

INFORMAL CHANNEL RELATIONSHIPS IN LOGISTICS

by

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Should channel relationships in logistics have contracts? Is it imperative that participants formalize their relationship to specify the functions performed by each? Or is it possible that a relationship may be just as successful without a formal contract?¹ The purpose of this research is to investigate whether some channel relationships in logistics may succeed without a formal contract. The hypothesis is that the success of channel relationships may depend more on attitudes and expectations surrounding the relationship than on a formal contract.

While we are not recommending the absence of contracts in every channel relationship, our results suggest that the quality and effectiveness of channel relationships are not related to the presence of a formal contract. Results also suggest that a long-term perspective on the relationship and an expectation of future business are significantly related to the quality, effectiveness, and level of policy integration between participants in the relationship.

BACKGROUND

Channel relationships are expected to become the focus of logistics management and research in the twenty-first century.² While logistics practice and research often focus on individual firms, channel relationships emphasize the complementary roles of multiple firms in the distribution process. This is important because an individual firm's cost and customer service objectives can seldom be achieved without the contribution of other participants in the channel. For instance, manufacturers need dealer cooperation to service their customer. In addition, a growing number of logistics functions are performed by channel participants such as third-party transportation companies and public warehouses.

Channel relationships may have varying levels of sophistication. The most sophisticated are rather complex, requiring significant changes in the business processes employed by both parties. These changes frequently include investments in relationship-specific assets such as EDI linkages or dedicated warehouses. Examples of complex channel relationships discussed in the literature include strategic alliances, partnerships, and supply chain management.

While requiring a lower level of integration of business processes among participants, simpler channel relationships still require that participants look beyond the completion of single transactions and manage the distribution process in a coordinated manner.³ In this sense, channel relationships—either simple or complex—differ from transaction-based channels where the focus of management is based on individual transactions.

While the logistics literature has focused mostly on more complex relationships, this paper centers on simpler channel relationships. The importance of researching simpler relationships is twofold. First, simpler relationships are by far the most numerous type of relationship found.⁴ Second, an understanding of simpler relationships is needed because they usually are a first step toward more complex relationship types.⁵ To illustrate this point, note how the literature in logistics alliances, partnerships, and supply chains often recommends that firms initiate their associations with firms that they already know and do business with.

One of the distinguishing characteristics of simpler channel relationships is that some are regulated by formal contracts while others are informal. This is distinct from more complex cases where contracts are most often a cornerstone of the relationship. As a result, simpler relationships provide an ideal testing ground for the role of contracts in channel relationships.

The channel of distribution of hi-fi speakers was chosen to provide the simpler channel relationships needed for this research. Participants usually agree on delivery dates, levels of inventory, and other logistics services. They also agree on product lines, warranty policies, and on cooperative advertising arrangements.

Three primary considerations influenced the choice of hi-fi speakers. First, the distribution of speakers is predominantly handled by a network of independent retailers, even though some exceptions exist.⁶ A vertically integrated or controlled distribution arrangement would not be a good sample to test relationships because of its governance structure.

Second, the hi-fi speaker industry is a mature market. Product positioning by established manufacturers and their distribution networks have been fairly stable. Barriers to entry are relatively low. Consequently, the data collected should be reasonably unaffected by extraneous influences. Most importantly, many manufacturer-dealer relationships in this industry are formalized by contracts, while others are managed more informally. This provides an ideal sample for investigating the role of contracts in simpler channel relationships.

LITERATURE REVIEW

There is a growing logistics literature on channel relationships. The main focus is long-term relationships between buyers and sellers. This happens because individual firms increasingly depend upon other firms in the channel to achieve their own performance goals. For instance, Coyle and Andraski⁷ used examples of companies such as Nabisco and Wal-Mart to illustrate the importance of greater integration among firms in the supply chain.

The research stream on long-term relationships between buyers and sellers evolved from contributions by Spekman⁸ and by La Londe and Cooper,⁹ who examined the features of more complex alliances. Bowersox et al.¹⁰ identified the implementation of long-term alliances as one of the characteristics that distinguish emerging from leading edge logistics companies. This work also discussed the advantages and disadvantages of logistics alliances as well as the different formats in which they may appear.

In a discussion of logistics as a form of creating customer value, Langley and Holcomb¹¹ point to the implementation of strategic alliances as a key tool to service customers. Ellram^{12,13} extended the literature by examining alliances in the international arena. The research centered on the reasons why firms engage in international alliances and on alliance characteristics.

The literature on channel relationships also reports on actual cases of successful partnerships and alliances. Some of the more recent cases include the distribution for athletic footwear,¹⁴ computer parts,¹⁵ and apparel.¹⁶ Additional cases refer to the electronics industry, that presents some parallels with this research. Berry and Towill¹⁷ describe the distribution of electronics products in Great Britain. The Bose Corporation, a producer of hi-fi speakers, has adopted an innovative approach to strategic alliances with their suppliers that became known as JIT II.¹⁸

Despite the growing literature, most articles assume a formal approach to logistics partnerships. The relationship is administered by a long-term agreement specifying the rights and obligations of parties involved. Informal partnerships are mentioned in two works. Bowersox¹⁹ gives an example of an informal partnership in the transportation industry. In a paper focused mostly on formal alliances, Ellram²⁰ examined six case studies of informal alliances. Her exploratory findings seem to indicate that contracts were either unnecessary or of limited importance to the success of international purchasing alliances.

The remainder of the paper is organized in five sections. Formal and informal channel relationships are discussed first. The research hypotheses derived are in the next section. This is followed by a section on methodological issues, with special emphasis on the measures used. The presentation of results is discussed subsequently, while conclusions, limitations, and managerial implications are presented in the final section.

FORMAL AND INFORMAL CHANNEL RELATIONSHIPS

Simpler channel relationships may be formal or informal. Firms may enter into formal channel relationships for well known reasons. The contract creates a stable environment by clearly spelling out each participant's rights and obligations. This promotes more certainty in the relationship by leaving less room for misunderstandings that often lead to conflict. The relationship is also taken more seriously because the contract will specify performance objectives and the penalties assessed for nonperformance. Finally, adherence to a written contract may be the motivation needed to keep a relationship going even when short-term problems arise.

In contrast, informal relationships are not regulated by a formal contract. Nevertheless, as in the formal case, the relationship is also based on a long-term perspective and on an expectation of future business.

Why, then, should firms consider informal channel relationships? One reason pointed out by hi-fi speaker manufacturers is increased flexibility. Provisions in formal contracts will introduce a measure of rigidity, making it more difficult to adapt the relationship to changing market and other environmental conditions. This flexibility is also a factor in reducing the cost of managing the relationship, because changes are implemented more easily.

A second advantage is continued nurturing of the relationship because there is no contract guaranteeing its continuance for a predetermined period. This continued nurturing leads to an environment where occasional problems are more likely resolved by managers rather than by lawyers. The resulting environment is conducive to the building of trust.

Finally, informal partnerships are an important first step toward more complex forms of business relationships. Partners may use an informal period to learn each other's cultures, build trust, and evaluate the partner's commitment to the relationship.

RESEARCH HYPOTHESES

Recall that the objective of this research is to test whether contracts should necessarily be present in successful channel relationships in logistics. The success of channel relationships is measured with three dependent variables: quality of relationship, effectiveness of relationship, and channel policy integration.

Each of the dependent variables is measured against the three independent variables in the research that correspond to the characteristics of relationships: long-term perspective on the relationship, expectation of future business, and formalization of the relationship. Thus, the nine hypotheses suggested below were derived by systematically combining the dependent and independent variables.

- H1 The quality of channel relationships is positively related to participants having a long-term perspective to the relationship.
- H2 The quality of channel relationships is positively related to participants maintaining an expectation of future business.
- H3 The quality of channel relationships is not related to the existence of a formal contract between buyers and sellers.
- H4 The effectiveness of channel relationships is positively related to participants having a long-term perspective on the relationship.
- H5 The effectiveness of channel relationships is positively related to participants maintaining an expectation of future business.

- H6 The effectiveness of channel relationships is not related to the existence of a formal contract between buyers and sellers.
- H7 The integration of channel policies is positively related to participants having a long-term perspective to the relationship.
- H8 The integration of channel policies is positively related to participants maintaining an expectation of future business.
- H9 The integration of channel policies is not related to the existence of a formal contract between buyers and sellers.

Six constructs are needed to test these hypotheses: Quality, effectiveness, channel policy integration, long-term perspective, expectation of future business, and formalization. These constructs and the hypothesized relationships among them are graphically presented in Figure 1.

The expected outcome is that all dependent variables will be significantly related to long-term perspective and expectation of future business. It is also expected that formalization will not be significantly related to any of the three dependent variables.

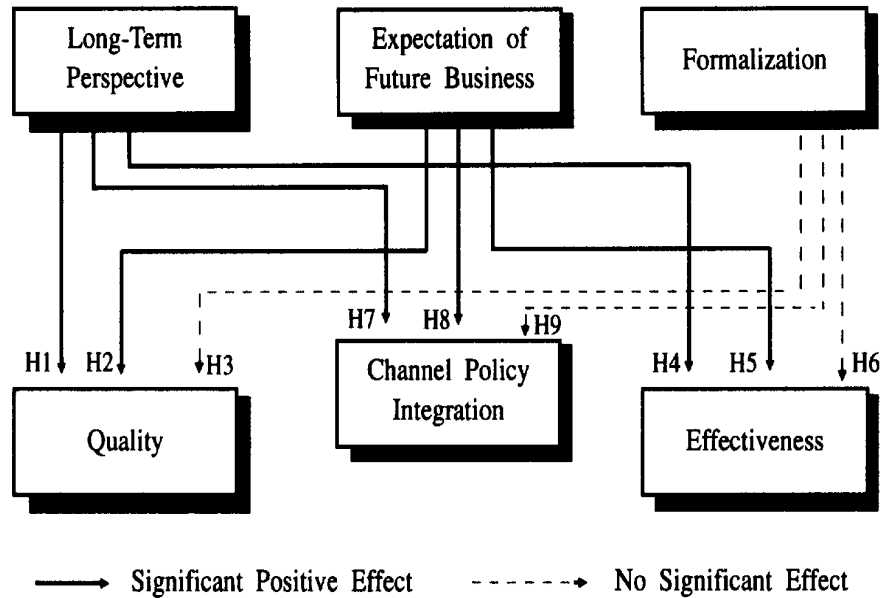
METHODOLOGY

This section presents the methodology used in the research and is divided into three subsections. The first presents the data collection methodology, while the second describes the operationalization of the six constructs introduced in the previous section. The discriminant validity of the measures used is discussed in the last subsection.

Data Collection Method

Respondents were asked to choose one brand and answer questions on the manufacturer-dealer relationship for that brand. The questionnaires were completed by either store owners or managers since they are expected to be most knowledgeable about the manufacturer dealer relationship. Respondents were also asked about their individual stores and the competitive environment.

FIGURE 1
HYPOTHESIZED RELATIONSHIPS



The data collection was based on a random sample of audio video retail stores (SIC code 5731) included in the sample frame of Dun's Database. The questionnaire was mailed in two waves to 945 dealers. Respondents returned 158 questionnaires, of which 115 were usable. The response rate is therefore 12.1%. This response rate is adequate, provided that no significant evidence of nonresponse bias is found.

To test for possible nonresponse bias, the responses from the first wave of questionnaires were compared with those of the second wave.²¹ The purpose of the comparison was to detect significant differences between the two waves of responses. A Multiple Analysis of Variance (MANOVA) failed to reveal significant differences between the two groups ($p > .317$) on the constructs examined in this research. Therefore, the response rate does not represent an obstacle to the validity of the results in this research.

The method used to collect the data followed a three-step approach. First, respondents received an announcement letter introducing the study, its potential value to research, and the importance of each firm's participation. The introductory letter also announced the arrival of the questionnaire within approximately five days.

In a second step, the first wave of questionnaires was sent out. The questionnaire was accompanied by a cover letter urging respondents to participate and reminding them of the value of the study to academics and to practitioners. A prepaid and addressed return envelope was included.

The third step consisted of sending out a second wave of questionnaires to firms that didn't respond to the first mailing within two weeks. The second wave was again accompanied by a cover letter and a prepaid return envelope. In all three steps we assured participating firms that the data would be treated with confidentiality. The telephone number of a participating researcher was included for those that wished to ask questions.

Operationalization of Constructs

The measurement instrument was developed in three stages. A review of existing literature was used to identify existing scales and items that could be adopted in the research effort. In addition, new items were especially developed for this research. In a second stage the content validity and wording of individual scales were evaluated in interviews with more than twenty retail store managers and manufacturer personnel in the industry. At the end of this stage, the first version of the complete questionnaire was drafted. The last stage was a pretest, designed to identify additional problems with the scales and the data collection procedure. Poorly worded or overlapping measures were identified and removed. Each of the constructs used in the research are described next.

Quality

The quality of the relationship between channel participants is one of the measures employed to describe the success of a channel relationship. It is measured by dealer perception of the degree of support received from manufacturers and by dealer perception that supplier representatives are competent. The higher the perceived support and the higher the perceived competence, the higher the quality of the relationship. Perceived support measures the supplier's willingness to respond

to customer needs, while competence measures supplier ability to do so effectively. Six items make up the measure. The specific items used in the questionnaire are in Table 1. Coefficient alpha is .78 for the scale, which presents evidence of good reliability.²²

Effectiveness

Effectiveness is the second measure used to describe the success of a relationship. Channel relationships can succeed only if participants are able to achieve their individual objectives through the relationship. Accordingly, the four items in the scale measure the suggested and obtained dealer margins, overall financial attractiveness, and sales volume of the supplier brands carried by the customer. Clearly, the higher the perception of sales volume, financial attractiveness, and margins obtained, the higher the success of the relationship. Evidence of scale reliability is provided by a coefficient alpha of .60.

Channel Policy Integration

The final measure of success in channel relationships is policy integration. In addition to the individual objectives captured in the effectiveness measure, successful relationships aim to avoid redundancy and overlap in channel policies, while seeking a level of coordination that allows participants to be more effective at lower cost levels. The measure is comprised of five items measuring whether policy integration is facilitated by a dealer hotline and by coordination in four areas: warranties, dealer service standards, returned goods, and inventory management. The coefficient alpha for this measure is .63.

Long-Term Perspective

A long-term perspective is an essential ingredient of channel relationships. It represents a key distinction between a relationship based on individual transactions vs. one based on a commitment to work together over an extended period of time. Our measure purposefully leaves out any indication of a contractual relationship, since the purpose of this paper is to test the hypothesis that informal relationships can be as successful as formal ones.

The measure includes three items. The first two measure the long-term view of the relationship as perceived by participants. The third item measures dealer perception of the manufacturer's reputation for switching dealers. The higher the

TABLE 1
ITEMS USED TO MEASURE THE
DEPENDENT VARIABLES

Quality—(QUAL)

Items (1) through (6) are Likert Scales anchored by 1 (Strongly Disagree) and 5 (Strongly Agree).

- (1) Dealers feel very comfortable with the support they receive from the manufacturer of this brand. (SUPPORT COMFORT)
- (2) How would you evaluate this brand's manufacturer support for dealers in general? (GENERAL SUPPORT)
- (3) The manufacturer representatives for this brand are generally very competent. (COMPETENCE)
- (4) This brand's manufacturer extends prompt support to dealers when trying to solve brand specific problems. (FAST SUPPORT)
- (5) This brand's manufacturer provides special support and benefits to its dealer network. (SPECIAL SUPPORT)
- (6) The quality of retailer assistances by the manufacturer is an important reason for dealers to carry this brand. (SUPPORT QUALITY)

Effectiveness—(EFFECT)

Items (1) and (2) are Likert Scales anchored by 1 (Strongly Disagree) and 5 (Strongly Agree). Items (3) and (4) are Likert Scales anchored by 1 (Lowest) and 5 (Highest).

- (1) Compared to all other speaker brands we carry, this brand generates the largest sales volume. (SALES VOLUME)
- (2) Overall, this brand is financially very attractive for us. (FINANCIAL ATTRACTIVENESS)

TABLE 1—Continued

<p>Relative to other speaker brands you carry, please indicate how this brand compares . . .</p> <p>(3) The manufacturer suggested retail margin for this brand is . . . (SUGGESTED MARGIN)</p> <p>(4) The retail margin for this brand is . . . (ACTUAL MARGIN)</p> <p>Channel Policy Integration—(INTEGRAT)</p> <p>Items (1) and (2) are Likert Scales anchored by -2 (Very Poor) and +2 (Very Good). Items (3) through (5) are Likert Scales anchored by 1 (Low Effort to Influence) and 5 (High Effort to Influence).</p> <p>Which of the following assistances are provided by the manufacturer of this brand and how well are they performed compared to other manufacturers you deal with.</p> <p>(1) Over-the-Counter Warranty Policy . . . (WARRANTY)</p> <p>(2) Dealer Hotline (e.g., 800-Number) . . . (HOTLINE)</p> <p>Please indicate the extent to which the manufacturer of this brand exerts effort to coordinate the following activities within its dealer network.</p> <p>(3) Dealer Service Standards . . . (DLR SERVICE)</p> <p>(4) Return Goods Policies . . . (RETURN GOODS)</p> <p>(5) Dealer Inventory Levels . . . (INVENTORY MGMT)</p>
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long-term view of the relationship perceived by participants, and the higher the loyalty exhibited by participants, the longer the perspective on the relationship. Specific items are presented in Table 2. The coefficient alpha for this measure is .61.

Expectation of Future Business

The expectation of future business is the second dimension of the channel relationships. The higher this expectation, the stronger the relationship, because participants have an incentive to work out differences and to invest on the future of the relationship. Our measure of expectation of future business includes two items on sales forecast for 1 and 5 years. It also includes one item on the expected market share increase for the seller's brand. These items are presented in Table 2. Coefficient alpha is .63, which indicates adequate scale reliability.

Formalization

The formalization scale is composed of two questions. Managers were first asked whether a formal agreement between manufacturer and dealer exists, and second, the extent to which it restricts the dealer's managerial choices. The first question is dichotomous (yes/no). The second question asked about the contract's restrictiveness in four areas. The items included in both questions are presented in Table 2.

Because the first question is dichotomous, it may appear that the larger variance of the second question is "crowding out" the effect of the first question. In fact, this is not the case because the scale recorded null values for the second question whenever the respondent indicated the absence of a formal contract in the first question. Coefficient alpha for this measure is .72.²³

Discriminant Validity

As an additional check upon the measures used in this research, a discriminant validity test was performed on all constructs. The method used is a factor analysis. The objective of the test is to see whether the items used in the same constructs actually load in the same factors. Results for the three dependent variables are presented in Table 3, while results for the independent variables are presented in Table 4. In both cases, despite one cross-loading incidence in the case of the dependent variables, adequate evidence of discriminant validity is presented.

TABLE 2
ITEMS USED TO MEASURE THE
INDEPENDENT VARIABLES

Long-Term Perspective—(LONG)

Items (1) through (2) are Likert Scales anchored by 1 (Strongly Disagree) and 5 (Strongly Agree).

- (1) Usually, retailers who carry this brand expect to be distributing this brand for a long time. (LONG TIME)
- (2) The manufacturer of this brand regards its relationship with the dealers as a long-term relationship. (ALLIANCE)

Item (3) is a Semantic Differential.

- (3) Low Anchor (1):
Manufacturer has a reputation for switching dealers a lot.
- High Anchor (5):
Manufacturer has a reputation for dealer loyalty. (SWITCH)

Expectation of Future Business—(EXPECT)

Items (1) through (2) are Likert Scales anchored by 1 (Low) and 5 (High). Compared to other brands you carry, how do you estimate your sales potential for this brand over the . . .

- (1) . . . next year (SALES POTENTIAL 1 YR.)
- (2) . . . next 5 years (SALES POTENTIAL 5 YR.)

Item (3) is a Likert Scale anchored by 1 (Strongly Disagree) and 5 (Strongly Agree).

- (3) In the future, we expect the market share for this brand to increase substantially in our trade area. (SHARE INCREASE)

TABLE 2—Continued

Formalization—(FORMAL)

The scale is composed of the summed scores for 5 items. The first item is a yes/no question:

- (1) Do you have a formal contractual agreement with the manufacturer of this brand concerning the sale of its speakers? (CONTRACT)

The following four items address the level of restrictiveness on the contract. The scale is anchored by 0 (low restrictiveness) and 5 (high restrictiveness).

Which of the following issues are addressed in your contractual agreement with the manufacturer of this brand and how restrictive are the terms?

- (2) Inventory levels. (INVENTORY LEVEL)
- (3) Sales goal. (SALES GOAL)
- (4) Quantity discounts. (QUANTITY DISCOUNTS)
- (5) Contract termination. (TERMINATION)

RESULTS

In this section, the hypotheses presented earlier in the research are tested. Each hypothesis is first tested individually with correlation analysis. This is followed by a multiple regression analysis that simultaneously tests all hypotheses relating to each dependent variable. Hypotheses H1 through H3 refer to the quality of the relationship, hypotheses H4 through H6 refer to the effectiveness of the relationship, and hypotheses H7 to H9 refer to channel policy integration. Each hypothesis is restated for better clarity.

- H1 The quality of channel relationships is positively related to participants having a long-term perspective to the relationship.

TABLE 3
DISCRIMANT VALIDITY TEST OF THE
DEPENDENT VARIABLES

Rotation Method: Varimax			
Rotated Factor Pattern			
	Factor 1 (QUAL)	Factor 2 (EFFECT)	Factor 3 (INTEGRAT)
Support Comfort	83*	9	-2
General Support	59*	37	31
Special Support	78*	-10	9
Fast Support	72*	-22	9
Support Quality	55*	7	5
Competence	52*	17	8
Sales Volume	-17	56*	29
Financial Attractiveness	11	60*	22
Actual Margin	42	70*	-16
Suggested Margin	1	74*	-11
Warranty	19	1	69*
Hotline	-7	-5	68*
DLR Service	53*	26	50*
Return Goods	33	6	60*
Inventory Mgmt	-2	27	39

Table 5, which presents the correlations of all dependent with all independent variables, shows a correlation coefficient of .6372 ($p < .0001$) between the quality of the relationship and long-term perspective on the relationship. The positive correlation indicates that the stronger the long-term perspective observed between partners, the higher the quality of the relationship.

TABLE 4
DISCRIMINANT VALIDITY TEST OF THE
INDEPENDENT VARIABLES

Rotation Method: Varimax Rotated Factory Pattern			
	Factor 1 (FORMAL)	Factor 2 (EXPECT)	Factor 3 (LONG)
Sales Potential 5 Yr.	5	85*	13
Share Increase	3	70*	10
Sales Potential 1 Yr.	-7	69*	19
Termination	87*	5	-7
Contract	83*	6	0
Sales Goal	82*	-2	6
Quantity Discount	80*	4	-2
Inventory Level	76*	-9	13
Switch	3	-3	81*
Alliance	5	33	72*
Long Time	0	23	66*

H2 The quality of channel relationships is positively related to participants maintaining an expectation of future business.

Results for this hypothesis are similar to the previous one. There is a positive and significant correlation (.4353, $p < .0001$) between the quality of the relationship and the expectation of future business held by participants. While this result is strongly significant, the correlation between the two variables is not as strong as the correlation presented in the previously tested hypothesis. The results we have observed for this hypothesis are corroborated by Heide and John,²⁴ who tested a similar hypothesis and obtained comparable results.

TABLE 5
CORRELATION MATRIX—INDEPENDENT AND
DEPENDENT VARIABLES

	<u>QUAL</u>	<u>EFFECT</u>	<u>INTEGRAT</u>
Long	0.6372* 0.0001**	0.3449 0.0002	0.3672 0.0001
Expect	0.4353 0.0001	0.4373 0.0001	0.2883 0.0018
Formal	0.0771 0.4129	-0.0202 0.8300	0.0942 0.3166
* correlation coefficient			
** p-value			

H3 The quality of channel relationships is not related to the existence of a formal contract between buyers and sellers.

Table 5 shows a correlation coefficient of only .0771 ($p < .4129$) for the relationship between the existence of a formal contract and the quality of the relationship in the channel. Thus, the presence of a formal contract does not seem to have a significant effect on the quality of the relationship between participants. This result is somewhat supported by Ellram's²⁵ exploratory study.

H4 The effectiveness of channel relationships is positively related to participants having a long-term perspective on the relationship.

The correlation coefficient presented in Table 5 (.3449, $p < .0002$) indicates that the effectiveness of a channel relationship is positively related to a long-term perspective on the relationship. Recall that effectiveness was measured in terms of financial results such as margins, sales volume, and profitability. This provides

an interesting result because it shows the relationship between attitude (long-term perspective) and perceptions of actual financial results.

H5 The effectiveness of channel relationships is positively related to participants maintaining an expectation of future business.

Expectation of future business seems to be positively related to the effectiveness of channel relationships. The correlation coefficient is .4372 ($p < .0001$). This presents interesting evidence of the relationship between behavioral expectation (expectation of future business) and perception of current financial results. The results of Heide and John²⁶ mentioned above corroborate the results for this hypothesis as well.

H6 The effectiveness of channel relationships is not related to the existence of a formal contract between buyers and sellers.

The correlation coefficient referring to this hypothesis in Table 5 approaches zero, with a p-value of .8300. Thus, the presence of a formal contract between participants does not seem to affect the effectiveness of the partnership. This result parallels the results obtained in Ellram's exploratory study.²⁷

H7 The integration of channel policies is positively related to participants having a long-term perspective to the relationship.

As in the case of quality and effectiveness of relationship, the integration of channel policy is positively related to long-term perspective on the relationship. The correlation coefficient is .3672 ($p < .0001$). Thus, long-term perspective on the relationship is also a positive factor on the coordination of common goals of channel participants.

H8 The integration of channel policies is positively related to participants maintaining an expectation of future business.

With a correlation coefficient of .2883 ($p < .0018$) results suggest that the higher the expectation of future business maintained by participants in the channel, the higher the level of policy integration achieved in the relationship. This is consistent with the findings in other hypotheses related to the impact of expectation of future business on the relationship. For all three dependent variables employed to measure

relationship success, higher expectation of future business is correlated to higher success.

H9 The integration of channel policies is not related to the existence of a formal contract between buyers and sellers.

Results for this hypothesis test suggest that a formal contract between buyers and sellers does not affect the level of integration in channel relationships. The correlation coefficient is .0942 with a p-value of .3166. As in the prior two hypotheses, results obtained with integration of channel policies as a measure of relationship success are consistent with the two other measures of relationship success employed in this research, namely a long-term perspective on the relationship and an expectation of future business from the other participant in the relationship.

Multiple Regression

The tests of hypotheses above are based on simple correlations. Each hypothesis refers to the relationship between two variables only. The purpose of the multiple regression analysis is to evaluate the simultaneous effect of the independent variables on each of the dependent variables.

Results are presented in Tables 6, 7, and 8. They present the same pattern observed in the tests of hypotheses. The dependent variables, quality of the relationship, effectiveness of the relationship, and channel policy integration are significantly related to long-term perspective and to the expectation of future business, while being unrelated to the presence of a formal contract. This confirms the results obtained with the correlation analysis.

One difference in the result observed for the two dependent variables is on the order of important. Long-term perspective on the relationship is the most important independent variable when quality of relationship and channel policy integration are the dependent variables. Conversely, when the dependent variable is effectiveness of the relationship, expectation of future business is the most important independent variable.

TABLE 6
MULTIPLE REGRESSION ANALYSIS FOR
DEP. VARIABLE "QUAL"

Dependent Variable: QUAL					
Parameter Estimates					
<u>Variable</u>	<u>DF</u>	<u>Parameter Estimate</u>	<u>Standard Error</u>	<u>T for H0: Parameter=0</u>	<u>Prob> T </u>
INTERCEP	1	-0.035162	0.04561723	-0.771	0.4425
LONG	1	0.486836	0.06725357	7.239	0.0001
EXPECT	1	0.196077	0.06669649	2.940	0.0040
FORMAL	1	0.041515	0.04582295	0.906	0.3669
Analysis of Variance					
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Prob > F</u>
Model	3	21.98461	7.32820	30.627	0.0001
Error	111	26.55938	0.23927		
C Total	114	48.54398			
R-square	0.4529				
Adj R-sq	0.4381				

TABLE 7
MULTIPLE REGRESSION ANALYSIS FOR
DEP. VARIABLE "EFFECT"

Dependent Variable: EFFECT					
Parameter Estimates					
<u>Variable</u>	<u>DF</u>	<u>Parameter Estimate</u>	<u>Standard Error</u>	<u>T for H0: Parameter=0</u>	<u>Prob> T </u>
INTERCEP	1	0.000921	0.05535926	-0.017	0.9868
LONG	1	0.188365	0.08161626	2.308	0.0229
EXPECT	1	0.320887	0.08094022	3.964	0.0001
FORMAL	1	-0.019269	0.05560892	-0.347	0.7296
Analysis of Variance					
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Prob > F</u>
Model	3	11.61017	3.87006	10.982	0.0001
Error	111	39.11476	0.35239		
C Total	114	50.72492			
R-square	0.2289				
Adj R-sq	0.2080				

TABLE 8
MULTIPLE REGRESSION ANALYSIS FOR
DEP. VARIABLE "INTEGRAT"

Dependent Variable: INTEGRAT					
Parameter Estimates					
<u>Variable</u>	<u>DF</u>	<u>Parameter Estimate</u>	<u>Standard Error</u>	<u>T for H0: Parameter=0</u>	<u>Prob> T </u>
INTERCEP	1	-0.002244	0.05584032	-0.040	0.9680
ALL_LONG	1	0.209256	0.08232549	2.542	0.0124
ALL_FUT	1	0.154508	0.08164357	1.892	0.0610
FORMAL	1	0.064076	0.05609215	1.142	0.2558
Analysis of Variance					
<u>Source</u>	<u>DF</u>	<u>Sum of Squares</u>	<u>Mean Square</u>	<u>F Value</u>	<u>Prob > F</u>
Model	3	6.30550	2.10183	5.862	0.0009
Error	111	39.79751	0.35854		
C Total	114	46.10301			
R-square	0.1368				
Adj R-sq	0.1134				

CONCLUSIONS, LIMITATIONS, AND MANAGERIAL IMPLICATIONS

Should channel relationships have contracts? Taken as a whole, the results seem to support the view that contracts generally do not play an important role in channel relationships. The tests of hypotheses went as predicted. Each of the three measures of relationship success chosen is significantly related to the long-term perspective on the relationship and on the expectation of future business. On the other hand, the key finding of the research is that the presence of a formal contract was not found to be of significance in explaining quality and effectiveness of relationship or the level of channel policy integration.

One additional factor adds to the confidence with which these results may be treated. The multiple regression analyses, which looked at the simultaneous effect of all independent variables, led to virtually the same conclusions.

Two limitations of the research are important and should be highlighted. First, while significant correlations are presented in the results, the evidence is not sufficient to indicate causality in the relationship. Second, the results apply only to the simpler channel relationships examined in this research.

This second limitation provides a basis for further research regarding the role of contracts in complex channel relationships. The benefit of increased flexibility provided by informal channel relationships may be extended to strategic alliances, partnerships, or supply chains.

The main managerial implication of this research is that the expectation of using contracts to manage the behavior of participants in simpler channel relationships may be suboptimal. Managers should focus more on attitudinal aspects of the relationship than on contractual ones. When establishing channel relationships, managers should look for firms with a long-term perspective of the intended relationship and of whom future business is expected.

Further, when managing existing relationships, managers should pursue policies and communication strategies that enhance a reputation for loyalty and increase expectations of future business. Channel participants should feel that they are in an ongoing relationship that will contribute to their business goals in the long run.

An informal relationship is not necessarily a poorly managed relationship. Informality may be a good way to maintain flexibility, nurture trust in the channel,

and evaluate the commitment and competence of a candidate for more complex relationships.

NOTES

¹The term "formal contracts" is used to distinguish contracts regulating a single transaction (an order is a contract) from contracts governing channel relationships.

²John T. Mentzer, "Managing Channel Relationships in the 21st Century," *Journal of Business Logistics* 4, no. 1 (1993): 27-42.

³John J. Coyle and Joseph C. Andraski, "Managing Channel Relationships," *Annual Conference Proceedings of the Council of Logistics Management* (Oak Brook, Ill.: Council of Logistics Management, 1990) I, pp. 245-257.

⁴Donald J. Bowersox, Patricia J. Daugherty, Cornelia L. Dröge, Dale S. Rogers, and Daniel L. Wardlow, *Leading Edge Logistics: Competitive Positioning for the 1990s* (Oak Brook, Ill.: Council of Logistics Management, 1989), p. 213.

⁵William J. Warren, "JIT II," *American Shipper* (December 1991): 42-46.

⁶The Tandy Corporation distributes their brands through company owned or franchised outlets. Some department stores and retail chains will carry their own brands (e.g., "LXI" for Sears).

⁷Same reference as Note 3.

⁸Robert E. Spekman, "Strategic Supplier Selection: Understanding Long-Term Buyer Relationships," *Business Horizons* (July-August 1988): 75-81.

⁹Bernard J. La Londe and Martha C. Cooper, *Relationships in Providing Customer Service* (Oak Brook, Ill.: Council of Logistics Management, 1989).

¹⁰Same reference as Note 4.

¹¹C. John Langley Jr. and Mary C. Holcomb, "Creating Logistics Customer Value," *Journal of Business Logistics* 13, no. 2 (1992): 1-27.

¹²Lisa M. Ellram, "Partners in International Alliances," *Journal of Business Logistics* 13, no. 1 (1992): 1-25.

¹³Lisa M. Ellram, "International Purchasing Alliances: An Empirical Study," *International Journal of Logistics Management* 3, no. 1 (1992): 23-36.

¹⁴Jim Severyn and Peter McQuaid, "Maximizing Customer Service & Inventory Control While Decreasing Labor Requirements in Consumer Products," *Annual Conference Proceedings of the Council of Logistics Management* (Oak Brook, Ill.: Council of Logistics Management, 1989) I, pp. 307-324.

¹⁵Gary R. Babel, "Logistics Issues in the 90's: Managing Quick Response Deliveries of Critical Parts," *Annual Conference Proceedings of the Council of Logistics Management* (Oak Brook, Ill.: Council of Logistics Management, 1991) I, pp. 131-144.

¹⁶James E. Oesterreicher, "Relationship for Quick Response at JC Penney," *Retail Business Review* (May 1993): 4-8.

¹⁷Danny Berry and Denis R. Towill, "Material Flow in Electronic Product Based Supply Chains," *International Journal of Logistics Management* 3, no. 2 (1992): 77-94.

¹⁸Same reference as Note 5.

¹⁹Donald J. Bowersox, "The Strategic Benefits of Logistics Alliances," *Harvard Business Review* 70 (July-August 1992): 36-45.

²⁰Same reference as Note 13 at p. 33.

²¹J. Scott Armstrong and Terry S. Overton, "Estimating Nonresponse Bias in Mail Surveys," *Journal of Marketing Research* 14 (August 1976): 396-402.

²²Gilbert A. Churchill Jr., "A Paradigm for Developing Better Measures of Marketing Constructs," *Journal of Marketing Research* 16 (February 1979): 64-73.

²³The coefficient alpha reported for this measure refers to respondents with formal contracts only. Including respondents without formal contracts would artificially increase the value of the coefficient. The reason is that respondents without contracts were assigned null values for all items, which increases the value of the correlations among items. The reported measure is therefore the most conservative estimate of reliability.

²⁴Jan B. Heide and George John, "Alliances in Industrial Purchasing: The Determinants of Joint Action in Buyer-Supplier Relationships," *Journal of Marketing Research* 27 (February 1990): 26.

²⁵Same reference as Note 13 at p. 33.

²⁶Same reference as Note 23 at p. 26.

²⁷Same reference as Note 13 at p. 33.

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