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# Countertrade's Impact on the Supply Function

BY

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## IN BRIEF

During the 1970s and 1980s, many second- and third-world countries accumulated enormous external debt. For countries facing convertible currency shortages or borrowing constraints, countertrade provided a means of circumventing structural trade imbalances. Due to intense global competition and the secrecy surrounding countertrade, little data is available regarding the scale and scope of this trading practice. This article updates the findings of a government survey performed in the mid-1980s and compares several parallel statistics from the earlier and later surveys. The combined information traces a pattern of American involvement in countertrade during the past decade.

This study also examines countertrade's impact on the supply function by considering the placement of reciprocally purchased goods — a task most frequently assigned to purchasing. The influence that countertraders' experiences may have on their choice of disposal options is explored through analysis of the more recent survey's data. The findings indicate that a majority of U.S. firms use reciprocal goods in their own operations. A number of future research directions are suggested as a follow-on to this study to provide additional detail regarding how countertrade affects the supply function and the supply base.

## COUNTERTRADE IN PERSPECTIVE

Countertrade, a trade-balancing method whereby goods or services are exchanged for other goods or services in full or partial payment for a sales transaction, has long been an interest of business executives and researchers. Countertrade enables firms to sell products in markets where other forms of payment may be difficult or precluded. While U.S. businesses have traditionally turned away from countertrade demands and insisted on compensation in the form of cash, letters of credit, or borrowed funds from private or public sources, many firms have found that to compete in the global marketplace and to enter new markets, countertrade must often be accommodated as an alternative means of trade finance.

During the 1970s and 1980s, many second- and third-world countries accumulated enormous external debt. Increasingly, convertible currency

earnings from exports had to be diverted to servicing this debt, thereby reducing the funds available to pay for imports. At the same time, multilateral lending institutions and Western commercial banks experienced numerous defaults and intensified requests for debt rescheduling, causing the world financial community to severely restrict additional loans. For countries facing convertible currency shortages or borrowing constraints, countertrade provided a means of circumventing structural trade imbalances. As such, countertrade has promoted worldwide business and expanded trade, further drawing American firms into the global market.

Due to intense global competition and the secrecy surrounding countertrade transactions, little data is available regarding the scale and scope of this trading practice.

No records are kept by the federal government, and few comprehensive surveys on countertrade have been conducted.<sup>1</sup> Numerous articles and books have presented anecdotal evidence, but these studies provide an unbalanced picture (and suffer from low external validity) because selected experiences are reported in order to illustrate an argument.<sup>2</sup> Among the surveys performed, most have focused either on furnishing profiles of active countertrade practitioners,<sup>3</sup> or on uncovering motives for countertrade involvement.<sup>4</sup> Few studies have looked beyond the initial countertrade decision to consider reciprocal purchases and their placement at the conclusion of the transaction.<sup>5</sup>

In 1985, the United States International Trade Commission (USITC) conducted a one-time survey of American involvement in countertrade, covering the first half of the 1980s.<sup>6</sup> With 369 major export firms responding, this survey collected data from the broadest group of American businesses to date. The study discussed in this article updates the findings of the USITC survey and compares the two surveys' results, to the degree possible. The combined information outlines a pattern of American involvement in countertrade during the past decade. To achieve this objective, the following research question and issues were examined:

■ What has been the pattern of American involvement in countertrade over the past decade?

- What has been the trend of countertrade volume and its corresponding share of international trade?
- With what parts of the world do U.S. companies have outstanding countertrade obligations? Has any geographic change taken place?
- In what parts of the world is countertrade growing? By how much?
- Why do American firms get involved in countertrade? Has any shift in motivations occurred?

This study also explores countertrade's effect on the supply function by considering the placement of

reciprocally purchased goods — a task most frequently assigned to purchasing. Purchasing's role in countertrade has traditionally begun after a sales agreement has been signed, when compensatory items must be selected and assessed for value, quality, usability or salability, and delivery requirements.<sup>7</sup> Compensatory items usually consist of raw materials, components, or finished goods (including MRO supplies), although they can also include the transfer of technology.<sup>8</sup> Once received, a means of disposal must be found for these goods. Typical outlets have included: in-house use, either domestically or in foreign subsidiaries; sales to a firm's suppliers, customers, or unrelated buyers; or sales through a trading company.<sup>9</sup>

Why firms choose specific disposal options is an issue that has not been addressed by empirical research. Consequently, the second inquiry of this study considers changes in disposal over the past decade and the influence that countertraders' experiences may have on their choice of disposal options — specifically, what has been the effect on the supply function?

■ How have the changes in countertrade involvement affected the supply function?

- How are reciprocally purchased goods disposed of? Has the favored method of disposal changed during the last decade?
- What consequences, both positive and negative, are associated with the various disposal options for reciprocal goods?

Summary statistics and comparisons with the 1985 USITC survey responses were used to answer the first research question and the first part of the second research question. The second part of the second research question was addressed by a series of stepwise regressions, separated according to disposal option and year of the reported data.

## HOW THE STUDY WAS CONDUCTED

As was done earlier by the USITC, this study used a large-scale survey to collect data for research purposes. A survey instrument was constructed with questions from previous studies<sup>10</sup> and pretested with a group of industry experts. Both perceptual and factual data were collected, although only the factual data is reported here.

### The Sample

A seven-page survey instrument was mailed to the purchasing manager or countertrade staff specialist at 1,122 firms. These firms were either firms contacted by the USITC in its 1985 study of barter and countertrade, or they were members of the National Association of Purchasing Management's (NAPM's) International Committee. Two hundred eighty-nine usable responses were received, yielding a 25.8 percent response rate. Seventy-two of

these respondents answered questions about their firms' countertrade practice and volume. The analysis presented here is based on the 72 responses.

### Characteristics of Respondents

Responding firms came predominantly from manufacturing or processing industries (well over half the sample) and were large, both in terms of employment and total annual purchases. Two-thirds of the active countertraders had 10,000 or more employees and more than three-quarters of the firms made annual purchases of \$100 million or more. Countertrading companies tended to be well entrenched in international markets; almost one-third of the respondents purchased 25 percent or more of their material inputs overseas.

## RESULTS

### Patterns of American Involvement in Countertrade

Because no public records on countertrade transactions are collected, estimates of countertrade's size vary widely. Countertrade has been judged to accompany anywhere from 15 to 30 percent of all world trade.<sup>11</sup> The number of countries engaged in countertrade has been placed at around 94, a six-fold increase from the 1970s, when participation was estimated to be 15 countries.<sup>12</sup> The United States International Trade Commission was the first organization to estimate the size of American countertrade involvement, covering the 1980-84 time period.<sup>13</sup> The present study updated that information for the period of 1985-89. A comparison of the two surveys' results is presented in Table I.

Table I reveals that total sales agreements involving countertrade more than doubled during the 1980s, from \$8.4 billion in 1980 to \$17.7 billion in 1989 — and from \$28.8 billion for the 1980-84 timeframe to \$78 billion for the period from 1985 to 1989. The average proportion of sales agreements that included reciprocal purchase requirements also increased, from 5.6 percent in 1984 to 8.8 percent in 1989. The smaller percentage increase may indicate that countertrade's share of international trade increased less than the total volume of American exports. The smaller percentage may also indicate that survey respondents did not answer the dollar volume question as truthfully as they answered the percentage question. Nevertheless, it appears that more sales were tied to reciprocal purchase requirements in 1989, showing an expansion in both countertrade volume and share of international trade during the 1980s.

While one form of countertrade, barter, requires the simultaneous exchange of goods or services for other goods or services, other forms of countertrade involve sales and purchases that take place at different points in time. Sales that have been made

by American firms, but haven't yet been compensated for with reciprocal goods, result in countertrade obligations on the part of the foreign trading partner. Table II shows a shift in countertrade obligations from European to Asian customers between the beginning and the end of the 1980s. There was also a small decline in the proportion of obligations from other parts of the world. This shift resulted in a more geographically "balanced" mix of reciprocal purchases due.

Table III traces the global growth of countertrade for the latter half of the 1980s in each of the

**TABLE I** SIZE OF COUNTERTRADE: 1980-89

	Total Sales Agreements Involving Countertrade (in billions of dollars)					
	1980	1984	1980-84	1985	1989	1985-89
USITC Study	\$8.4	\$7.1	\$28.8			
Current Study				\$13.6	\$17.7	\$78.0

  

	Mean Percent of Sales Agreements Involving Countertrade					
	1984	1985	1986	1987	1988	1989
USITC Study	5.6%					
Current Study		5.0%	4.6%	7.1%	7.0%	8.8%

**TABLE II** OUTSTANDING COUNTERTRADE OBLIGATIONS

	Origin of Countertrade Obligations		
	Europe	Asia	Other Parts of the World
USITC Study (1980-84)	52%	21%	27%
Current Study (1985-89)	44%	32%	24%

**TABLE III** AVERAGE GROWTH OF COUNTERTRADE IN EACH PART OF THE WORLD, 1985-89

Geographic Region	Growth Factor
Western Europe	13.1 times
Eastern Europe	9.4 times
North America	8.1 times
South Asia	4.1 times
Africa	3.7 times
Middle East	3.6 times
Latin America	2.3 times
East Asia	2.2 times

major geographic regions of the world. The USITC did not collect this data, so no comparisons can be made with the first half of the decade. Responses to the current survey show that countertrade grew the fastest in Western Europe (13.1 times) and the slowest in East Asia (2.2 times), although growth took place in all major parts of the world. It appears that countertrade is an expanding practice worldwide.

Why do American firms get involved in countertrade? As shown in Table IV, the major reason throughout the 1980s was that it was required by a foreign government, although the percentage declined somewhat during the latter half of the decade. Two other reasons — "used to maintain foreign market share" and "needed to meet the competition in export markets" — declined in importance, while "used to help finance a firm's exports" grew in importance. "All other reasons" also became more important. These other reasons were not specified in the USITC survey, but in the current study, the reasons included:

- use as a pricing mechanism
- a factor used to permit or increase sales
- a vehicle to increase market share
- a factor used to enter a market not previously open
- a vehicle to move surplus inventory
- a vehicle to move finished goods

### Impact on the Supply Function

Purchasing's traditional role in countertrade has been to find either a use or sales outlet for the compensatory items that must be bought. Table V compares disposal options that were used by American companies at the middle and end of the 1980s. Several remarkable shifts are apparent. First, the absorption of *counterpurchases for in-house use* jumped by 10 percentage points between 1984 and 1989, while sales of reciprocal goods to U.S. suppliers remained unchanged and insignificant at two percent. Sales to a firm's supply base does not appear to be an important disposal outlet. Use of trading companies to assist in selling compensatory goods declined by two percentage points, while sales to other buyers increased by 11 percentage points. Other buyers include a firm's regular customers as well as unrelated consumers. The "unspecified" disposal outlets in the USITC study were not explained.

To investigate the consequences associated with the various disposal options, a series of stepwise regressions were performed with the 1985-89 data. The Appendix (see page 44) explains the statistical method used and displays the results of the regression analyses. Various countertrade experiences were significantly related to each disposal option, suggesting that different involvement outcomes lead to different means of disposal.

TABLE IV

#### WHY FIRMS COUNTERTRADE

	Primary Reason for Engaging in Countertrade					
	Required by Foreign Govt	Meet Comp. in Export Market	Maintain Foreign Mkt. Share	Used to Finance Exports	Repat. Blocked Currency	All Other Reasons
USITC Study (1980-84)	59%	13%	14%	3%	2%	9%
Current Study (1985-89)	51%	10%	11%	10%	1%	17%

TABLE V

#### WHAT HAPPENS TO RECIPROCAL GOODS

	Disposition of Countertrade Obligations				
	Absorbed In House <sup>2</sup>	Sold To Your Domestic Suppliers	Sold Thru a Trading Company <sup>3</sup>	Sold to Different Buyer	Unspecified
USITC Study (1984) <sup>1</sup>	42%	2%	23%	14%	19%
Current Study (1989)	52%	2%	21%	25%	-

<sup>1</sup>Excludes offsets (nonmilitary countertrade only)

<sup>2</sup>Includes in-house use in American facilities as well as in foreign affiliates

<sup>3</sup>Includes domestic and foreign sales made through a trading company

Reciprocal purchases that didn't fit the U.S. company's established marketing channels significantly influenced three disposal options:

- Use in domestic operations
- Use in a foreign affiliate
- Sales through a trading company

Goods and services that *did* fit a company's marketing channels were likely to be employed in the American firm, while items that didn't fit a company's marketing channels were typically sold through a trading company or absorbed by an overseas affiliate. Reciprocal purchases that were of poor quality were often sold to a U.S. buyer (other than the firm's suppliers) but could not be sold through a trading company, at least in 1985. Lost sales and unprofitable deals were associated with sales of reciprocal purchases to different U.S. buyers, although lower unit costs were a benefit related to this disposal option also.

Sales through a trading company led to higher unit costs at the end of the decade but helped boost sales and profits during the mid-1980s. Sales of countertrade obligations in other countries resulted in higher sales throughout the 1985-89 time period, while use of obligations in foreign affiliates led to decreased sales from 1987 to 1989. The development of new technology was positively related to sales of reciprocal obligations to non-supplying American buyers and to overseas customers but negatively related to in-house use of these products. In 1985, sales of countertrade goods through a trading company helped boost levels of employment in U.S. firms while leading to less efficient production runs; employment of these goods in an overseas affiliate led to increased plant capacity utilization; and use of these items in a domestic operation led to higher unit costs.

Some of the most encouraging relationships were those between countertraders' experiences and sales of reciprocal purchases to a firm's suppliers. Larger, more efficient production runs were associated with sales of countertrade obligations to suppliers in every year except 1985. Sales to suppliers were also a profitable means of disposal in 1985-86 and led to decreased competition for countertrading firms in 1987. In-house use of reciprocal purchases led to decreased competition for countertrade participants in 1989.

## INTERPRETATION AND DISCUSSION

Much of the countertrade literature relies on anecdotal evidence or the estimations of "experts" to gauge the size, scope, and trends of American countertrade involvement. The few surveys performed typically have relied on a small sample of participants to draw conclusions.<sup>14</sup> The study discussed in this article reports patterns of involvement by comparing data gathered in the largest

countertrade sample<sup>15</sup> to mirror statistics from another large sample. The results are significant for several reasons. The research:

1. collects factual information on American countertrade involvement and compares that data to statistics collected for five years prior to this study, resulting in a longitudinal picture of U.S. countertrade practice for the previous decade
2. investigates changes in the means of disposal for reciprocally purchased items (the task most commonly assigned to the supply function) from the middle to the end of the 1980s
3. examines the influence of U.S. companies' actual countertrade experiences on their choice of disposal for reciprocally purchased goods

The picture described by the data shows that aggregate sales agreements involving countertrade more than doubled during the 1980s and were accompanied by an increase in reciprocal purchase requirements.

Growth took place in all major parts of the world. This growth has probably stagnated or reversed itself in the 1990s due to the collapse of communist

regimes throughout Eastern Europe and the development of convertible currencies in several of those countries. In addition, many developing countries that were dependent on one or a few commodities for their export earnings in the 1980s (such as Indonesia and Malaysia), have since built up fledgling or even thriving industrial bases that provide a more stable and predictable source of export earnings. As a result, these countries have had a lesser need to insist on payment-in-kind as compensation for imports.

However, restricted access to international channels of distribution and limited expertise in marketing their products overseas mean that some developing countries will continue to impose countertrade requirements on U.S. firms wishing to sell in those countries. Developed and newly industrialized nations that want to balance bilateral trade flows will also insist on reciprocal trade, especially for expensive one-time purchases (such as military equipment). Results of the current survey indicate that the most successful American exporters either purchased compensatory items that fit their company's established marketing channels or else sold the items they received overseas. Success with the latter disposal option would require knowledge of overseas markets and stable worldwide distribution channels. Companies that had these assets benefited from increased sales. Companies that bought goods that fit existing marketing channels were able to use the compensation-in-kind in in-house operations

***Results of the current survey indicate that the most successful American exporters either purchased compensatory items that fit their company's established marketing channels or else sold the items they received overseas.***

and minimize the transaction costs associated with other means of disposal.

If a firm accepts reciprocal purchases that do not fit its current marketing channels, one disposal option is to use the services of a trading company to find a buyer for the products. Firms that chose this option benefited from higher sales and profits (due to the original sales made that were enabled by the acceptance of payment-in-kind) but also paid a price with higher transaction costs, since some of the profits were absorbed by the trading companies' fees. Businesses would be advised to weigh carefully the attendant transaction costs with additional revenue from increased sales, if the items offered to them as compensation are outside their distribution sphere.

Finally, companies that received poor-quality goods as part of a countertrade deal favored sales of these items to U.S. purchasers (other than their suppliers) as a means of disposal. These sales were associated with unprofitable deals (since the items probably had to be sold at a discount) and some lost sales (perhaps because the customer formed a negative opinion of the company as a whole due to its experience with these shoddy products).

Receipt of poor-quality goods is more likely to happen if the U.S. company fails to inquire about and inspect the payment-in-kind before the countertrade agreement is initially signed. Poor quality is also a more intractable problem if the compensatory items taken are finished goods. Quality problems can be minimized if a firm insists on taking raw materials or other commodities as compensation. These items are often graded, making quality easier to assess. Raw materials also provide greater flexibility in use, since they can be combined with a variety of other materials to produce a wide assortment of finished products. Greater flexibility reduces the likelihood of having to find an outlet for goods that don't fit established marketing channels. Transaction costs are curtailed, making the countertrade deal more profitable overall.

#### DIRECTIONS FOR FUTURE RESEARCH

The intriguing findings of this study motivate a number of additional questions that future research can address. First, what implications does the rise in countertrade volume and share of international trade have for purchasing? Does this mean a rise in overall imports or a substitution of countertrade suppliers for traditional cash suppliers? Second, what implications does the shift in countertrade obligations from Europe to Asia have for the supply function? Does the different geographic origin affect cost, quality, delivery, or availability of needed inputs? Third, most firms engage in countertrade because their trading partner or their trading partner's government requires it. Can useful sources of supply be obtained from cash-strapped countries

that want to retain marketable commodities for foreign-exchange earnings?

And finally, the majority of firms are using reciprocal purchases from countertrade suppliers internally. If firms elect to use reciprocal purchases in house, and if demand for their own products is not rising, then they must either transfer orders from current suppliers, not place additional orders with these suppliers, accumulate excess inventory, or shift in-house operations to countertrade suppliers. Choosing to accumulate excess inventory is unlikely. What effect(s) have the remaining options had on the supply base and the supply function, given the increase in countertrade volume observed in Table I?

Further surveys of countertrade practitioners can help answer these questions. In-depth case studies of experienced countertrade participants can also provide useful information. Given the likelihood of continued countertrade demands, additional knowledge of this trade finance practice can help make countertrade's impact on the supply function a positive one.

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## APPENDIX

To examine the consequences associated with the various disposal options used by U.S. firms, a series of stepwise regressions were performed with the 1985-89 data. Stepwise regression uses a partial F test to establish which independent variables should be included in or excluded from a model. It is a practical procedure for building a relevant regression model.<sup>16</sup> The explanatory variables were chosen from a list of benefits and drawbacks that respondents experienced as a result of their countertrade involvement. The disposal options for reciprocal purchases were the dependent variables. Because disposal practices may vary between domestic and international operations, in-house use and outside sales were separated by geographic location (in the United States or outside the United States) as well as by sales channel. This classification removes the potential confusion of different procedures used at home and abroad. Each disposal option was used as a separate dependent variable. The results of the analyses are presented in Table VI. (See pages 44 and 45).

The first column of Table VI shows the proportion of variability in the dependent variable that can be accounted for by the regression ( $R^2$ ). The second column indicates the level of significance of the overall model (model p-value); the third column lists the significant independent variables; and the last column shows the associated levels of significance (p-values) for the main effects of practitioners' experiences from countertrade involvement. The statistical significance of the independent variables is of primary concern here because the purpose is to demonstrate a relationship between countertrade experience and disposal choice. Only one set of independent variables explains more than half the variance in the dependent variable (those for "Sold through a trading company: - 1985:  $R^2 = 0.901$ ), indicating that factors other than reciprocal trade outcomes also affect means of disposal.

All but two model p-values are significant at the 0.10 level or better; five model p-values are significant at the 0.005 level; and 14 model p-values are significant at the 0.01 level (nearly half of the 30 models tested). Various explanatory variables are significantly related to each disposal option, suggesting that different involvement outcomes lead to different means of disposal.

TABLE VI

## FACTORS ASSOCIATED WITH EACH DISPOSAL OPTION

	Disposal Option and Year of Disposal	R <sup>2</sup>	Model p-value	Significant Independent Variables and Sign of Relationship	p-values
Used In House in the U.S.	1985	0.419	0.004***	• Lower unit costs (-) • Receiving g&s <sup>†</sup> that that don't fit company's mktg. channels (-)	0.074* 0.002***
	1986	0.332	0.005***	• Development of new technology (-) • Receiving g&s that that don't fit company's mktg. channels (-)	0.076* 0.002***
	1987	0.259	0.007***	• Development of new technology (-) • Receiving g&s that that don't fit company's mktg. channels (-)	0.013** 0.013**
	1988	0.000	—		
	1989	0.190	0.025**	• Increased completion (-)	0.057*
Absorbed by a Foreign Affiliate	1985	0.246	0.060*	• Increased utilization of plant capacity (+)	0.060*
	1986	0.141	0.124		
	1987	0.398	0.006***	• Increased sales (-) • Receiving g&s that that don't fit company's mktg. channels (+)	0.003*** 0.051*
	1988	0.419	0.001***	• Increased sales (-) • Receiving g&s that that don't fit company's mktg. channels (+)	0.000*** 0.047**
	1989	0.339	0.006***	• Increased sales (-) • Receiving g&s that that don't fit company's mktg channels (+)	0.002*** 0.078*
Sold to Your Domestic Suppliers	1985	0.318	0.058*	• Unprofitable deals (-)	0.058*
	1986	0.179	0.078*	• More efficient production runs (+) • Unprofitable deals (-)	0.048** 0.090*
	1987	0.218	0.046**	• More efficient production runs (+) • Increased competition (-)	0.074* 0.083*
	1988	0.067	0.070*	• More efficient production runs (+)	0.070*
	1989	0.065	0.070*	• More efficient production runs (+)	0.070*
Sold to a Different U.S. Buyer	1985	0.395	0.001***	• Lower unit costs (+)	0.001***
	1986	0.260	0.020**	• Lower unit costs (+)	0.060*
	1987	0.309	0.007***	• Develop. of new technology(+) • Unprofitable deals (+)	0.062* 0.099*
	1988	0.404	0.000***	• Receiving g&s of poor quality (+) • Profits from overseas offset inv. (-) • Develop. of new technology (+) • Lost sales (+)	0.014** 0.079* 0.000*** 0.003***
	1989	0.303	0.000***	• Receiving g&s of poor quality (+) • Lower unit costs (+) • Lost sales (+)	0.013** 0.005*** 0.016**
Sold Abroad	1985	0.213	0.083*	• Increased sales (+)	0.083*
	1986	0.267	0.028**	• Increased sales (+)	0.028**
	1987	0.151	0.066*	• Increased sales (+)	0.066*
	1988	0.269	0.020**	• Increased sales (+) • Develop. of new technology (+)	0.015** 0.092*
	1989	0.241	0.008***	• Increased sales (+)	0.008***

TABLE VI (CONTINUED)

## FACTORS ASSOCIATED WITH EACH DISPOSAL OPTION

Sold Through a Trading Co.	Disposal Option and Year of Disposal	R <sup>2</sup>	Model p-value	Significant Independent Variables and Sign of Relationship	p-values
	1985	0.901	0.000***	<ul style="list-style-type: none"> <li>• Increased levels of employment (+)</li> <li>• More efficient production runs (-)</li> <li>• Lost sales (-)</li> <li>• Unprofitable deals (-)</li> <li>• Receiving g&amp;s of poor quality (-)</li> <li>• Receiving g&amp;s that that don't fit company's mktg. channels (+)</li> </ul>	0.003*** 0.030** 0.001*** 0.040** 0.079* 0.000***
	1986	0.395	0.001***	<ul style="list-style-type: none"> <li>• Lost sales (-)</li> <li>• Receiving g&amp;s that that don't fit company's mktg channels (+)</li> </ul>	0.055* 0.000***
	1987	0.268	0.006***	<ul style="list-style-type: none"> <li>• Receiving g&amp;s that don't fit company's mktg channels (+)</li> </ul>	0.005***
	1988	0.074	0.064*	<ul style="list-style-type: none"> <li>• Receiving g&amp;s that don't fit company's mktg channels (+)</li> </ul>	0.064*
	1989	0.068	0.068*	<ul style="list-style-type: none"> <li>• Lower unit costs (-)</li> </ul>	0.068*

Significance levels: \* -p &lt; 0.10, \*\* -p &lt; 0.05, \*\*\* -p &lt; 0.01

†g&amp;s = goods and services



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