

Price Premiums for Organic Food from Australia and China

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Abstract

Australian consumers (N=221) were surveyed to establish their valuations of food, based on provenance, organic status and eco-labelling. For Chinese produce Organic attracted a 6.4% premium, and Certified Organic a 11.6% premium. This compares to Australian produce which attracted a 7.9% premium for Organic, and a 16.5% premium for Certified Organic. For Chinese produce Natural added a 1.7% premium and Eco a 2.9% premium, compared to Australian produce which added a 2.6% premium for Natural and a 2.8% premium for Eco. Chinese produce was devalued by 20.6%, compared to Australian produce (alternatively Australian produce attracted a premium of 26.0% over Chinese product). Respondents who volunteered comments, indicated they were "dubious of" or lacked "trust" in the labelling of food from China; affordability and buying "local" were also issues mentioned by respondents. Certified Organic produce offers an opportunity for Chinese producers to improve their return for effort, and raise the status of their produce. Adjunctive labelling can add 14.6% to consumer valuations of Chinese produce.

Introduction

Chinese agriculture has been described as the world's oldest agriculture (King, 1911). Recent developments in China make it now a world leader in organic food production (Paull, 2007). For the Chinese agricultural sector, organic production offers a path to higher returns, lower input costs, environmental benefits, the retention of rural workers in rural areas (Giovanucci, 2005; Mei et al., 2006), access to international markets and enhanced prestige.

Labelling is an increasingly important aspect of adding value to food sales. All the label elements that are adjuncts to the generic description of the food item are candidates for adding value for the purchaser. Adjunctive labelling includes country of origin, environmental claims including *Certified Organic*, fair trade claims, regional identification, dietary claims such as *suitable for vegetarians*, health and nutrition claims, and religious conformity claims such as "halal".

Price premiums for organic produce reward farmers for the additional care taken, and contribute to the costs of the certification process, Retail price premiums in Australia for organic food average 80% (Halpin, 2004), without regard to country of origin. Halpin reported the view among retailers that premiums are too high for consumers and that 15% would be more acceptable.

A proliferation of eco-labelling in the market place including "natural" and "organic" causes confusion for consumers according to Wong (2005) who reported that of "organic vegetables" on sale in Hong Kong, only 29% were certified.

Country of Origin Labelling (CoOL) is increasing in importance in food retailing and yet

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no Australian studies have reported the size, or confirmed the existence, of price differentials based on provenance (Priestley, 2005). Reported here are the values consumers attributed to food, based on three dimensions of labelling information: country of origin, organic labelling, and other eco-labelling.

Methodology

This study examined three food labelling variables, each at three levels. Using a factorial design, this generates $3 \times 3 \times 3 = 27$ treatments or food scenarios. The variables were provenance (*China, Australia, Tasmania*), organic status (*null, Organic, Certified Organic*) and eco-labelling (*null, Natural, Eco*). Each subject valued the 27 generic food scenarios individually, in each case in the range \$5.00 to \$10.00 (on a 21 point scale, stepped in increments of 25 cents), and answered eight demographic questions, and additionally there was an optional comments box. The instrument was presented on the World Wide Web. Subjects were recruited *via* a press release issued by the Media Office of the University of Tasmania to Australian media, mostly newspapers (e.g. Quick News, 2006), which gave a web address, and invited readers to respond to a "survey about food labelling"; none of the variables under investigation (*Organic, Certified Organic, Eco, Natural, Australia, China*) were mentioned in the press release.

Results

221 respondents completed the survey, and all analysis reported here is based on the full sample. The demographics of the sample are as follows: 75% of respondents were female, 47% were aged 40 or under, 42% reported below average income, 96% were from Australia, 72% completed tertiary education, 78% were the main food shopper in their household, 3% were affiliated with the organic industry, and 5% reported they never purchased organic food. The average time to complete the survey was 6 minutes. The comments box was used by 81 respondents.

The responses were analysed using ANOVA. The three main effects (Organic, Provenance & Eco) were all significant (Factor-Organic: $F(2,219) = 178.161$, $p < 0.001$; Factor-Provenance: $F(2,219) = 249.720$, $p < 0.001$; Factor-Eco: $F(2,219) = 55.042$, $p < 0.001$). Three of the four interactions were significant: Organic x Provenance $F(4,217) = 21.783$, $p < 0.001$; Provenance x Eco $F(4,217) = 2.983$, $p = 0.021$; Organic x Provenance x Eco: $F(8,213) = 2.484$, $p = 0.013$).

A summary of results for China and Australia are reported here. The mean valuations for the nine China food scenarios and the nine Australia food scenarios are presented in Fig.1. The country of origin (Provenance) factor yielded the largest effect. Respondents attributed to Australia a valuation 26.0% higher than the China valuation. All label elements added value (Fig. 1). *Organic* added 6.4% for China and 7.9% for Australia, *Certified Organic* added 11.6% for China and 16.5% for Australia (Fig. 2). There was a significant interaction ($p < .05$) between provenance and eco-labels.(Fig. 3). For China, *Natural* added a 1.7% premium and *Eco* added 2.9%; the corresponding figures for Australia were 2.6% and 2.8% (Fig. 3). All the preceding percentages are based on marginal means. Of the nine China scenarios, the treatment *China, Certified Organic, Natural* attracted the highest premium of 14.6% (Fig. 1). Of the nine Australia scenarios, the treatment *Australia, Certified Organic, Natural* attracted the highest premium of 21.1% (Fig. 1). There was a comments box at the end of the survey. Of 221 respondents, 81 used the optional comments box. There were 12 comments referring specifically to food from China, all were negative.

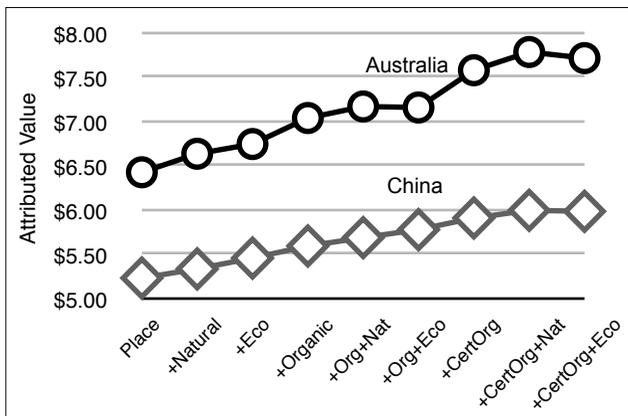


Figure 1: Australia & China: Consumer valuations for nine food labelling scenarios, N=221, cell means.

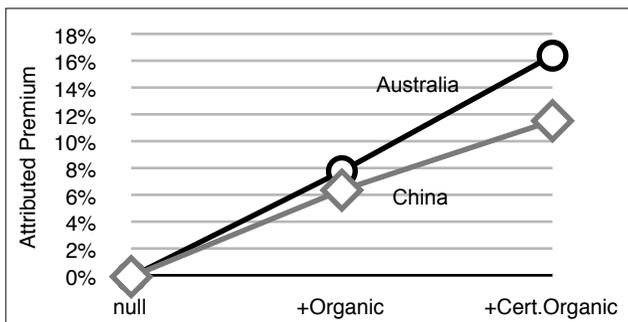


Figure 2: Australia & China: Consumer valuation premiums for *Organic* and *Certified Organic*, N=221, based on marginal means. There is a valuation gap of 4.9% between Australian and Chinese *Certified Organic*.

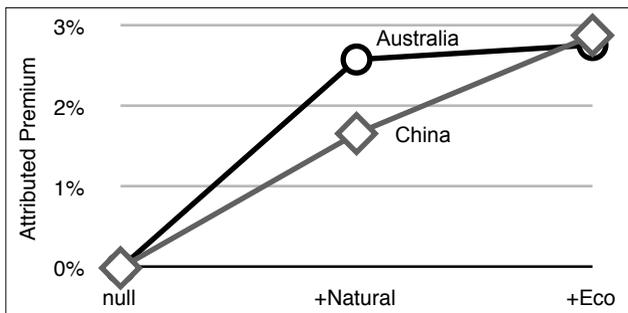


Figure 3: Australia & China: Consumer valuation premiums for *Natural* and *Eco*, N=221, based on marginal means. The eco-labels *Natural* and *Eco* add small but significant value for consumers.

Discussion and Conclusions

Halpin (2004) reported that certified organic premiums averaged 80% in Australia, and that consumers are likely to consider this figure too high. The present study confirmed this, and additionally found that the price premium consumers attribute to organic food is a function of the provenance of the food.

The present study found that country of origin (CoOL) has a greater impact on consumer valuations than the organic status of the food. Consumers valued up Certified Organic, whether from Australia or China. *Certified Organic* attracted twice the premium of *Organic*, indicating that consumers clearly distinguish between these two different claims. *Certified Organic* derives half its premium for “organic” and half from “certified”. Adjunctive labelling of produce adds value cumulatively for Australian consumers, for example *Certified Organic*, *Natural* scenarios exceeded the value of *Certified Organic*. The eco-labels *Natural* and *Eco* added statistically significant but monetarily small premiums.

Wai (2006, p. 112) claimed that Chinese organic standards are “the most stringent in the world”. LeCompte (2007) reported that “Made in China” attracts more complaints from North American organic consumers than any other single issue. The present study found Australian consumers devalued Chinese produce, compared to local.

Kuhlmann (2007) declared that the opportunity for Chinese organic exports is as ingredients of food processed in first world countries. The issue with this approach is that while manufacturers gain the benefit of cheaper inputs, consumers are likely to remain ignorant of the provenance of the ingredients. In Australia and New Zealand, for example, most processed food now suppresses the origin of the ingredients, by invoking one of the FSANZ (2006) labelling prescriptions, either “*made from local and imported ingredients*” or its inversion “*made from imported and local ingredients*”. This practice advantages Chinese organic ingredient exporters over Australian producers.

For China, organics presents the opportunity to add value to agricultural produce, to move the focus of Chinese produce from price (cheapest) towards quality (best), to increase rural employment opportunities, to bring wealth and renown to rural regions, to reduce reliance on farm inputs, especially imported inputs, to increase reliance on farmer know-how and skill, and to safeguard the health of rural workers, the environment and consumers.

China is already a world leader in organics (Paull, 2007). Because of the vast size of China’s agricultural output, there is the opportunity for China to redefine the standards of internationally tradable food as *Certified Organic*. Such a lead from China would reap health and environmental benefits for China and the world.

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