

# **Regional preferences in the Japanese seafood consumption: Consumer purchasing behavior on domestic vs. imported seafood**

D.A.M. De Silva, University Of Hiroshima  
Masahiro Yama, University Of Hiroshima

Department of Food and Environmental economics, Graduate school of  
Biosphere sciences, University Of Hiroshima, 1-4-4, Kagamiyama, Higashi  
Hiroshima, 739-8528, Japan. [achini\\_lk@yahoo.co.uk](mailto:achini_lk@yahoo.co.uk) and [Yamao@hiroshima-u.ac.jp](mailto:Yamao@hiroshima-u.ac.jp)

## **Abstract**

Japan as a global seafood powerhouse with large imports is [get rid of passive sentence constructions] reinventing its seafood custom. Whilst there [do not use “there” anywhere] is extensive research about seafood consumption, seafood imports and regional preferences, research into consumer evaluation of seafood based on product attributes, country of origin attributes and impact of ethnocentrism on seafood evaluation has been limited within the context of Japan. This research addresses these deficiencies by researching consumer evaluations of various product attributes of seafood of imported vs. domestic origin, regional variations in evaluation and explore the phenomenon of ethnocentrism and its effects on domestic purchasing behavior. The study presents the results of a questionnaire survey of 122,108 and 126 respondents from Tokyo, Osaka and Hiroshima respectively and 15 in-depth interviews. The findings reveal on overall positive image of imported seafood relative to those of domestic origin. Even seafood is deeply attached to the Japanese culture; none of the sub samples appears highly ethnocentric. Regional comparison reveals that on average most ethnocentric consumers was from Tokyo and Osaka.

**Key words:** Seafood, product attributes, country of origin, ethnocentrism, domestic purchasing behavior.

## **Introduction**

Japan is still the world’s largest consumer of fish and fishery products, at 8723000 MT for 2004 (2253209 MT was imported), but at 73kg/per capita, Iceland (88kg/per capita) overtakes its consumption rate (National Marine Fisheries Service, (2004); Statistical Bureau of Japan (2004). Fish is central to the Japanese diet, and Japanese households spend more on seafood than on chicken, beef and pork combined (Johnson et al, 1998). Japanese consumers devote 17 percent total at home food expenditures to fish and shell fish, compared to 12 percent on pork, beef and chicken combined (Statistics Bureau of Japan, 2005). Japan was once the world’s top catcher of fish but has been overtaken by China (Fish chain, 2001). Imports grew rapidly, due primarily to the decline in catches by the Japanese distant water fleet since the introduction of 200 mile limits, decrease of coastal fish stocks because of over fishing, and the limitations to the expansion of aquaculture such as pollution, available sites with clam seas and good currents. Consumption of seafood in Japan is on the decline and younger consumers prefer meat than the seafood, while the sales volume for fresh fish products show a slight decline, and the value of purchase has dropped considerably (Statistics Bureau of Japan, 2005). The general recession in Japanese

consumer is looking for bargains in all sectors in order to maintain their standard of living, but this is having a major effect on the seafood industry and wholesale prices (Statistics Bureau of Japan, 2005). Dynamic changes in the socio-economic environment, including the economic recession, reduced family expenditure, seriously influenced the attitudes and behavior of consumers in Japan, and consequently affected their purchasing habits preferences and inclinations. Japan ranked as net exporter of fish and fishery products to the international market, until early 1970's (Ministry of Agriculture, Forestry and Fisheries, 2004). Fish imports experienced steady increase during 1970s and the balance of fish trade became negative. Japan is the world's largest importer of fish and fishery products, both in volume and value, i.e. 14 and 23 percent (in volume) respectively of world's share in 2001 (Food and Agriculture Organization, 2003). Many seafood exporting nations are wishing to import seafood products into Japan. On the other hand, there [get rid of all "there"] are many potential buyers, that would willingly accept, foreign seafood product exports such as large-scale food processors, super-market chains and restaurant businesses have strong demands for buying large quantities of seafood products at prices as low as possible (Japan External Trade Research Organization, 1997). The knowledge on supply demand trends, consumer perceptions, attitudes towards imported vs. domestic seafood, regional variations of seafood consumption and consumer appreciation of imported products represent information important for exporters around the world.

This article presents the results of a wider research study on consumer behavior in three main cities of Japan. Research on the factors affecting the choice of consumers between domestically caught fish and fishery products and imported fish and fishery products attracted several researches. Fish is important part of Japanese culture and research on cultural sensitivity and ethnocentrism demanded high.

The aim of the current research is three fold. One, to compare the consumer evaluations of various attributes of seafood products of imported vs. domestic origin. Second, to analyze the regional variations in evaluation of domestic vs. imported seafood products. Finally to explore the phenomenon of economic ethnocentrism and its effects on domestic purchasing behavior.

Prior publications include little research to discover the factors that affect choice between domestic versus imported seafood by Japanese consumers. This study attempts to bridge this gap by examining the impact of consumer ethnocentrism, and imported seafood product judgment on the intention to buy domestic seafood. This paper is organized around four points, introduction, conceptual framework and method, results and discussion and conclusions. There is little evidence of previous research related to consumer ethnocentrism on non-durable products, especially on food stuff. The literature in the field of international marketing supports the notion that information on the country of origin of products affects the decision-making process of both final consumers and industrial customers alike (Vida and Dmitrovic, 2001). This research investigates whether those with high levels of ethnocentrism favor domestically produced seafood more than those with low levels. Moreover study focuses to identify the relationship between consumer evaluations of the product attributes and the ethnocentrism.

#### **Literature review and conceptual framework**

Consumer decision-making may show biases in that they either favor domestically produced seafood over imported seafood. Early conceptualization of ethnocentrism

has been used predominantly in the social psychology, where the concept was defined as “the view of things in which one’s own group is the centre of everything, and all others are scaled and rated with reference to it” (Sumner, 1906). Ethnocentrism defines as an individual who tends to be “ethnically-centered”, meaning to strongly accept the culturally ‘alike’ and reject the culturally “unlike” (A’dorno et al., 1950). According to the literature, ethnocentrism is seen from an evaluative perspective, as an attitude of judging all other cultures by the standards of one’s own culture (Vida and Dimitrovich, 2001). Fish is playing important role in Japanese culture. When it comes to purchase decision of fish, it may have significant impact of ethnocentrism and cultural sensitivity. In the consumer literature, consumer ethnocentrism denotes the beliefs held by consumers about the appropriations and morality of purchasing foreign-made products (Shimp and Sharma, 1987). For highly ethnocentric consumers, purchasing foreign products leads to job less, hurts the economy, and is viewed as un-patriotic behavior (Tho et al., 2004). Although it would be expected that increased globalization of markets would decrease consumer sensitivity to product origins, many studies suggest that as globalization intensifying consumers perceptions of foreign product and hence, the country of origin intensifies (Philp and Brown, 2003) Ethnocentric tendencies are significantly negatively correlated with attitudes towards foreign products (Shimp and Sharma (1987); Ulgado and Lee (1998); Speece and Pinkaco (2002); Klein (2002). Therefore, it can be proposed that ethnocentric Japanese consumers willing to buy domestically produced seafood compared to imported seafood.

1. Ethnocentric tendencies can rate from highly ethnocentric to non-ethnocentric, where by a consumer on the high end of the spectrum believe that purchasing of foreign made product is morally wrong (Vida and Dmitrovic, 2001). JETRO (1997) report on seafood products states that Japanese consumers do not mind whether the fish they buy is domestically produce or imported. Japanese have been accustomed to consuming what is available in a particular season. Moreover, due to imports, many fish varieties are now available outside their normal seasons in Japan. However, little research literature have available, the current research incorporated both qualitative and quantitative phases in order to clarify the issues related to consumer ethnocentrism impacts on purchase decisions of seafood products.
2. On the other hand, highly non- ethnocentric consumers may view foreign products as better because they are not produced in their own country (Vida and Dimitrovic, 2001).

Based [passive; revise]on the previous research, following hypotheses were proposed.

H1: There[get rid of all “there”] is a positive relationship between consumer evaluations of the attributes of seafood products and its domestic origin.

H2: There is a positive relationship between consumer ethnocentrism and intention to buy domestically produced seafood.

H3: There is a positive relationship between the age, level of education, occupation and gender of the consumers and ethnocentrism

This study used three constructs: foreign product judgment, consumer ethnocentrism, and intention-to-buy local products.

### **Method**

Once consumer evaluations of the attributes of seafood, ethnocentrism and purchasing behavior issues were clarified by the literature survey, a field survey was conducted. In-depth interviews were conducted prior to the survey. These were carried-out with purposively selected individuals from a cross-section of ages, genders, Socio-economic status, cultural exposure and locations of Tokyo, Osaka and Hiroshima. Same procedure was followed by Shimp and sharma (1987) and Craig and Douglas (1992), in pervious research related to consumer ethnocentrism levels based on demographics. The interview schedule was followed by the previous research and modified to suit for non-durable goods such as seafood. Interview schedule, two consumers each from Hiroshima and Osaka, was pre-tested before grounding the in-depth interviews among 15 respondents in Tokyo, Osaka and Hiroshima. Interviews were carried out during the evenings at consumer's residents. Prior to the interview, the date and time was arranged through telephone conversation.

For the purpose of this research, three selected locations, Tokyo, Osaka and Hiroshima, were considered as geographically distinct separate markets. The reasons for constructing three sub-samples in Japan were two fold: First research anticipated differences in socio-economic status together with values of the consumers; secondly, given geographical variations of the locations. Selection of three locations were based [passive; revise] on there relative importance to the seafood marketing, availability of financial resources and closer proximity to the researchers university. Tokyo was selected because the city is home for world's biggest seafood market and catering to all over the Japan, including Tokyo metropolitan. The consumers in Tokyo have exposed [passive; revise] to seafood from all over the world and research focuses identify their unique responses. In contrast, consumers in Hiroshima are more exposed to domestically produced seafood than the imported seafood. Other than the uniqueness of the seafood market, closer proximity to the University leads to select Hiroshima as a research site. Osaka, Japan's most industrial city and consumers have exposure to wider range of domestic and imported seafood. Osaka was selected to identify the uniqueness of the consumption behavior of the consumers of busy, industrial city. Moreover, limited availability of financial resources made barriers to expand the study. The survey instrument was a self-administered structured questionnaire distributed to the respondents by the researcher after pre-testing. The interviewing that took place in the super-markets, department stores, local markets and shops in each location, was conducted in autumn 2005. The sample population was randomly selected Japanese consumers over the age of 18 years old, living in Tokyo, Osaka and Hiroshima cities. The sample size was set at 100-150 in each city and cost constraints were act as main limiting factor to expand the survey. Therefore recorded numbers of respondents were 122 from Tokyo, 108 from Osaka and 126 from Hiroshima. The questionnaire was delivered to consumers before starting the shopping and answered questionnaires were collected at their departure.

The composition of the questionnaire was three sections. In section I, respondents were ask to provide socio-economic information, seafood product preferences, buying behavior, and asked to rate product attributes in terms of importance. Table 1 describes the sample characteristics of three locations.

Section II, consists of 10 item “Country of Origin Scale”, which was modified to suit non-durable products such as seafood and developed by Parameswaran and Pasioli (1994). The scale consisted of evaluations of various product attributes with respect to a product’s origin. Finally, consumers were asked to evaluate the attributes of domestically produced seafood and imported seafood. Ten items “Country of Origin Scale” was spread over 3 dimensions, such as General Country Attributes (GCA), General Product Attributes (GPA) and Specific Product Attributes (SPA). In relation to attributes, section II of the questionnaire contained five-point numerical scales to be consistent with “Country of Origin Scale”.

Section III of the questionnaire was targeting to measure the consumer ethnocentrism and domestic purchasing behavior using research literature. The part III of the questionnaire we were developed, using the CETSCALE developed by Shimp and Sharma (1987) and psychometrically validated a scale, which measures perceptions of the appropriateness of buying domestic vs imported seafood products. The CETSCALE used in this questionnaire has been previously used and validated in various cross-cultural studies, including in Central and Eastern Europe (e.g. Vida and Reardon (1997); Lindquist et al., (2001)), the ten-item version of the original scale was utilized in this study. The CETSCALE was double-blind translated into Japanese and back into English by native speakers. The scale was also pre-tested on convenience samples of consumers in every city for its comprehensibility, clarity of instructions and length. CETSCALE was the main measurement tool and for each respondent 10 items on the scale were summed to produce a composite score. Based on the composite scores (possible scores 10-50); respondents were categorized as follows;  $>10$ - $<29$  = low levels of consumer ethnocentrism, 30 = mid level and  $>31$ - $<50$  high level of consumer ethnocentrism. Consumers belong to mid level were not included into the hypothesis testing relating to high and low consumer ethnocentrism levels because they represented groups whose opinions were neutral and removing this group from the analysis reduced variability within high and low categories and thereby increased variability between these groups (Philip and Brown, 2003). Moreover, the average scores for the selected product attributes of domestically produced seafood and imported seafood were used to analyze graphically. Analysis was based on quantitative techniques such as descriptive statistics, Pearson product correlations and Chi-square tests (The variables used for Chi-Square analysis was ethnocentrism an intention to buy domestic seafood). SPSS 13 statistical package (SPSS Inc., 2005) was used for the analysis.

### **Table1: Sample profile of the selected demographic characters**

#### **Results and Discussion**

##### **Findings from the in-depth interviews**

Investigations of this research were focused on the consumer evaluations of various product attributes of imported vs. domestic origin, regional variations of consumer evaluations of product attributes and the impact of ethnocentrism on domestic purchasing behavior. The results of the analysis are presented in three sub-sections and the first part brings the findings of the in-depth interviews. Some respondents indicated that they always consider country of origin before made the final purchase decision. Others report rarely considering country-of-origin. The in-depth interviews showed that, in the absence of Japanese alternatives or due to closed season, the country of origin attribute was not considered as an important factor. The globalization of seafood industry means that lots of seafood goes to different places

for processing before it reaches the end market and consumer, such as an Alaskan harvested flat fish can be filleted and frozen in China and then return to Canada for breaching and packing before it gets consumed in Texas, Maldivian harvested tuna can be canned in Thailand before it consumed in USA or Japan. Even though large number of seafood products in Japanese market has multiple origins, majority of the respondents have no clear idea about the hybrid nature or multiple origins of seafood products. Their consideration goes with the final manufacturing destination appears on the product label. According to the some respondents, imported seafood helps to remove the impact of the seasonality of domestic production. But some argued that seasonality lead to make the changes in consumption pattern and available seafood products in each season is really match with environmental changes. The importance of country of origin attribute varied between respondents and products, such as they pay special attention on origin for tuna, salmon, trout, and octopus. When asked to choose between Japan and foreign countries of origin, Japan was consistently the favorite, with most respondents indicating this was important to the economy, and products are good in quality and match with Japanese taste. In the meantime, some respondents indicate that they are waiting for a boom of seafood industry in Japan again. There is a big gap between demand and domestic supply of seafood products to Japanese market. Some respondents of Tokyo and Osaka state that if seafood products are in good quality and reasonable price, they are not considering its origin. In contrast some respondents of Hiroshima sub-sample highlighted that even the seafood is good in quality, they pay much attention on its origin. Date of expiration and price were the most important considerations, compared to country of origin, for their final purchase decision. Very few people were aware on HACCP (Hazard Analysis Critical Control Point; HACCP identifies the potential avenues of contamination, establishes control measures to eliminate or minimize these hazards, monitors and documents the effectiveness of the programme (Cruz et al.,2006)). Especially, two interviewees attached to the Tsukiji whole sale fish market express their idea about HACCP certification. Some of them argue that Japanese used to eat fresh fish and demand for it is high all the time. Therefore, suppliers all over the world supply fish in its freshest form to the Japanese market and consumers have not to worry about the quality. But average Japanese consumers are not aware about the HACCP certification; even it appears in lot of food products. Majority of interviewees except higher educated, were never heard about it. Other than the above mention factors, interviewees also determined the characteristics consumers used for evaluation, such as including fishing techniques, from which fishing ground (ocean or sea), climate, level of processing, added ingredients, method of preparation.

The continuum of cultural similarity was constructed using the findings of in-depth interviews where consumers were asked to list and mapping the continuum of cultural similarity of seafood importing countries in order of cultural similarity to Japanese culture (see figure 1) Figure 1 was constructed using the average distances based on the consumer responses. Shorter distance means the closer cultural similarity to Japan and longer distances means culturally dissimilar countries. Theoretical concept of Philip and Brown (2003) was followed for this study. Countries on the right of the continuum were perceived as being for different from Japanese culture and countries to the left were perceived as being very similar. When made selection between culturally similar and dissimilar countries of origin, most of the interviewees indicated that they would base on product attributes rather than country of origin. Whilst others who chose culturally similar alternatives. This [what?]is also depending on seafood product. For an example, consumers have no special preference for the

imported shrimp from culturally little similar Thailand or Vietnam over the India. They pay their priority for the product quality. When it reaches to tuna some of them had special favor for Taiwanese and South Korean products over either Guam or Honduras. Moreover, southern Bluefin tuna from Spain, Italy and France fetches highest prices based on quality with out any concerns on cultural miss-match.

**Figure 1: The continuum of cultural similarity**

**Impact of product attributes on final purchasing decision**

Primary data from the questionnaire interview was used to determine which attributes consumers regarded as most important in their evaluating of different categories of seafood products. Seafood products were categorized into 6 main groups for this analysis, such as fresh (whole fish), fresh (sliced), frozen, canned, dried and smoked fish. Consumers were asked to rank which attributes they considered in the purchase evaluations and then, through the frequency of appearance, a consensus was forward as to the five important attributes. The results of these interviews are summarized in table 2. Both fresh whole-fish and fresh-sliced fish purchases consider date of expiration as the most important factor. When it comes to frozen fish canned fish purchases, price was the most important factor. Quality and price were the most important factors for the dried fish purchases.

**Table 2: Frequently utilized product attributes and percentage of appearance**

**Comparative analysis of country of origin effects: imported vz domestic seafood**

Evaluations of ten product attributes with respect to a seafood's origin were measured [passive; revise] using the modified "country of origin" scale by Parameswaran and Pisharodi (1994).

Product attributes that used o evaluate the domestic vs. imported seafood products and their relative importance to respondents was also explored in the in-depth interviews.

Product attributes that used for evaluation were good reputation, value for money, HACCP certified, easily available, Traceability, convenient for consumption, quality of packing, wide range of value addition, sold in many countries and intensity of sales promotion. Figure 2 shows the results of the analysis and each of the four charts presents the average scores for the selected seafood product attributes of imported relative to domestic. Common features were found in the samples of Hiroshima, Tokyo, Osaka and cumulative sample. All respondents evaluate the attributes of imported seafood products more favorably than those produce domestically, except good reputation. Even for the attribute,"good reputation" respondents of Osaka placed similar values. Along with rice, fish is central to the Japanese diet. Rice and fish together they form the basis of the traditional food culture in Japan. There fore, they are experts in handling and processing of fish to fulfill the demand of Japanese consumers. Along with the tradition, consumers have better reputation for domestically produced seafood products compared to imported seafood. Compared to Tokyo and Osaka, respondents of Hiroshima were assigned [passive; revise] higher values for both imported and domestic seafood. On the other hand, respondents of Hiroshima do not perceive any differences in the "traceability" of imported vs. domestic seafood. They were assigned some what neutral values for "wide range of value addition", "quality of packing" and "value for money" of domestic seafood products. In Hiroshima, some seafood product attributes such as "wide range of value addition", "quality of packing", "easily available" and "value for money" were measured favorably assigning higher values. In this respect, imported seafood enjoys

some advantage compared to domestic seafood and this lead to attract more consumers. Respondent's knowledge on HACCP labeling is very poor. They were not considering HACCP as important product attribute. Because they trust on Japanese food and sanitation law procedures and they believe that the products available in market is safe enough for consumption. Japanese have been accustomed to consuming what is available in a particular season (JETRO, 1997). Hiroshima is rich in domestic fishery resources but seasonality of catches has an impact on consumption pattern.

**Figure 2: Comparison of average scores for attributes of imported vs. domestic seafood by sub-sample (on a scale from 1 to 5, whereby 1- not at all appropriate; 5- most appropriate).**

However, due to imports many seafood varieties are available outside their normal seasons. Therefore, respondents report the attribute "easily available" more favorably for imported seafood. In Tokyo, respondents assigned highest value for "good reputation" of domestic seafood compared to imported seafood. Relative to the other product attributes, the difference between domestic vs. imported seafood was large for "good reputation". Attributes such as quality of packing, traceability, easily available and value for money, yet they still exceeded the ones assigned to domestic seafood. Respondents in Tokyo perceive similar features in "convenient for consumption" in both imported and domestic seafood. The awareness on HACCP certification among respondents was poor, except respondents attached to Tsukiji wholesale fish market. They evaluated imported seafood favorably for "HACCP certification" compared domestic seafood. Because they believe that entering into Japanese market is strict for imports and due to the requirements of Japanese food and sanitation law, seafood products require HACCP labeling. In the meantime, seafood products of Japanese origin can enter to local market without facing to stricter regulatory barriers and for that they assigned higher value for imported seafood. In Tokyo, respondents perceive difference in "intensity of sales promotion" of domestic seafood was higher compared to import seafood. But many products attributes related to domestic seafood measured in neutral values. In Osaka, most of the measured attributes of domestic seafood were assed neutrally, except for "HACCP certification" and "good reputation". The only attributes of domestic seafood that received somewhat favorable evaluations were "HACCP certification" and "good reputation". Attributes such as "sold in many countries", "wide range of value additions", "quality of packing", "convenient for consumption" received lower scores. Relative to sub samples of Hiroshima, Tokyo and Osaka, imported seafood products received the least favorable evaluations of product attributes from the Osaka sub sample and highest favorable evaluation from Hiroshima sub sample. Findings lead to reject the H1 and supported to the alternate hypothesis, there is no relationship between the origin of seafood and consumer evaluations of seafood product attributes. Furthermore, findings of this section fulfill the first and second objectives of the study. According to the findings, regional variation of the consumer evaluation of the seafood product attributes were exists with in the geographically distinct markets of Tokyo, Osaka and Hiroshima. In generally, Japanese consumers prefer fresh seafood rather than the processed. Moreover, seafood staple for the Japanese and through out the year the demand for seafood is high and the domestic production is not enough to fulfill the demand. Seafood imports essential to fill the gap between demand and supply. This study considers all kinds of seafood as one product to minimize the bulkiness of the data.

**Ethnocentrism and domestic purchasing behavior**

According to the consumer behavior literature, consumer ethnocentrism denotes the beliefs held by consumers about the appropriateness and morality of purchasing foreign-made products (Shimp and Sharma, 1987). Identification of ethnocentric tendencies will help to seafood producers; (both domestic and international) interested in market segmentation strategies and provide the guidance into determining the product mix. Individuals in Japanese society, especially considered as homogeneous population, have different experiences and attitudes toward the value and norms of other cultures different from their own. Fish in particular is essential to the Japanese diet and deeply related to Japanese culture. Especially, seafood and the rituals of preparing and presenting it are deeply rooted in Japanese culture. Japan has imbued fish with historical, symbolic, even spiritual meaning (Mcquaid, 1997). Therefore, respondent's evaluations on domestic vs. imported seafood may have strong influence of cultural sensitivity. Table 3 presents the results of the analysis by sub samples of Hiroshima, Osaka, and Tokyo and for the cumulative sample. The total ethnocentrism score on the CETSCALE was obtained by average summated scores on the CETSCALE instrument and scores were ranged 10 to 50.

**Table 3: Ethnocentricity by region and cumulative sample**

Table 4 describes the descriptive statistics (% share of the respondents who agree with the statement) for the Likert type statements measuring the construct domestic purchasing behavior. Especially this construct refers to the importance of purchase-related behavior in support of domestic fisheries industry.

**Table 4: Domestic purchasing behavior by region and cumulative sample**

The analysis of the consumer ethnocentrism points to relatively low average ethnocentric tendencies in all sub samples, as well as cumulative sample. The cross regional comparison reveals that, on average most ethnocentric consumers was from Tokyo and Osaka (similar average scores on the scale), compared to Hiroshima. The least ethnocentric was the respondents of Hiroshima with an average CETSCALE score (25.85), in its mid point (30.00) which is the cutoff point between ethnocentric and polycentric consumers (polycentric consumers either evaluate products based on their attributes or they feel imported products are better because they are foreign made (Vida and Dmitrovic, 2001)). Consumers of Tokyo and Osaka are more exposed to imported seafood compared to Hiroshima. Moreover, the wholesale markets of Tokyo and Osaka trading high volumes of imported seafood comparable to Hiroshima. Seafood trading of Hiroshima wholesale market consisting with high volumes of domestic seafood and small quantity of imported seafood. In addition to that, consumers of Tokyo and Osaka have to purchase imported seafood than the domestic seafood. Therefore, they have preference over the domestic seafood and showed more ethnocentric features than the Hiroshima. Especially world's largest seafood market, Tsukuji is supplying fish to all over the Japan. Fish markets in Tokyo are flooded by imported seafood over the domestic produce. Although the consumers in Tokyo have better access to imported seafood than the domestic seafood, they have intention to buy domestic produce compared to consumers of Hiroshima and Osaka. Even fish and seafood is deeply attached to the Japanese culture, none of the sub samples appears highly ethnocentric, the analysis of variance reveals significant differences ( $p < 0.05$ ) across the regional sub samples. The domestic purchasing behavior as an outcome of ethnocentricity is highly pronounced in the Tokyo and Osaka compared to Hiroshima.

Over 60% of the respondents from Tokyo and Osaka, and 75% from Hiroshima claimed, only that seafood are unavailable or not enough to fulfill the demand should be imported to Japan. Especially the respondents of Hiroshima sub sample stressed that imports should target to fill the gap between supply and demand and to reduce seasonality effects. In the meantime, over 70% of the respondents from all sub samples agree with that they should give priority to consume Japanese origin seafood and they hope this will lead to booming up domestic fisheries industry. Only respondents of Tokyo sub sample stressed that imported seafood should be taxed heavily to control their flooding into Japanese market. In contrast, other sub samples disagree with this point because seafood is main and important part of their diet. Ethnocentric tendencies of sub samples reflect the consumer's domestic purchasing behavior and this information will help to importers to rethink about their product mix. In the meantime, highly ethnocentric markets open up new avenue to domestic seafood products.

Our analysis of the three sub samples and findings are consistent with the findings of the previous cross-cultural studies of Sharma et al., (1995); Vida and Reardon (1997); Lindquist et al., (2001) and Vida and Dmitrovic (2001). Highly ethnocentric consumers prefer to purchase the products of domestic origin rather than imported. Table 5 describes the correlation among consumer ethnocentrism and demographic characteristics. Results reveal that the more ethnocentric consumers in all sub samples were older aged people (see figures 3, 4 and 5) with low levels of education (Primary school up to High school level) than their less ethnocentric counterparts. Findings support to the argument in H3. Moreover, consumers having higher levels of education, such as university graduates, post graduate holders and permanently employed had less ethnocentric tendencies. In Osaka and Tokyo, women tend to have stronger ethnocentric tendencies over man. In contrast, male consumers showed significant ethnocentrism in Hiroshima. Fish consumers in Tokyo and Osaka are harried busy people, high income and usually both working parent families, who now eat about one out of two meals out of home.

**Table 5: relationship between ethnocentrism and demographic characteristics by sub samples**

**Figure 3: Relationship between the age and ethnocentrism (sub sample – Osaka)**

**Figure 4: Relationship between the age and ethnocentrism (sub sample – Hiroshima)**

**Figure 5: Relationship between the age and ethnocentrism (sub sample – Tokyo)**

On the other hand, the least ethnocentric individuals were younger people who tend to be single. Aggregate analysis showed that the less ethnocentric segments tend to evaluate seafood of domestic origin less favorably than do the more ethnocentric consumers. The respondents of sub samples evaluate imported seafood favorably than the seafood of Japanese origin. Moreover, respondents of Osaka and Tokyo evaluate imported seafood less favorably than domestic seafood. Purchase habits have changed as evidence by the modern Japanese consumer's penchant for just-in-time shopping those results in small lot transactions (Sanliner, 1990). Results of the aggregate analysis (Chi-square analysis for test of significance in table 6) supported to the hypothesis H2 and H3.

### **Table 6: Results of the Chi-square test**

Previous cross-cultural studies of Ahmed and d'Astous (1993); Ahmed, d'Astous and Zouiten (1993); Okechuku (1994) concluded that country of origin has significant impact on product evaluation. But this was not supported in this research, country of origin was found to be one of the product attribute that considered in consumer evaluation. Findings fulfill the demand of third objective of this research.

### **Conclusions**

This study examines the consumer evaluations of various products attributes of seafood of domestic vs. imported and consumer ethnocentrism on intention to buy local products by Japanese consumers in three main locations. Findings of the field survey supports to the arguments of the study and lead to provide better insight about the seafood consumption behavior and evaluation of seafood based on its origin among the Japanese consumers. Based on the analysis of a survey of 126, 108 and 122 consumers from Hiroshima, Osaka and Tokyo respectively and in-depth interview of 15 respondents from same locations, found that consumer ethnocentrism and foreign product evaluation had no positive relationship. Respondents from three locations evaluate imported seafood product favorably than the domestic seafood. Japanese consumers evaluate seafood products using the level of product attributes. Moreover, cultural sensitivity and ethnocentrism were not made direct impact on their evaluations on seafood. Consumers with high levels of ethnocentrism were found to favor domestically produce seafood and they have favorable evaluations for the seafood imported from culturally similar destinations. Moreover, in purchase situations, where there was no domestically produced alternative or seasonality of production, the role of ethnocentrism is neutral. The results of our research partly support to seafood importers or exporting nations to Japan. Where, importers have to pay much attention on product attributes rather than cultural barriers. On the other hand, seafood producers of Japan too, have to consider this matter as important signal to them. They should have to improve the level of product attributes to face the rival competition rather than waiting to the sell seafood under cultural label. Our findings can conclude that consumer ethnocentrism and intention to buy domestic seafood has positive relationship. But, Japanese consumers belong to the less ethnocentric category. Even though, they are less ethnocentric they have intention to buy locally produced seafood. This shows positive signs to the domestic seafood producers. They can expand the market size using this positive thinking of consumers. Results reveal that market segments with specific demographic characteristics as older female consumers with low level of education; young, educated, single consumers with permanent employment, exhibit significantly strong ethnocentric tendencies than the general population. Moreover, market opportunities existing in Japanese seafood market will vary according to the degree of ethnocentrism. On the other hand, a new generation of Japanese consumers with less emotional attachment to the culture and domestic industry have neutral attitude towards domestically produced seafood. This study has a number of limitations. First, we consider all kinds of fish and fishery products as a one product such seafood. But behavior of different fish and fishery products in market has a variation and limited time and financial resources made barriers to expand the study. Secondly, this study was conducted in city limits of Tokyo, Osaka and Hiroshima with limited number of respondents. Although the small sample size limited the generalizations of the findings to the whole country, results

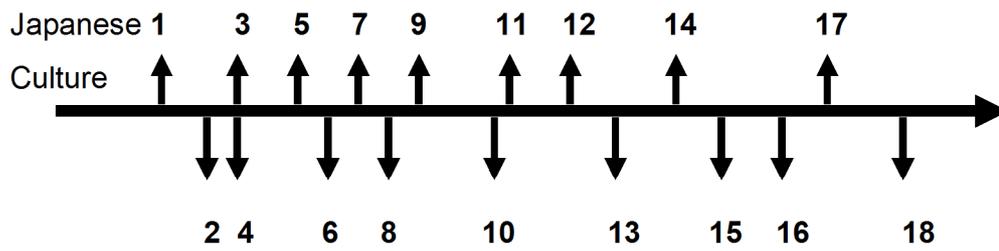
suggest important indications to the seafood producers. Large samples throughout the Japan using same techniques are useful to generalize the findings. Furthermore, future research should focus on the consumer evaluations of various kinds of seafood separately and to identify the niche markets and market segments with in the huge Japanese seafood market.

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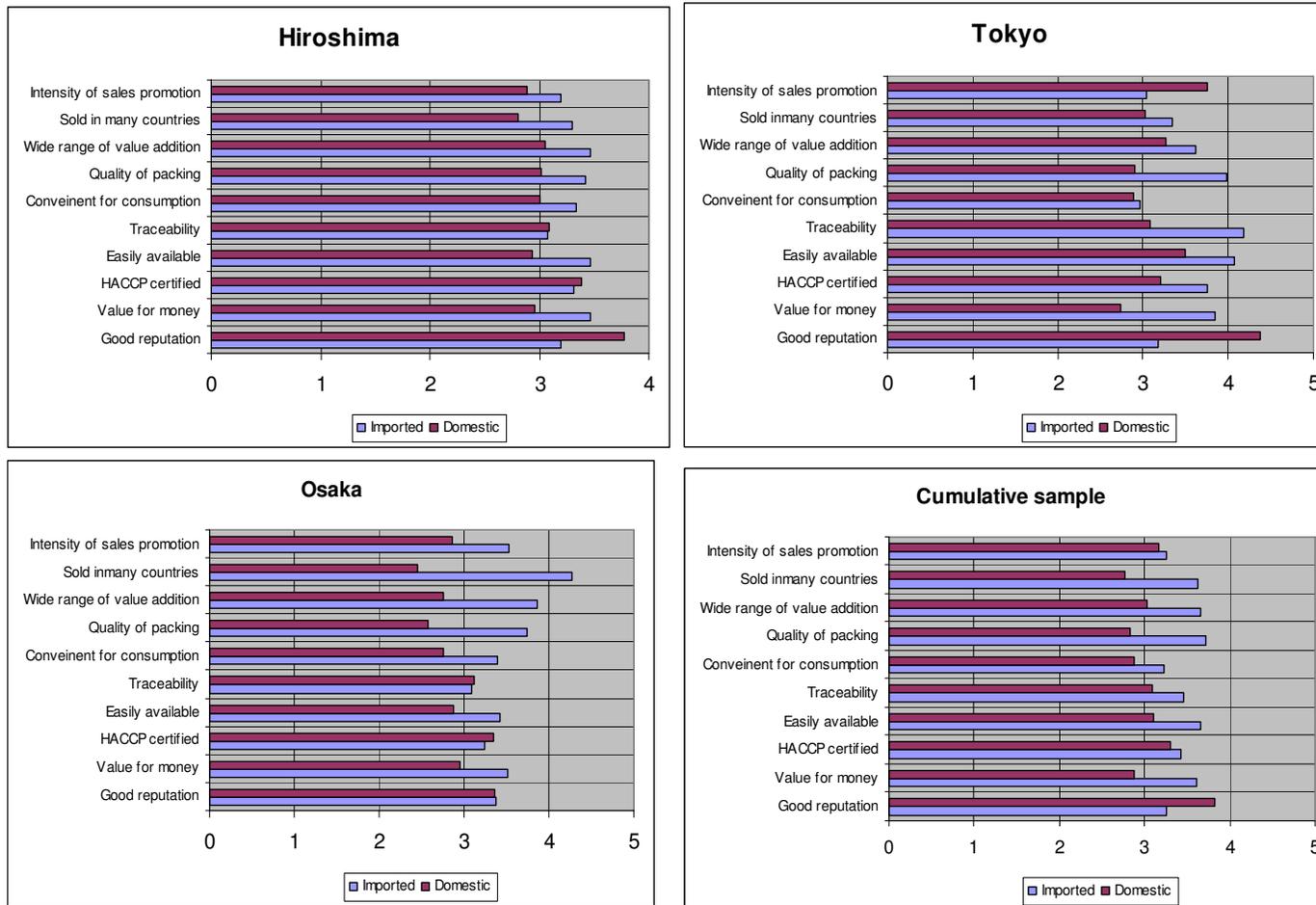
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(1- South Korea; 2- China; 3- Taiwan; 4- Hong Kong; 5- Hawaii; 6- Thailand; 7- Vietnam; 8- Philippine; 9- Indonesia; 10- Chili; 11- Mexico; 12- Russia; 13- India; 14- Italy; 15- Spain; 16- France; 17- Norway and 18- USA).

Source: developed from in-depth interviews

Figure 1: The continuum of cultural similarity



**Figure 2: Comparison of average scores for attributes of imported vs domestic seafood by sub-sample (on a scale from 1 to 5, whereby 1- not at all appropriate; 5- most appropriate).**

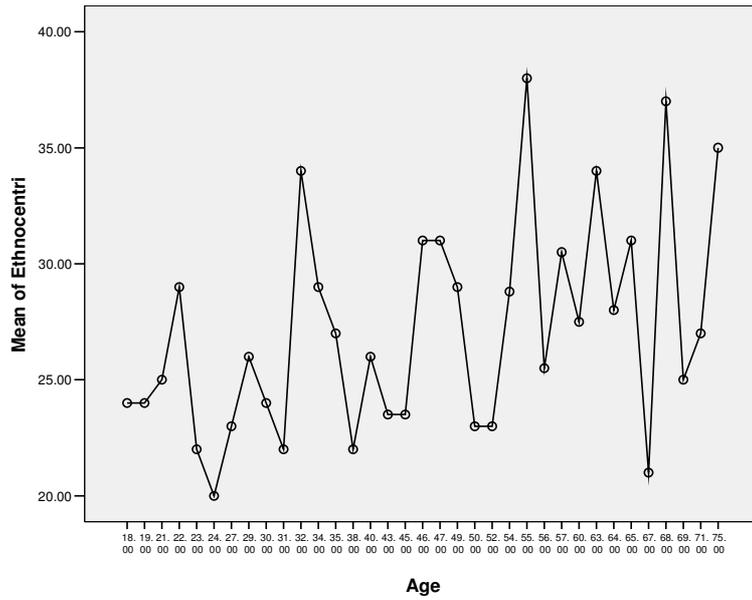


Figure 3: Relationship between the age and ethnocentrism (sub sample – Osaka)

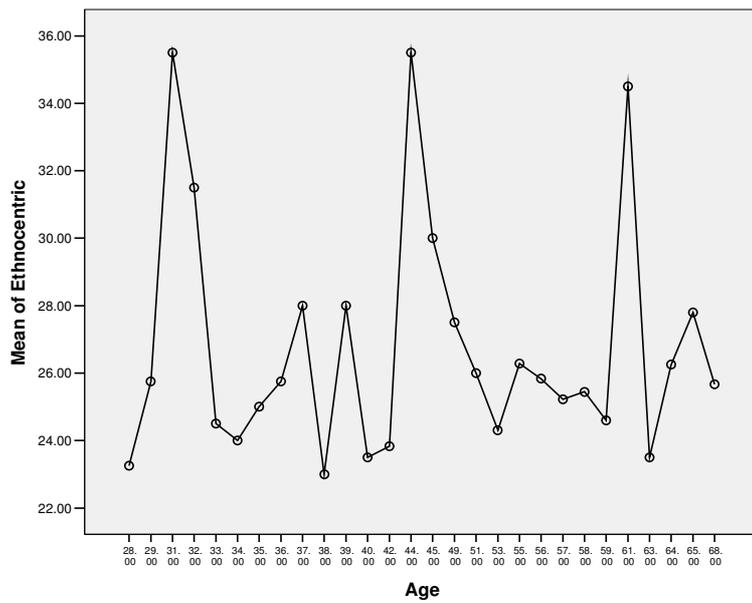


Figure 4: Relationship between the age and ethnocentrism (sub sample – Hiroshima)

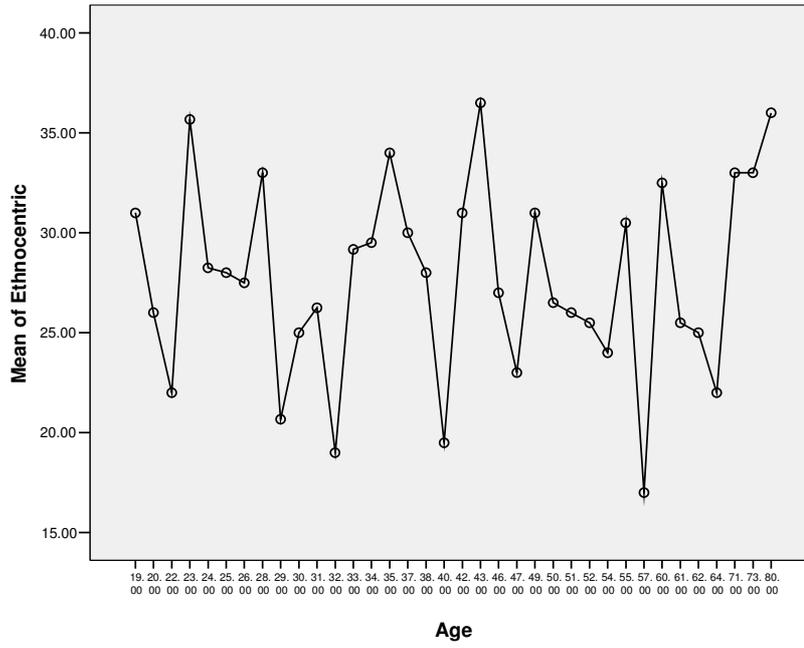


Figure 5: Relationship between the age and ethnocentrism (sub sample – Tokyo)

## List of tables

**Table1: Sample profile of the selected demographic characters**

Characteristic	Tokyo	Osaka	Hiroshima	Total
No. of respondents	122	108	126	356
Female (%)	53.27	59.26	66.46	59.56
Male (%)	46.72	40.74	34.13	40.53
Average age (Standard Deviation)	39.58 (14.04)	46.68 (14.94)	49.56 (11.99)	45.27
Married (%)	48.36	61.11	79.37	62.94
Unmarried (%)	49.18	31.48	17.46	32.7
Level of Education				
High School	42.62	61.11	56.14	53.29
University Graduate	50.81	37.04	26.57	38.14
Postgraduate	6.55	00	7.94	7.24
Employment				
Permanent	45.92	27.77	29.57	34.42
Part-time	15.57	31.48	43.65	30.23
Self-employed	18.85	32.41	5.76	19
Other (House-wife)	19.67	9.26	21.43	16.78
Share of consumers who consider Country of Origin	59.61	59.26	62.69	60.52
Responsible of shopping for seafood				
Mother	77.87	85.19	87.3	83.45
Father	13.93	1.85	9.52	8.43
Grand mother	00	3.7	1.59	2.66
Grand Father	00	7.41	3.17	5.29
Status of fish consumption				
Increase	13.12	22.22	32.54	22.62
Similar	83.61	75.93	54.76	71.43
Decrease	3.28	1.85	15.87	7

Source: developed from field survey – autumn 2005.

**Table 2: Frequently utilized product attributes and percentage of appearance**

Fresh (whole fish)	Fresh (sliced)	Frozen	Canned	Dried fish	Smoked
Date of Expiry (100)	Date of Expiry 100)	Price (82)	Price (86)	Quality (92)	Date of Expiry (93)
Price (87)	Price (78)	Date of Expiry (76)	Origin (79)	Price (86)	Price (81)
Quality-color of eyes & gills (74)	Quality-color of flesh (69)	Origin (74)	Date of Expiry (76)	Origin (57)	Quality (75)
Traceability (57)	Traceability (61)	Traceability (63)	Traceability (68)	Date of Expiry (52)	Traceability (62)
Origin (42)	Origin (54)	Packaging (61)	Contents (63)	Packaging (32)	Origin (58)

Source: developed from in-depth interviews and questionnaire.

**Table 3: Ethnocentricity by region and cumulative sample**

Location	Total ethnocentric score on the CETSCALE (mean)	Minimum	Maximum	Standard Deviation
Hiroshima	25.85	18	37	5.20
Tokyo	27.70	17	48	6.19
Osaka	27.05	19	38	5.39
Cumulative	26.87	17	48	5.59

**Table 4: Domestic purchasing behavior by region and cumulative sample (% of consumers who agree with the following statements)**

Statement	Hiroshima	Osaka	Tokyo	Cumulative
1. Japanese people always buy Japanese origin seafood instead of imported seafood	20.6	37	33.3	30.3
2. Only those seafood that are unavailable or not enough for demand should be imported to Japan	77.8	63	66.7	69.16
3. Buy Japanese originated seafood and keep Japan's fisheries improving	75.4	70.4	76.4	74.06
4. Consume Japanese origin seafood first, last and foremost	29.4	35.2	52.8	39.13
5. Consumption of foreign made seafood is un-Japanese	7.9	9.3	16.7	11.3
6. For Japanese, it's not right to buy imported seafood	3.2	9.3	12.5	8.3
7. A real Japanese should always buy Japanese origin seafood	7.9	14.8	9.7	10.8
8. We should purchase seafood made in Japan instead of letting other countries get rich off us	28.6	18.5	16.7	21.26
9. Japanese should not buy imported seafood because this hurts Japan's fisheries	19	22.2	16.7	19.3
10. Imported seafood products should be taxed heavily to reduce their entry into Japan	1.6	16.7	45.8	21.36

Source: field survey, autumn 2005.

**Table 5: Relationship between ethnocentrism and demographic characteristics by sub samples [report to two decimals]**

Variable	Ethnocentrism Hiroshima	Ethnocentrism Osaka	Ethnocentrism Tokyo
Gender			
Male	.18*	-.20*	
Female		.198*	.23*
Level of education			
Primary	.212*		
High school	.196*	.270**	
University		.237*	.239**
			.248**
Employment			
Permanent	-.218**	-.316**	-.242*
House wife			-.271**
Self employed	-.361**	.326**	.195*
Age	.29**	.39**	.36**

\*\* Correlation is significant at the 0.01 (2-tailed),

\* Correlation is significant at the 0.05 (2-tailed)

**Table 6: Results of the Chi-square test**

	Ethnocentric Hiroshima	Ethnocentric Osaka	Ethnocentric Tokyo
Chi-square	332.81	96.556	94.815
df	40	40	40
Asymp.sig.	0.000	0.000	0.000