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## **Evaluating Consumer Response to Labels and Packaging in the Market for Baby Foods**

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The landscape of the baby food industry has evolved significantly in recent years and reflects consumer concerns in other foods. Demand for organic baby food continues to grow rapidly as well as for non-GM labeled baby food. The new packaging innovation, the pouch, has been very popular among parents. Previous studies on baby food have focused on determining the consumers' willingness to pay for organic and other nutrition attributes. So far, consumer response to non-GM labeled baby food and the pouch packaging has not been examined.

### **Problem Statement**

This article is taken from a study that examines consumers' willingness to pay for three baby food attributes: the organic label, the non-GM label, and the pouch packaging. Additionally, this study explores possible demographic and socio-economic effects on each of the three attributes. The research results provide interesting information for retailers and producers in the baby food industry in the United States and for other food companies that use these attributes.

The data source is Nielsen Homescan data of 2011. Nearly 170,000 observations of baby food purchase records are used in the analysis. The sample contains approximately 4,480 households that purchased baby food in 2011, of whom 2,270 purchased baby food more than 10 times a year.

### **Introduction**

Non-genetically modified (GM) has gained popularity in recent years in accordance with the heated debate surrounding GM foods. Several states held referendums on mandatory labeling of GM foods and many people feel strongly about both sides of the issue. Proponents of mandatory GM labeling cite the right to know what is in their food as an important consideration in a democratic society. Opponents counter that GM labels will confuse consumers with no improvement in food safety and will also increase the cost of food. The propositions of California, Washington, Colorado, and Oregon between 2012 and 2014 were defeated;

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Connecticut and Maine passed the laws in 2013 under a clause that their GM labeling law will go to effect only if four or five other states pass similar laws, including one that borders them; and Vermont became the first state to pass a “clean” GM mandatory labeling law, which will go into effect in 2016. All these referendums have attracted consumers’ attention to GMs, and many food companies have started to use non-GM labels, which is a voluntary labeling, to attract consumers who are concerned about GMs.

The interesting thing is that all the baby food brands that adopt non-GM labels already had an organic label. In other words, these baby food brands are “double labeled”. If a product is organic, it is by default non-GM. However, evidence from the study by Hartman Group suggests that most consumers do not clearly understand the relationship between organic and non-GM. Therefore, non-GM and organic label might be two independent labels for some consumers, and these “double labeled” baby food brands might create more incentives to buy among baby food consumers by including both organic and non-GM labels. In addition to the organic label and the non-GM label, “natural” is also a popular label. Some baby food producers use the natural label as a substitute for the organic label. It is interesting to see whether the natural label resonates with the baby food consumers.

One of the reasons that organic baby food has become more popular in recent years is that it has found the perfect partner: the food pouch. Food pouches are BPA-free plastic bags with little plastic spouts at the top from which baby food can be sucked. These pouches are shelf-stable, unbreakable, re-sealable and allow babies or toddlers to feed themselves through the spout.

## Results

The study results show that baby food purchasers paid a premium of 2.6 cents per ounce for the organic label, and 2.9 cents per ounce for non-GM label. It is interesting to see that the price premium for the non-GM was higher than organic.

Baby food purchasers also paid a premium of 13.8 cents per ounce for the new pouch packaging compared with the plastic tub packaging. First, pouch packaging material costs are much greater than the plastic tub and glass jar. More importantly, consumer demand is significantly higher, and consumers are willing to pay much higher prices for the pouching packaging. Indeed, more than half of the baby food in the supermarket is now in pouch packaging.

### Price Premiums for Four Baby Food Attributes

	Organic	Non-GM	Pouch	Natural
	<i>cents per ounce</i>			
Price premium over non-organic baby food in a plastic tub	2.6	2.9	13.8	-1.2

Purchaser characteristics – The results show that younger purchasers, those with high incomes, those with fewer children, and those with more free time are more likely to purchase organic and non-GM baby food. Higher education would increase consumers’ preference for

organic baby food, but has no significant effects on consumers' preference for non-GM baby food. In terms of geographic factors, consumers from the Pacific region have stronger preference for both organic and non-GM baby food.

### **Conclusions**

There are organic and non-GMO labels sprinkled throughout the store, but in baby food, these labels are used much more frequently. Organic labeling and non-GMO labeling are on different brands, different packaging, and different categories of baby food, so baby food products are one of the few food products in the United States that show relatively widespread adoption of organic and non-GMO labels. Therefore, the information from baby food products can shed light on the effects of organic and non-GMO labels on other products, such as fresh produce and dairy products. Also, because of the heated debate surrounding GM foods, more products will have "double labeling" in the near future.

Another interesting finding that might provide implications for the rest of food industry is the effect of pouch packaging on baby food purchasing. Purchasers of baby food are willing to pay a very high premium for the pouch packaging, in part due to its convenience and BPA-free status. There have been few studies investigating the convenience of packaging. In recent years, the pouch packaging has also been adopted in other products. This paper might also provide information for use in future studies.

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