



**AgEcon** SEARCH  
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

# Promotion in the Marketing Mix: What Works, Where and Why

Proceedings from the NEC-63 Conference

Toronto, Ontario • Canada • Spring '94

*Sponsored by*

The Committee on Commodity Promotion (NEC-63)

The Dairy Farmers of Canada

Department of Agricultural Economics and Business, University of Guelph, Canada  
and the National Centre for Promotion Research, Cornell University, USA



**FACTORS AFFECTING THE MEASUREMENT OF  
ADVERTISING AND PROMOTION:  
American Peanut Butter in a Transitional Economy, Poland**

*Bill R. Miller*  
*The University of Georgia*

**Introduction**

On January 1, 1990, the government of Poland began one of the most unique experiments in economic policy revision that the world has seen. Based on broad political support, communist policy of central control was replaced with what has become known as economic shock therapy. Shock therapy was the implementation of rather simple macroeconomic concepts common to the rhetoric of free market economic principles. The concepts were:

1. Remove all price controls.
2. Remove subsidies on major inputs to production such as gas, coal, and chemicals such as fertilizer and herbicides. Subsidized interest was curtailed but not eliminated.
3. Promote privatization with legislation and tax incentives.
4. Cut government borrowing as near to zero as possible.

Negative results began occurring almost immediately. Industrial production began to drop in large state owned firms such as steel and state farms. Industrial output dropped by only 3 percent in 1990, but by 1991 it had plummeted downward by 22 percent. By 1991, state farms were losing 10 million dollars per week and dairy herds, mostly state farms, were being liquidated. Inflation was running at about 70 percent per year (although down from the 80's level of 600 percent) and unemployment, previously illegal, was rising toward the current level of about 14 percent.

Positive results were also significant. In Warsaw alone, 11,000 new businesses were started in the first year. Foreign investment in the form of joint ventures began to increase. Investment from the U.S. tended to be at the high side represented by such firms as Johnson and Johnson and Coca Cola. In the food sector, German wholesalers quietly became a major factor. Investments were small, in the range of 100,000 dollars, and resulted in mushrooming of Polish Hometownia's (small general merchandise outlets) throughout the country side. Imports of foreign goods were relatively unrestricted. Stocks of consumer goods were still sparse in 1991, but by 1992 most of the empty shelves had been filled and inventory was for the first time becoming a concern.

Today, Poland is still a transitional economy, but major advances can be noted.

Industrial production rebounded to a 7 percent increase in 1993 which was the largest increase in Western or Eastern Europe. Exports have risen from approximately 8 billion dollars, in 1989, to approximately 20 billion, in 1993. Inflation has dropped somewhat to about 35 percent. Unemployment and privatization are still important problems and there is increased pressure to restore subsidies. Government spending is being held in check only because of pressure from the World Bank and other outside lenders who might withdraw lines of credit, if deficit spending exceeds five percent of tax receipts.

### **Polish Firms in the Transition Economy**

The transition environment for firms, at the micro level, can only be described as chaotic. Managers were exposed for the first time to price and business risk. The state monopoly had previously bought at fixed prices all that could be produced and furnished any amount of credit necessary for maximum production. Polish agriculture was particularly vulnerable in this environment. Costs were rising because of lost subsidies and high interest rates, in excess of inflation. As expected, competition from foreign imports was rising and significant markets to the east had been lost as the bankrupt central monopolies of the former Soviet Union were unable to continue their former levels of buying power.

#### *U.S. Response*

Many of these problems were anticipated. U.S. Secretary of Agriculture Clayton Yuetter was asked to tour Poland in late 1989 as the first step toward implementation of the SEED ACT (Support East European Democracy). One result of that visit was a decision to establish the Polish-American Extension Project. As of October, 1993, 60 U.S. Advisors representing 23 Land Grant Colleges have participated in this project. Miller and Rust who were part of the first set of Advisors who arrived in June, 1991 quickly identified marketing and credit as the two primary areas of education most needed by Polish farmers and agribusinessmen. Their initial workshops have evolved into set of Advanced Business Planning Centers that teach a curriculum in business planning that concentrates on these important areas. The Centers link Polish agricultural universities, at Poznan, Olsztyn, Wroclaw and Lublin with Polish counterparts in the Polish Extension Service. The Centers typically offer intensive one week workshops to a clientele of Polish Extension Advisors, farmers, bankers and agribusiness managers. At Olsztyn, Poland the curriculum concentrates on market research and is called a Market Research Center. Members of the Center have been trained in the principles of market research and have trained at least one Advisor from each of the 49 voivodships (constructed similarly to a U.S. state) in Poland.

#### *Research Support*

One of the first projects of the Market Research Center was to conduct consumer surveys of the milk market in Olsztyn. The Olsztyn milk market survey provided a body of knowledge about Polish consumers and it provided a nucleus of market researchers who can be called on for future projects. The author was able to use the Olsztyn workshop teachers in a recent study of advertising for Georgia (U.S) peanut butter sold in Poland. Questionnaires were constructed and tested and the Polish Advisors were left to complete the study after the author left Poland. Efforts of the Polish-American Extension

Project (PAEP) have thus begun to serve the dual purpose of creating educational infrastructure for transition to a free market and a democratic process and creating opportunities for expanding markets for U.S. products. The Market Research Center at Olsztyn now has a trained field staff throughout Poland that could carry out a national market research study in a manner that could not be matched by any other institution in Poland. One of Center's instructors located in Gdansk has been instrumental in arranging for import of container load of American peanut butter for sale during the test period. The Market Research Center was also instrumental in establishing a general knowledge of Polish consumers and in pretesting the questionnaire.

### Polish Consumers in the Transition Economy

Prior to 1990, Polish consumers had become accustomed to absolute scarcity of goods. Fixed prices were considered low, but long waiting lines of consumers in markets were common. Consumers skipped work to line up for particularly scarce goods, such as a TV, or paid other people to stand in line for them. For some items such as cars, phones, or apartments the waiting time could be years.

Shortly after the beginning of the transition period, many Poles were mystified by a seemingly incongruous phenomena. Poles who thought of themselves as poor, who could see that unemployment was rising rapidly, who could see that consumer prices were rising but wages were not, nevertheless began to see that consumers in general were consuming more at higher prices. One highlight: during one month of 1993, the Opal car dealership in Poznan became the high volume seller for all of Europe.

Inflationary prices and increased consumption are unique to a transition economy. The inflation now occurring in Poland bears little relationship to inflation in the western world. Inflation in Poland cannot be characterized as general rise in the level of prices. During a given period of time some prices rise rapidly, others hardly rise at all. Relaxation of price controls that keep prices fixed at given ratios and at given levels, allows prices to adjust to supply-demand forces. Some Polish prices simply adjust more rapidly than others. Typically, those prices that are the most subject to world markets adjust at the most rapid rate. Polish wheat prices, for example, exceeded world prices as early as 1993 but were soon moderated by imports. A good Polish dinner, however, can still be had at one-fourth the price of a similar dinner in Western Europe. A simple supply-demand diagram, Figure 1, is useful to summarize the adjustment process.

In Figure 1,  $S_1$  and  $D$  represent aggregate supply and demand response curves before the transition period. Fixed price,  $P_1$ , from the benevolent communist state is lower than the price that would have prevailed in a free market,  $P_e$ . The low price, however, induces consumption at level  $Q_{d1}$  which is in excess of what the state monopoly can supply, which is  $Q_{s1}$ . An absolute shortage results in the market place which is equivalent to  $Q_{d1} - Q_{s1}$ . Seeing the shortage and recognizing the unhappiness of the consumers, the state is motivated to increase production by increasing subsidies to producers, thereby attempting to shift the supply curve to the left until quantity supplied,  $Q_{s1}$  is equal to  $Q_{d1}$ . One can see that when this process is successful, it has great political appeal. When the state is successful, the consumers see the benevolent state as the source of a good supply of inexpensive goods; the producers see the benevolent state as the source of subsidized cheap inputs; there is no risk of business failure; there are no marketing problems; and

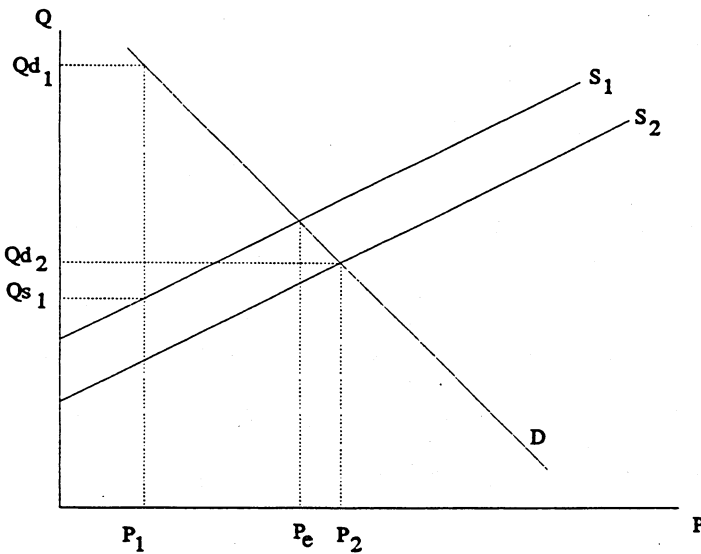


Figure 1. Supply and Demand in a Transitional Economy

there is no need to justify investment as having a profitable pay-off. Further, there is full-employment and everyone has 40 days of vacation per year (common in the communist countries).

Such an economy must be strictly protected from the rest-of-the-world. Land and capital are frequently undervalued because profits from foreign trade are not capitalized into assets that produced them, but disappear into state budgets. Outside traders would bid up protected consumer prices in a benevolent state. Unfortunately, given the experience of Poland, it appears to require 40-50 years or longer before the state itself becomes completely bankrupt from the subsidies. As an aside, one wonders if Russia and other states of the former Soviet Union have yet suffered enough to learn the lessons of Figure 1.

Once the state is too bankrupt to borrow money for subsidies from the rest-of-the-world, or inflation from printing its own money destroys its low price policy, it is ready to enter a transition period to a free market. Entering the transition period, as seen in Poland, means loss of the ability to fix low prices for consumers and the loss of ability to subsidize production. The principle effect will be for the supply curve to shift back to the right to S<sub>2</sub>, for prices to rise to market equilibrium at P<sub>2</sub>, and equilibrium quantity supplied and demanded Q<sub>d2</sub> to be higher than quantity supplied, Q<sub>s1</sub>, under the fixed price scheme. The mystifying effect noted by Polish consumers will then be manifested by seeing that more is produced and consumed, Q<sub>d2</sub>, in a free market than was observed in the command economy, Q<sub>s1</sub>. One important additional effect that affected Polish prices was the influx of imports, particularly food products. The increase in imports could offset the decrease in domestic supply caused by reducing subsidies. Since S<sub>1</sub> is the aggregate domestic supply curve, the effect of adding import supply to domestic supply could cause

prices to be even higher than shown in Figure 1, as the supply curve,  $S_2$ , could actually move to the left of  $S_1$ .

### Conditions of Demand

Traditional Marshallian theory of demand cannot be tested in a command economy. For example, there is no price variation that is appropriate for testing hypotheses. Further, the homogeneity condition of demand theory implies that purchases of a good remain unchanged for proportionate changes in prices and income. Proportionate price changes among goods was a policy goal of the Polish state economy. In the 1970's Zbigniew Kurpinski, in the Polish Ministry of Agriculture, was in charge setting the prices of more than 4,000 food products. What sounds like an almost impossible task was simplified, according to Kurpinski, by not changing them very often and by changing them proportionately when they were changed. One of the most frequent questions raised by Poles in workshops is "What are the ratios of American prices?" Testing for demand relationships would also be hindered by shortages. An econometric analysis of consumption would only make sense if market quantities were elastically supplied at the state's administered fixed price. The presence of shortages in the shops implies that was not the case.

Concern for former conditions was evident in the consumer survey carried out by the Olsztyn Center for Market Research in December, 1991. Professors carrying out the survey were very concerned with whether there were shortages in the shops, whether there were foreign products on the shelves, and whether price was a determinant of consumption. The prevailing assumption of the professors was that habitual consumption would be the most important determinant of demand. In fact, the theory of demand would support that quantities consumed would be extremely constant, or habitual, if the state was consistent in raising both wages and commodity prices in fixed proportions.

One table has been pulled from the Olsztyn survey data to test some of the hypotheses developed in this paper. One, price would be positively correlated with consumption and two, habitual consumption would be significant for domestic products but not for new, or foreign products. Price should be positively correlated with consumption because of the transition effect described in Figure 1 and habit should be associated with consumption because of persistent attempts by the command economy to raise prices and wages in the same proportions, however, in the case of new products consumers may not have developed habitual patterns of consumption.

Generally, the data supported these hypotheses. Normal milk, condensed milk, sour cream and cream are traditional Polish products. In all instances, quantity purchased and unit price were positively related, Table 1, and their t-tests were highly significant. Likewise, the effect of habitual behavior was positively related to consumption, Table 1, with t-tests ranging from .01 for normal milk to .10 for cream.

In contrast, consumption of products that were relatively new to the market were positively related to price but unrelated to habitual behavior. In 1991, UHT milk was totally an import product and yogurt was mostly an import. As an aside to this paper, it should be noted that Polish dairies used results of this survey in assessing restructuring of the dairy industry. Both domestic UHT milk and domestic yogurt are now common in the Polish market.

Table 1. Consumption of Selected Milk Products as a Function of Price and Habitual Behavior in Olsztyn, Poland, December, 1991

Consumption Products	Unit Price	Habit*
	Regression Coefficients	
Normal milk	.19	1.26
t-test	(.0001)	(.02)
Condensed milk	.01	.06
t-test	(.0001)	(.02)
Cream	.02	.05
t-test	(.0001)	(.08)
Sour cream	.02	.05
t-test	(.0001)	(.10)
Yogurt	.04	.14
t-test	(.0001)	(.20)
UHT milk	.19	.16
t-test	(.0001)	(.25)

\*Habit is a dummy variable with 1 indicating either a small or large degree of influence on behavior; 0 indicated no influence.

### Possibilities for Advertising

According to communist theory, advertising is considered to be a social cost and attempts to change consumer tastes and preferences are not only wasteful but are a negative influence on an individual's development. Accordingly, costs of advertising in excess of .5 of one percent could not be claimed as a cost of production in reports of Polish state enterprises. Persistence of habitual consumption patterns generated by price and wage controls did in fact reinforce the political correctness of the advertising policy. Yet, despite the theory and practice of 45 years of communist rule, Polish consumers in 1991 indicated there was significant reason to believe that consumers would be affected by advertising.

Consumers in Olsztyn were asked a series of questions concerning their awareness of advertising and awareness of product characteristics that might be affected by advertising, Table 2. In two questions related to packaging, 74 percent of the consumers said they often or always paid attention to the type of package used in selling dairy products. Sixty seven percent agreed that new dairy products on the market were packaged in a more pleasing way. The new products on the market in 1991 were mostly of foreign origin and some were packaged in foil which had not previously been used in Poland. Since 1991, Polish dairy plants have been moving rapidly in the direction of new packages that are more pleasing to the eye and that incorporate new packaging materials.



*Table 2. Summary of Polish Consumer Awareness of Factors Related to Consumption that might be Affected by Advertising, Olsztyn, Poland, December, 1991.*

Factors	Awareness	Percent
Do you pay attention to the kind of package when you buy dairy products (For example, the foil?)	1. Always	20.3
	2. Often	53.4
	Subtotal	73.7
	3. Rarely	19.5
	4. Never	6.8
Total	100.0	
Do you pay attention to domestic or foreign origin when buying dairy products?	1. Always	44.1
	2. Often	38.9
	Subtotal	83.0
	3. Rarely	11.9
	4. Never	5.1
Total	100.0	
Do you pay attention to the use of preservatives when you buy dairy products?	1. Always	15.3
	2. Often	31.4
	Subtotal	46.7
	3. Rarely	27.9
	4. Never	25.4
Total	100.0	
To what degree are you interested in the application of antibiotics in feeding?	1. Very interested	33.9
	2. A little bit	19.5
	Subtotal	53.4
	3. Not interested	22.9
	4. No opinion	22.9
Total	0.8	
Total	100.0	
To what degree are you interested in the application of hormones in feeding?	1. Very interested	33.1
	2. A little bit	20.3
	Subtotal	53.4
	3. Not interested	22.9
	4. No opinion	22.9
Total	0.8	
Total	100.0	
To what degree do you agree that dairy products are packaged in a more pleasing way?	1. Agree	67.0
	2. Agree to a certain degree	22.0
	Subtotal	89.0
	3. Don't agree	0.8
	4. No opinion	10.2
Total	100.0	

*Table 3. Taste-test of American versus Chinese (Peony) Peanut Butter, Gdansk, Poland, June, 1993.*

Product	Preferred (number)	Percent Chosen	Weight	Price	Ounces	cents/oz.
U.S.A.	58	72	18oz	\$1.991	18	11.06
Peony	23	28	340g	19,700z	11.92	10.34

<sup>1</sup>Price of Kroger creamy peanut butter in Athens, Georgia, July, 1993.  
<sup>2</sup>Conversion rate: gram = 0.035 ounce.  
<sup>3</sup>Based on exchange rate: 16,000z = \$1.00.

One of the most important advertising themes available to Polish processors is an appeal to national pride. Eighty three percent of consumers said they often or always paid attention to whether a product was of domestic or foreign origin, Table 2. Further questioning of consumers indicated that they had a high preference for products of Polish origin.

Consumer awareness of packaging seemed to be higher than awareness of health related issues. Consumer attention to the use of preservatives in milk and hormones and antibiotics fed to cows ranged from 47 percent who paid attention to preservatives to 53 percent who paid attention to use of hormones and antibiotics, Table 2. A general result of this survey was that there is a significant portion of Polish consumers that are very interested in healthy food. Other questions asked on the survey supported the hypothesis that approximately half of the population will be influenced by advertising directed at concepts of healthy food.

### Possibilities for Advertising American Peanut Butter

Development of the focus of advertising and questionnaire design were enhanced by the general knowledge of Polish consumers. One, the concept of point-of-sale advertising

*Table 4. Taste-test of American versus Dutch Peanut Butter, Gdansk, Poland, June, 1993.*

Product	Preferred (number)	Percent Chosen	Weight	Price	Ounces	Cents/oz.
U.S.A.	101	75	18oz	\$1.991	18	11.06
Calve	33	25	350g	31,700z	12.252	16.163

<sup>1</sup>Price of Kroger creamy peanut butter in Athens, Georgia, July, 1993.  
<sup>2</sup>Conversion rate: gram = 0.035 ounce.  
<sup>3</sup>Based on exchange rate: 16,000z = \$1.00.

was supported by the fact that consumers were very aware of packaging. Second, although awareness of healthy food concepts was not as high as packaging awareness, there was evidence that consumers might respond to advertising that stressed the wholesomeness of peanut butter.

### *Taste-Tests*

A pre-test of survey questions was accomplished through a taste-test of consumers in the Gdansk area in June, 1993. This test also established that peanut butter was a product that had sales potential in Poland. Although approximately half of the consumers tested had never heard of peanut butter, there was a general high acceptance of the product.

The taste test was conducted by allowing consumers to taste an unidentified product followed by drinking Pepsi Cola contributed by the local bottling company. The consumer then tasted the second unidentified product and marked a questionnaire. The Dutch versus American peanut butter test was conducted on Saturday and Chinese versus American was conducted on the following day.

The taste test used the Dutch product Calve because of the quality associated with the Dutch product. This association with quality is reflected in Calve's price, 31,700z. At the time of the survey, Calve was the highest priced peanut butter on the market. Based on the exchange rate at the time of the survey, 16,000z = \$1.00; the 12.25 ounce jar of Calve sold for the equivalent price of 16.16 cents per ounce.

There were 83 surveys from the taste test between the U.S.A. peanut butter and the Chinese peanut butter Peony. Of the 83 surveys, two surveys listed no preference. Out of the remaining 81 surveys, 58 potential consumers (72%) chose the U.S. product while the remaining 23 (28%) chose Peony.

There were 136 surveys from the taste test between the U.S.A. peanut butter and the Dutch peanut butter Calve. Of the 136 surveys, two surveys listed no preference. From the remaining 134 surveys, 101 potential consumers (75%) chose the U.S. product while the remaining 33 (35%) chose Calve.

### *Advertising Test*

The taste-test greatly favored the American product as the American product was preferred by a margin of three to one over either the Dutch or the Chinese brand. Following the successful test, arrangements began for a shipment of American peanut butter to arrive in Poland in November, 1993. Also, plans were made in cooperation with the National Peanut Council, London Office, to develop point-of-sale advertising. The advertising was a four-color, eight-page pamphlet, approximately 3 inches in diameter with an elastic thread that allowed it to be attached to a jar of peanut butter. The advertising defined peanut butter and its contents, described how peanuts are grown, how peanut butter is made and presented recipes for the use of peanut butter. The pamphlet was produced in London and shipped to Gdansk in time to be attached to product sales that began in December, 1993. The original design of the test of advertising effectiveness was to measure sales in stores that had advertising versus sales in stores that had no advertising. This scheme was subsequently abandoned in favor of attaching the pamphlet to half of the jars sold in any store, recording subsequent sales and conducting follow-up interviews with peanut butter customers.

Staff of the Marketing Research Center in Olsztyn have only recently completed recording sales and interviewing consumers. Approximately 125 questionnaires have been collected and sales and questionnaire data are now being recorded in Poland. The data are being recorded as SAS data sets and will subsequently be analyzed using the SAS program. All of the staff are familiar with SAS as it was introduced to Poland by the Polish-American Extension Project and a nation-wide training program by the Marketing Research Center has made it a useful tool for analysis. This data will be analyzed both in Poland and at The University of Georgia.

### Concluding Comments

Early results from the field workers indicate that rate of peanut butter sales is lower than expected. As there are no habitual patterns of consumption for the product, price is expected to play an important role. Questions in the pretest relating consumers expected consumption to expected price indicated a negative effect of price on sales. American peanut butter must contend with a 35 percent border tariff compared to none for Chinese peanut butter and Chinese peanut butter is likely to be seen as a better buy than the American brand. China and Poland have a bilateral trade agreement that gives China most favored nation status. The future of this agreement is currently being debated in light of recent GATT talks that would eliminate such trade. Since Poland has a goal of entering the European Common Market, perhaps there will be some reduction in the tariff.

The research design is simple but doable in the Polish economy. The applied level of the research has allowed the Polish Advisors in the Market Research Center to work directly with Polish businessmen in both a research and extension role. This interaction has been very useful to the Advisors who typically had no marketing skills under the command economy.

The interaction of the Center with the Polish importer was of itself a positive influence on the importer's decision to import American peanut butter. There is a high likelihood that in the absence of the research effort there would have been no import of peanut butter. Certainly the availability of assistance with advertising was a deciding feature in the importer's final decision.

Finally, the research could not go forward effectively without cooperation of the National Peanut Council and a small grant of research funds available to pay some of the expenses of the field-workers of the Market Research Center. The Market Research Center is proposing that it become Market Research Foundation and believe that experience in the peanut butter project will give them visibility that will be helpful in obtaining grant funds.