$) than do Bulgarian respondents ($mean$

$= 3.2927$). One may question the practical significance, however. Although the ANOVA revealed a significant difference between respondents from Bulgaria and respondents from China in their perception of the quality of mechanical products made in China, there is not a significant difference found by respondents when considering mechanical products made in Bulgaria.

Table 2. Perceived quality of mechanical products by respondents from Bulgaria and China

	ANOVA			Means	
	F ratio	df	Sig	China	Bulgaria
Quality of Bulgarian mechanical products	3.1145	1.381	0.0784	3.2625	3.0976
Quality of Chinese mechanical products	8.0402	1.400	0.0048	3.5863	3.2927

Note: 7 point scale: 1 = very low, 7 = very high.

3.3. Perception of the quality of food products. As reported in Table 3, Bulgarian respondents view the quality of their food products to be of better quality than do respondents from China. The mean rating for Chinese respondents when viewing food made in Bulgaria is 3.3142, indicating medium quality; the mean rating of the Bulgarian respondents for their domestic food products is 3.8537, which is somewhat higher. As indicated in Table 3, the results of the

ANOVA indicate that this is statistically significant ($F = 35.8032$, $df = 1383$, $p = 0.0000$). Also shown in Table 3, the ANOVA reveals statistically significant responses between the Bulgarian and Chinese respondents when viewing the quality of food products made in China ($F = 26.5995$, $df = 1.396$, $p = 0.000$). Chinese respondents view the quality of Chinese food products as being higher in quality than do the Bulgarian respondents.

Table 3. Perceived quality of food products by respondents from Bulgaria and China

	ANOVA			Means	
	F ratio	df	Sig	China	Bulgaria
Quality of Bulgarian food products	35.8032	1.383	0.0000	3.3142	3.8537
Quality of Chinese food products	26.5955	1.396	0.0000	3.3127	2.6639

Note: 7 point scale: 1 = very low, 7 = very high.

3.4. Perception of the quality of fashion merchandise. When viewing fashion merchandise made in Bulgaria, respondents from both countries viewed the Bulgarian fashion merchandise to be in the medium product quality range ($mean = 3.2510$ for Chinese respondents and $mean = 3.2295$ for Bulgarian respondents). As indicated in Table 4, the results of the ANOVA were not significant when considering fashion merchandise made in Bulgaria. However, the ANOVA reveals a significant

difference between respondents from the two countries in their perceptions of the quality of fashion merchandise made in China ($F = 48.5263$, $df = 1.392$, $p = 0.0000$). An examination of the group means shows that Bulgarian respondents viewed fashion merchandise made in China to be of low quality ($mean = 2.9752$) while Chinese respondents viewed fashion merchandise from their country to be of a higher quality than did the Bulgarian respondents ($mean = 3.6654$).

Table 4. Perceived quality of fashion merchandise by respondents from Bulgaria and China

	ANOVA			Means	
	F ratio	df	Sig.	China	Bulgaria
Quality of Bulgarian fashion merchandise	0.0449	1.380	0.8323	3.2510	3.2295
Quality of Chinese fashion merchandise	48.5263	1.392	0.0000	3.6654	2.9752

Note: 7 point scale: 1 = very low, 7 = very high.

3.5. Perception of the quality of electrical products. The results of the ANOVA, presented in Table 5 found there to be a statistically significant difference ($F = 0.5795$, $df = 1.1391$, $p = 0.4470$) between respondents from China and Bulgaria when viewing the quality of electrical products made in China. Bulgarian respondents rated electrical products made in China somewhat higher in quality

($mean = 3.6393$) than did Chinese respondents ($mean = 3.5593$). It is interesting to note that Chinese respondents rated electrical products made in Bulgaria much higher in quality ($mean = 3.2569$) than the Bulgarians rated them ($mean = 2.6967$). The results of the ANOVA indicate that this finding is statistically significant ($F = 30.6760$, $df = 1.374$, $p = 0.0000$).

Table 5. Perceived quality of electrical products by respondents from Bulgaria and China

	ANOVA			Means	
	F ratio	df	Sig.	China	Bulgaria
Quality of Bulgarian electrical products	30.6760	1.374	0.0000	3.2569	2.6967
Quality of Chinese electrical products	0.5795	1.391	0.4470	3.5593	3.6393

Note: 7 point scale: 1 = very low, 7 = very high.

3.6. Gender and age differences. Some research studies have indicated that gender and/or age may directly affect the attitude toward a product or the evaluation of product quality and in some circumstances the evaluation and purchase intention may be moderated by gender or age (Orth and Firbasova, 2003; Quester and Chong, 2001; Bailey and Gutierrez de Pineros, 1997; Bhuian, 1997; Liefeld et al., 1996; Lawrence, Marr and Prendergast, 1992; Wall and Heslop, 1986; Joannson, Douglas and Nonaka, 1985; Schooler, 1987).

In order to determine if there are gender differences between respondents from each country, ANOVA was completed. Likewise, for age differences in perceived product quality or likelihood to purchase a product, ANOVA was completed.

3.7. Gender differences in perceived product quality. As shown in Table 6, the results of the ANOVA ($F = 5.3353$, $df = 1.225$, $p = 0.0218$) indicate that Chinese males consider the quality of mechanical products made in Bulgaria to be higher in quality than do Chinese females.

Table 6. Perceived quality of mechanical products by Chinese subjects by gender

	ANOVA			Means	
	F ratio	df	Sig.	Male	Female
Quality of Bulgarian mechanical products	5.3353	1.225	0.0218	3.4200	3.1429
Quality of Chinese mechanical products	0.0040	1.238	0.9498	3.6154	3.6074

Note: 5 point scale: 1 = very low, 7 = very high.

The results of the paper showed that there were no gender differences found in the perception of Bulgarian respondents when viewing the

perceived quality of Bulgarian mechanical products or the perceived quality of Chinese mechanical products.

3.8. Age differences in perceived product quality.

There were five age categories utilized for the current study: Group One: 18-25; Group Two: 26-35; Group Three: 36-45; Group Four: 46-55 and Group Five: 56 and older. In order to determine if age was a factor in how the Bulgarian respondents and the Chinese respondents viewed product quality, the ANOVA procedure was used.

3.8.1. Chinese respondents. There was a significant overall difference between the age categories of Chinese respondents' perception of the quality of Chinese food products ($F = 1.9462$, $df = 3.174$, $p = 0.1240$). The Scheffe test could not pinpoint the specific difference between any two groups (Table 7).

Table 7. Perceived quality of food products by Chinese subjects by age

	ANOVA			Means				
	F ratio	df	Sig.	18-25	26-35	36-45	46-55	56+
Quality of Bulgarian food products	1.9462	3.174	0.1240	3.3659	3.0000	3.2143	3.5000	-
Quality of Chinese food products	3.1477	3.181	0.0264	3.4921	2.8919	2.8667	4.0000	-

Note: 7 point scale: 1 = very low, 7 = very high.

3.8.2. Bulgaria Respondents. As indicated in Tables 8-11, age was a factor in the perception of the perceived quality of Bulgarian respondents when viewing the quality of domestic products in general, as well as the quality of mechanical products, fashion merchandise, and electrical products made in Bulgaria and the quality of fashion merchandise made in China.

A significant difference ($F = 7.3099$, $df = 4.116$, $p = 0.0000$) was found between the age groups of Bulgarian respondents when considering the quality of Bulgarian products in general. Using the Scheffe method, significant differences were found between the 18-25 year olds and 36-45, 46-55 and 56+ age groups (see Table 8).

Table 8. Perceived quality of products in general by Bulgarian subjects by age

Bulgarian subjects by age	ANOVA			Means				
	F ratio	df	Sig.	18-25	26-35	36-45	46-55	56+
Quality of Bulgarian products	7.3099	4.116	0.0000	3.9000	3.4242	3.0698	3.0870	3.0000
Quality of Chinese products	0.6291	4.116	0.6428	3.4000	3.3333	3.4419	3.6957	3.5000

Note: A Scheffe test showed a significant difference between group 1 and group 5, 3, 4 for quality of Bulgarian products; 7 point scale: 1 = very low, 7 = very high.

A significant difference ($F = 3.1549$, $df = 4.116$, $p = 0.0169$) was found between the perceptions of age groups of Bulgarian respondents when considering the quality of mechanical products

made in Bulgaria. The results of the Scheffe test show that the difference is between the 18-25 year age category and the 46-55 year age category (refer to Table 9).

Table 9. Perceived quality of mechanical products by Bulgarian subjects by age

Bulgarian subjects by age	ANOVA			Means				
	F ratio	df	Sig.	18-25	26-35	36-45	46-55	56+
Quality of Bulgarian mechanical products	3.1549	4.116	0.0169	3.7000	3.2424	3.0233	2.8696	3.1250
Quality of Chinese mechanical products	0.8815	4.116	0.4775	3.5000	3.4545	3.1163	3.1739	3.3750

Note: A Scheffe test showed a significant difference between group 1 and group 4 for Bulgarian mechanical products; 7 point scale: 1 = very low, 7 = very high.

Table 10 presents the results of the ANOVA when Bulgarian respondents view the quality of fashion merchandise. A significant difference ($F = 5.6819$, $df = 4.116$, $p = 0.0003$) was found by Bulgarians viewing domestic fashion merchandise. The results of the Scheffe test indicate the difference to be between 18-25 and 36-45 age category as well as

the 18-25 and 46-55 age category. The results of the ANOVA also found a significant overall difference between age categories of Bulgarian respondents' perception(s) of the quality of Chinese fashion merchandise. The Scheffe test could not pinpoint the specific difference between any two groups.

Table 10. Perceived quality of fashion merchandise by Bulgarian subjects by age

Bulgarian Subjects by age	ANOVA			Means				
	F ratio	df	Sig.	18-25	26-35	36-45	46-55	56+
Quality of Bulgarian fashion merchandise	5.6819	4.116	0.0003	3.9000	3.4848	3.0000	2.9565	3.0000
Quality of Chinese fashion merchandise	3.5290	4.115	0.0095	2.5556	3.2727	2.7209	3.2609	3.0000

Note: A Scheffe test showed a significant difference between group 1 and groups 4, 3 for Bulgarian fashion merchandise; 7 point scale: 1 = very low, 7 = very high.

A significant difference was found between the age groups of Bulgarian respondents when viewing the quality of electrical products made in Bulgaria ($F = 6.0369$, $df = 4.116$, $p = 0.0002$).

The results of the Scheffe test indicate that the significant differences are between the 18-25 year age category and all other age categories except the 26-35 year age category.

Table 11. Perceived quality of electrical products by Bulgarian subjects by age

Bulgaria subjects by age	ANOVA			Means				
	F ratio	df	Sig.	18-25	26-35	36-45	46-55	56+
Quality of Bulgarian electrical products	6.0369	4.116	0.0002	3.6000	2.9394	2.4651	2.5217	2.2500
Quality of Chinese electrical products	0.5866	4.116	0.6730	3.6000	3.5455	3.5814	3.6957	4.1250

Note: A Scheffe test showed a significant difference between group 1 and groups 5, 3, 4 for Bulgarian electrical products; 7 point scale: 1 = very low, 7 = very high.

It should be noted that the perceived quality of food products made in Bulgarian did not vary significantly based on the age of the Bulgarian respondents nor were significant differences found between age categories of the Bulgarian respondents when viewing the quality of Chinese food products.

3.9. Likelihood of purchase. Due to the difficulty of measuring consumers' purchase of products, the consumer's willingness to buy the foreign product is used as a viable proxy for the actual purchase. Several studies have previously validated specific variables, including purchase intention (Han, 1988), likelihood of purchase (Liefeld, 1993), willingness to buy (Klein, Ettenson and Morris, 1998) and reluctance to buy (Suh and Kwon, 2002) to serve as acceptable indicators or future purchase behavior. Respondents were asked to indicate 'how likely are you to purchase a product made in Bulgaria' and 'how likely are you to purchase a product made in China on a 7 point scale where 1 = *not at all likely to purchase* and 7 = *very likely to purchase*.

For products made in Bulgaria, the majority of respondents indicated that they would be likely to purchase. Almost 25% of the total respondents stated that they would be likely to purchase, 22% of the respondents indicated that they would be very

likely to purchase and 11% of the respondents would definitely purchase a product made in Bulgaria. However, when examining the percentages by respondents' country, one finds that 49.0% of the Chinese respondents indicated that they would be likely, very likely or definitely likely to purchase products made in Bulgaria, 77.7% of the Bulgarian respondents indicated that they would purchase domestic products. As indicated in Table 6, the results of the ANOVA indicate that these results are statistically significant ($F = 39.8350$, $df = 1400$, $p = 0.0000$). When asked the likelihood of purchasing a product made in China, 20.9% of the respondents indicated that they would be likely, 24.4% very likely and 27.9% definitely likely to purchase a product made in China. Chinese respondents (81.4%) are more likely to purchase a domestic product than Bulgaria respondents (56.6%) are likely to purchase a product made in China.

Table 12 presents the results of the ANOVA. There were statistically significant differences found in the responses of the respondents from the two countries ($F = 50.0584$, $df = 1.429$, $p = 0.0000$). The Chinese respondents are more likely to purchase products made in China than are the Bulgarian respondents.

Table 12. Likelihood of purchasing Bulgarian or Chinese products

	ANOVA		Means		
	F Ratio	df	Sig.	China	Bulgaria
Would you purchase Bulgarian products?	39.8350	1.400	0.0000	4.1882	5.2846
Would you purchase Chinese products?	50.0584	1.429	0.0000	5.6279	4.4884

Note: 7 point scale: 1 = not at all likely to purchase, 7 = very likely to purchase.

3.9.1. Likelihood of purchasing products by Chinese respondents by gender. There were no significant differences found in the perceived product quality of Chinese products or Bulgarian products between male and female respondents from China.

3.9.2. Likelihood of purchasing products by Bulgarian respondents by gender. The results of the

ANOVA presented in Table 13 show a significant difference ($F = 4.6278$, $df = 1.117$, $p = 0.0335$) between the likelihood of the purchase of a Chinese product by male and female respondents from Bulgaria. Male respondents indicated that they were more likely to purchase Chinese products than female respondents.

Table 13. Likelihood of purchasing products by Bulgarian respondents by gender

Bulgarian subjects by gender	ANOVA			Means	
	F ratio	df	Sig.	Male	Female
Would you purchase Bulgarian products?	0.0157	1.117	0.9006	5.2923	5.3208
Would you purchase Chinese products?	4.6278	1.117	0.0335	4.8462	4.3208

Note: 7 point scale: 1 = not at all likely to purchase, 7 = very likely to purchase.

3.9.3. Age differences in likelihood of purchase by age of Chinese respondents. As indicated in Table 14, age is a factor when Chinese respondents were asked if they would purchase Bulgarian products ($F = 3.4684$, $df = 3.169$, $p = 0.0176$). Overall, Chinese respondents between the ages of 26-35 were the least likely to purchase Bulgarian products while Chinese respondents between the

ages of 46-55 were the most likely to purchase products made in Bulgaria. A Scheffe test indicates that there is a significant difference between the 18-25 year and the 26-35 year age categories. There were no significant differences found between age groups when Bulgarian respondents were asked if they would purchase Chinese products.

Table 14. Likelihood of purchase by Chinese respondents by age

	ANOVA			Means				
	F ratio	df	Sig.	18-25	26-35	36-45	46-55	56+
Would you purchase Bulgarian products?	3.4684	3.169	0.0176	4.2479	3.2500	4.3571	5.0000	-
Would you purchase Chinese products?	1.0177	3.183	0.3861	5.6220	5.1842	5.6000	6.2500	-

Note: A Scheffe test showed a significant difference between groups 1 (18-25) and 2 (26-35) for Bulgarian products; 7 point scale: 1 = not at all likely to purchase, 7 = very likely to purchase.

3.9.4. Age differences in likelihood of purchase by age of Bulgarian subjects. As presented in Table 15 there was not a significant difference between age groups of Bulgarian respondents when asked if they would purchase products made in China. The results of the ANOVA ($F = 3.4907$, $df = 4.116$, $p = 0.0100$) indicate that there is a statistically significant difference when Bulgarian

respondents were asked if they would purchase domestic products. Using the Scheffe method, significant differences were found between the 18-25 year age category and the 36-45 year age category. For all age categories, the 18-25 year age category were the most likely to purchase Bulgarian products while the 36-45 age category were the least likely.

Table 15. Likelihood of purchase by Bulgarian respondents by age

Bulgaria subjects by Age	ANOVA			Means				
	F Ratio	df	Sig.	18-25	26-35	36-45	46-55	56+
Would you purchase Bulgarian products	3.4907	4.116	0.0100	6.3000	5.5758	4.9070	5.3043	5.1250
Would you purchase Chinese products	1.1160	4.116	0.3526	3.9000	4.6667	4.5814	4.9565	4.5000

Note: A Scheffe test showed a significant difference between group 1(18-25) and group 3 (36-45) for purchase of Bulgarian products. 7 point scale: 1 = not at all likely to purchase, 7 = very likely to purchase.

Conclusions, limitations and future research

From a strategic management/planning perspective, marketing managers planning to export their product(s) into a country need information about consumers' perception of products from the exporting country. Likewise, knowledge of the perceptions of consumers from the 'home' country toward the products from an exporting country would be beneficial for managers planning to import product(s). The results of the survey reported in this paper have allowed us to examine the perception of the quality of products made in Bulgaria by respondents from Bulgaria as well as respondents from China and compare these perceptions to the perception of the quality of products made in China by respondents from Bulgaria and by respondents from China. These

results will be beneficial to managers from China and Bulgaria in their strategic planning process. Managers from Bulgarian firms and managers from Chinese firms want to import products from a country with a reputation for having good quality products. Managers from Bulgaria who plan on exporting to China and managers from China who plan on exporting to Bulgaria would also want to know consumer perceptions of their home country's product(s).

The strategic window of opportunity provided by favorable product quality perceptions must be taken advantage of while it exists. For negative product perceptions, strategies must be implemented to change the negative perception. Advertising is one area where this information would be useful. Where the country-of-origin image is positive managers

from China and Bulgaria could emphasize that the product was made in their country. Where the country-of-origin implies a negative image the advertising should stress product attributes.

The respondents from both Bulgaria and China represent a metropolitan population of respondents who have some knowledge of their country's international trade. This limits generalizability of the findings to other cities and areas of the respective

countries. The study also has a limited number of product categories. Future research will focus on acquiring samples from more areas of each country and also expanding the number and type of product categories. It would also be interesting to see how involved respondents are with the product categories and if they have actually purchased a product in that category from either their home country or the exporting country.

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