

Chapman University
Chapman University Digital Commons

Business Faculty Articles and Research

Business

2009


How Fairness Earns Loyalty in the Pharmaceutical Supply Chain: Role of Trust in the Wholesaler-Pharmacy Relationship

Thani Jambulingam

Ravi Kathuria

John R. Nevin

Follow this and additional works at: https://digitalcommons.chapman.edu/business_articles

 Part of the [Business Administration, Management, and Operations Commons](#), [Organizational Behavior and Theory Commons](#), [Other Business Commons](#), [Other Pharmacy and Pharmaceutical Sciences Commons](#), and the [Pharmacy Administration, Policy and Regulation Commons](#)

How Fairness Garners Loyalty in the Pharmaceutical Supply Chain: Role of Trust in the Wholesaler-Pharmacy Relationship

Comments

This is a pre-copy-editing, author-produced PDF of an article accepted for publication in *International Journal of Pharmaceutical and Healthcare Marketing*, volume 3, issue 4, in 2009 following peer review. The definitive publisher-authenticated version is available online at DOI: [10.1108/17506120911006029](https://doi.org/10.1108/17506120911006029).

Copyright

Emerald

Explicating Fairness-Trust-Loyalty Relationships in a Supply Chain

Thani Jambulingam

Associate Professor and Chair
Department of Pharmaceutical Marketing
Erivan K. Haub School of Business
St. Joseph's University
5600 City Line Avenue
Philadelphia, PA 19131
Phone: 610-660-3382
Fax: 610-660-3365
Email: tjambuli@sju.edu

Ravi Kathuria*

Professor and James L. and Lynne P. Doti Chair in Operations Management
Argyros School of Business and Economics
Chapman University
One University Drive
Orange, CA 92866
Phone: 714-628-2703
Fax: 714-532-6081
Email: kathuria@chapman.edu

John R. Nevin

Grainger Wisconsin Distinguished Professor
School of Business
University of Wisconsin-Madison
975 University Avenue
Madison, WI 53706
Phone: 608-262-8912
Fax: 608-265-4191
Email: jnevin@bus.wisc.edu

*Corresponding author

Explicating Fairness-Trust-Loyalty Relationships in a Supply Chain

ABSTRACT

This study seeks to understand if the two dimensions of fairness—procedural and distributive—contribute differently in fostering the two types of trust—credibility and benevolence. Further, we examine how the two dimensions of trust mediate the fairness-loyalty relationship. Using data from retail pharmacies in the healthcare supply chain to test our hypotheses, we find that procedural fairness appears to be more important than distributive fairness in generating credibility-based trust, whereas distributive fairness is more important in garnering benevolence-based trust. Also, procedural fairness fosters trust-credibility more than trust-benevolence, whereas distributive fairness garners trust-benevolence more than trust-credibility. Further, trust-credibility is found to partially mediate the relationship between procedural fairness and loyalty, and trust-benevolence fully mediates the distributive fairness-loyalty relationship. The theoretical and managerial implications of these findings are discussed in the paper.

Keywords: Supply Chain Management, Trust, Fairness, Loyalty, Mediating Effects

INTRODUCTION

In the current hypercompetitive environment, firms are increasingly utilizing supply chain partnerships as sources of competitive advantage. To gain a competitive edge, firms are aligning with both inbound and outbound supply chain partners, making it one of the main characteristics of a successful business (Lambert and Cooper 2000). Fostering superior relationships between supply chain members creates a win-win situation for both the buyer and supplier firms (Paulraj and Chen 2005). Alignment of the supply chain depends on effective management of supplier-buyer relationships. The outbound part of the supply chain, which includes wholesalers and retailers, plays a key role in delivering the perfect order to customers (Lejeune and Yakova 2005). Firms are increasingly placing greater strategic importance on customer retention and loyalty management.

The concept of fairness has long been suggested as important in creating effective relationships (Dwyer, Schurr and Oh 1987; Frazier, Spekman and O'Neal 1988; Kaufmann and Stern 1988; Anderson and Weitz 1989, 1992; Gundlach and Murphy 1993; Griffith et al. 2006). Kumar, Scheer, and Steenkamp (1995) found strong evidence that vulnerable buyers' perceptions of fairness (both distributive and procedural fairness) were positively related to the perceived quality of the relationship with their suppliers. We attempt to extend this research stream further by examining the alignment between the two dimensions of fairness (procedural and distributive) with the two dimensions of trust (credibility and benevolence). Further, building on the existing research on the level of commitment and trust in buyer-supplier relationships (Morgan and Hunt 1994; Kwon and Suh 2005), we posit that trust intervenes between fairness and loyalty.

The specific purpose of this study is to: (1) understand if the two dimensions of fairness—procedural and distributive—contribute differently in fostering the two types of trust—

credibility and benevolence, and (2) examine how the two dimensions of trust mediate the fairness-loyalty relationship.

THEORY AND HYPOTHESES

Fairness-Trust Relationships

In the channels literature, the concept of fairness has been studied for developing effective channel relationships, as mentioned earlier. Research on organizational and social justice has identified two distinct categories of fairness: distributive fairness, that is, the fairness of outcomes received, and procedural fairness, the fairness of process (Tyler and Lind 1992). *Distributive fairness* refers to the buyer's perception of the fairness of earnings and other outcomes that it receives from its relationship with the supplier. Distributive fairness "relates to the division of benefits and burdens" (Frazier, Spekman and O'Neal 1988, p. 60), and can be viewed as an evaluation of the channel partner's relative rewards (or losses) in comparison to the respective contributions or inputs (Frazier 1983). Kumar, Scheer and Steenkamp (1995) defined distributive fairness as a firm's comparison of its actual outcomes to those outcomes the firm deems it deserves. *Procedural fairness* refers to the buyer's perception of the fairness of the supplier's procedures and processes in relation to its buyers (Kumar, Scheer and Steenkamp 1995).

Trust has two distinct dimensions: (1) *trust-credibility*, which is based on the extent to which the buyer believes that the supplier has the required expertise to perform the job effectively and reliably, which is the cognitive dimension of trust and (2) *trust-benevolence*, which is based on the extent to which the buyer believes that the supplier has intentions and motivations beneficial to the buyer when new conditions arise for which a commitment is not made (Ganesan 1994), which is the emotional aspect.

Trust is a key element in the emergence and maintenance of social exchange relationships. One source of trust in exchange relationships is fairness (Lind and Tyler 1988). Signaling fairness appropriately in exchange relationships can reduce the firm's fear of other firm's opportunism, which paves the way for a trusting relationship. Thus, fairness, in general, leads to trust, but do both dimensions of fairness equally help develop the two dimensions of trust?

Suppliers with fair procedures and practices (procedural fairness) in place develop a reputation for fairness (credibility) within the industry (Anderson and Weitz 1989). Suppliers with a reputation of fairness develop greater trust-credibility in their relationships with their buyers (Ganesan 1994). On the other hand, suppliers that lack procedural fairness are less likely to develop trust-credibility in their relationships with buyers (Kumar, Scheer and Steenkamp 1995). Further, procedural fairness has a more enduring quality (Tyler and Lind 1992); it can be easily monitored and evaluated because it involves specific actions on part of the supplier. Thus, procedural fairness facilitates the buyer's assessment of the supplier's expertise to perform the job effectively, which more effectively serves to build credibility-based trust than the benevolence-based trust since the latter is a function of the buyer's belief of the supplier's motivations and intentions.

Kumar et al. (1995) have shown that distributive fairness positively impacts relationship quality, of which trust is one component. We, however, surmise that trust-benevolence is reflected more through caring actions on part of the suppliers, by following through and actually sharing the benefits with the buyers (i.e., distributive fairness), and not so much through the existence of fair procedures and processes (i.e., procedural fairness). Researchers have theorized that perceived injustice in outcomes received will result in unfavorable affective reactions

(emotions) and conflict within channel relationships (Frazier 1983; Frazier, Spekman and O'Neal 1988). Thus, distributive fairness is more likely to affect buyers' perceived intentions and motivations (trust-benevolence) of the supplier rather than buyers' perceptions of the supplier's expertise to perform the job effectively (trust-credibility).

Assessment of distributive fairness takes more effort and development of relational bonds in the exchange. Distributive fairness signals emotions that help foster the buyer's belief in the supplier's intentions and motivations of equitable, compassionate treatment (trust-benevolence) in future transactions for which a commitment is not made. Such emotions do not have as strong an effect in cultivating credibility-based trust, which is facilitated more by specific, measurable actions of the supplier. Thus,

H1a. The positive effect of procedural fairness will be stronger on trust-credibility than that on trust-benevolence. ($PF \rightarrow TC > PF \rightarrow TB$)

H1b. The positive effect of distributive fairness will be stronger on trust-benevolence than that on trust-credibility. ($DF \rightarrow TB > DF \rightarrow TC$)

H1c. The positive effect of procedural fairness on trust-credibility will be stronger than that of distributive fairness. ($PF \rightarrow TC > DF \rightarrow TC$)

H1d. The positive effect of distributive fairness will be stronger on trust-benevolence as compared to that of procedural fairness. ($DF \rightarrow TB > PF \rightarrow TB$)

Mediating Effects of Trust

Based on an extensive review of the literature on buyer-supplier relationships, Terpend et al. conclude that "future research needs to ...focus more on the potential for practices and mutual efforts to mediate...as well as directly effect..." (2008, p. 42). Our attempt to establish the mediating role of trust is key to understanding the process of developing loyal relationships in a supply chain. "[F]ailing to include their [mediating variables'] effects in such studies would result in flawed conclusions regarding not only the direct impact of relationship commitment and

trust on important outcomes, but the impact of other antecedents as well” (Morgan and Hunt 1994, p. 31).

Some researchers have suggested that fairness (distributive and procedural) is needed to earn long-term customer loyalty (Seiders and Berry 1998, Blogett, Hill and Tax 1997), indicating a direct effect of fairness on loyalty. For example, procedural fairness could be quickly recognized by the buyer early in the relationship, and it could help foster the buyer’s loyalty. This argument is grounded in the referent cognitions theory (Folger 1986), which suggests that if a supplier treats his/her buyers well, this will in the long run lead to a positive effect on the buyers’ dedication to, identification with, and internalization of—or loyalty to—the supplier.

Trust can lead to the commitment of both the supplier and the buyer to the exchange relationship. At that point, the supplier and buyer are likely to work diligently at preserving their relationship investment by cooperating with one another. Trust leads to the sort of cooperative behaviors that facilitate relational exchange (Pelton, Strutton and Lumpkin 1997).

We argue, consistent with Wong et al. (2002), that when the buyer perceives the supplier’s practices and processes to be fair and consistent (procedural fairness), the buyer develops confidence in the supplier’s expertise to perform the job effectively (trust-credibility) and, as a result, the buyer is more likely to rebuy from the supplier. Such customer trust in the service provider has been observed to increase commitment to the relationship with the service provider (Moorman et al. 1992, 1993; Grayson and Ambler 1999). Kwon and Suh (2004) found that a firm’s trust in its supply chain partner is associated with increased specific asset investment and reduced behavioral uncertainty. This influence is supported by social exchange theory as increments in trust serve to increase the social embeddedness of the relationship, thereby reducing the propensity to leave. Thus,

H2a. Trust-credibility will fully mediate the relationship between procedural fairness and loyalty.

When the buyer perceives a fair division of benefits and earnings with the supplier (distributive fairness), s/he becomes more confident that the supplier will perform in a way that is beneficial or at least not detrimental to his/her interests (Gambetta 1988). Thus, when the buyer is confident about the good intentions of the supplier (trust-benevolence), the buyer is more likely to develop a loyal relationship with the supplier. Such feelings of confidence alleviate the fear that the supplier will act opportunistically (Bradach and Eccles 1989), which help develop a relationship based on trust-benevolence. This trust strengthens the bond between the buyer and supplier, which manifests in the form of buyer's loyalty to the supplier. We hypothesize that, as benevolence-based trust develops in a relationship, it becomes the essence of the relationship and behaves as the key governance mechanism in the distributive fairness-loyalty relationship. Thus,

H2b. Trust-benevolence will fully mediate the relationship between distributive fairness and loyalty.

METHOD

Sample and Data Collection

We tested our hypotheses with a sample drawn from the retail pharmaceutical industry that deals with pharmaceutical wholesalers. Pharmaceutical wholesalers play a critical role in the distribution of prescription products, because about 80 percent of the products flow through the wholesalers. The sampling frame was obtained from state departments of licensing and regulation. Because it is mandatory that all pharmacies in each state register and obtain a license to operate, this list was the most comprehensive and accurate and included all types of pharmacies (e.g., independent, chain, food and drug combination stores, etc.) in each state.

Telephone prescreening of a random sample drawn from the sampling frame was conducted in order to: (a) identify the owner/manager, (b) seek prior commitment to participate in the mail survey, (c) identify the supplier that served as the referent for that pharmacy's response, and (d) determine how knowledgeable and involved the prospective respondent was with respect to the supplier. Most of the pharmacies had multiple suppliers of pharmaceutical products. To avoid pharmacies consistently selecting either their best or their worst supplier and to ensure variance on the type of supplier evaluated, the identification of the referent supplier on which the pharmacy answered the questionnaire was done randomly following a procedure similar to the Kish selection grid (Kish 1965).

Following prescreening, pretested surveys with personalized cover letters were mailed to 400 pharmacies. Follow-up letters were not sent. Questionnaires were received from 156 pharmacies, with a response rate of 39 percent. The proportion of pharmacy types in our sample was not significantly different from that of the sampling frame obtained from the National Council of Prescription Drug Program files (Chi-squared = 0.658, p value = 0.542), which suggests that nonresponse bias does not pose a serious threat. The nonresponse bias was further evaluated by comparing the early respondents with late respondents using the Armstrong and Overton (1977) procedure for all constructs considered in this study. Since no significant differences ($p > 0.10$) were found, nonresponse bias did not appear to be a serious problem. In addition, questions measuring the respondent's degree of personal involvement (in the pharmacy's dealings with this wholesaler) and knowledgeability (in general about the pharmacy's dealings with this wholesaler) were included in the survey. The average levels of involvement and knowledgeability measured on a seven-point scale were 6.35 and 6.56 respectively,

indicating that the respondents were very involved with and knowledgeable about the suppliers, thus reducing the incidence of common methods variance.

Measure Development

Whenever possible, we attempted to use multi-item measures that had been utilized in previous studies. Where a new scale had to be developed, we were guided initially by the construct definitions and the scales utilized in organizational research. The resulting measures and scales were then modified after face-to-face and telephone interviews with pharmacy managers (see Appendix).

Distributive fairness was assessed using five items developed by Kumar, Scheer, and Steenkamp (1995) and Price and Mueller (1986) but was modified based on interviews with retail pharmacies. The items require the pharmacy managers to assess, relative to several factors, the fairness of outcomes and earnings from carrying the wholesaler's line. The correlation between this scale and a global item of fairness is 0.71 ($p < 0.0001$), providing evidence of convergent validity. Procedural fairness items were adapted for this study from measures previously utilized by Kumar, Scheer, and Steenkamp (1995). One item measuring each of the six principles of bilateral communication, impartiality, refutability, explanation, knowledgeability, and courtesy created the procedural fairness scale. The correlation between this scale and a global measure of overall fairness is 0.77 ($p < 0.001$), which shows a high level of convergent validity.

Trust was defined as the perceived credibility and benevolence of a target (supplier) of trust (Ganesan 1994, Kumar, Scheer and Steenkamp 1995). Thus, a two-dimensional construct of trust was developed, and the items were rendered from past studies (Ganesan 1994, Doney and Cannon 1997). For buyer's loyalty, we used a two-item scale based on the definition of conative

loyalty, which is characterized by repeat episodes of intent to rebuy from the supplier and is similar to motivation (see Appendix). Purchase volume (percentage of total annual dollar purchase from this particular wholesaler) was used as a control variable.

Measurement Analysis

We evaluated the psychometric properties of all constructs, by conducting a series of confirmatory factor analyses on the covariance matrices. The discriminant validity between the two fairness dimensions was also evaluated by including all distributive and procedural items in a single two-factor model. Similar analysis was performed for trust (credibility and benevolence). These measurement models are acceptable because the Comparative Fit Index (CFI) and Tucker Lewis Index (TLI) are close to or greater than the 0.90 recommended level. All first-order factor loadings were significant, demonstrating convergent validity. The minimum first-order t-value is 9.2. The composite reliability was 0.88 for procedural fairness, 0.86 for distributive fairness, 0.94 for trust (credibility), and 0.87 for trust (benevolence).

The summary statistics for the measures are reported in Table 1. All of the independent and dependent variables are significantly intercorrelated at $p < 0.01$. The control variable, purchase volume, is significantly correlated at $p < 0.05$ with the ultimate outcome variable, buyer loyalty. Purchase volume is also significantly correlated at $p < 0.05$ with trust (benevolence), which serves as a mediating variable, as a penultimate outcome variable.

INSERT TABLE 1 HERE

ANALYSIS AND RESULTS

For testing Hypothesis H1a-H1d, we compared the corresponding paths in the fully specified structural equations model in Figure 1. For example, for testing Hypothesis H1a, we compared: (1) PF \rightarrow TC and (2) PF \rightarrow TB, and for testing Hypothesis H1b we compared: (3) DF

→ TB and (4) DF → TC. As shown in Table 2, each comparison was conducted as a chi-square difference test at 1 *df* where the compared paths of interest were constrained to be equal in one model but were freely estimated in the specified model. The chi-square difference in case of H1a and H1c is significant at $p < 0.0001$ level, for H1b at $p < 0.01$ and H1d at $p < 0.05$, indicating support for all four hypotheses.

INSERT TABLE 2 AND FIGURE 1 HERE

Hypotheses H2a and H2b were tested using the Baron and Kenny (1986) procedure, and the results are presented in Tables 3 and 4 respectively. First, we ran a regression with loyalty as the dependent variable and purchase volume as the independent (control) variable. Second, we estimated a direct model without any mediation variable (trust-credibility or trust-benevolence) and estimated direct effects of fairness on loyalty after controlling for the purchase volume. We then compared the direct effects with the corresponding coefficients from a mediating model that included the hypothesized trust variable (credibility or benevolence) as the mediating variable. A full mediation was indicated if the following conditions were met: (1) the direct effects model produced a significant effect on a given outcome (e.g., procedural fairness on loyalty), (2) the corresponding direct effect was reduced to nonsignificance after inclusion of the specified mediating variable, and (3) the mediator had a significant effect on the focal outcome (e.g., trust-benevolence on loyalty). Mediation was not indicated when the direct effects remain virtually unchanged with the introduction of the mediating variables as in condition 2. Finally, partial mediation was indicated if the direct effects were reduced but did not become nonsignificant.

INSERT TABLES 3 AND 4 HERE

As shown in Table 3, procedural fairness has a significant direct effect ($\beta = 0.491, p < 0.0001$) on loyalty. When trust-credibility is introduced in the equation, the results indicate that

the procedural fairness coefficient becomes less significant ($beta = 0.337, p < 0.01$) and the trust-credibility coefficient ($beta = 0.216, p < 0.05$) is significant. Thus, H2a is not fully supported because trust-credibility partially (not fully) mediates the relationship between procedural fairness and loyalty.

As seen in Table 4, distributive fairness has a direct significant effect ($beta = 0.269$ at $p < 0.001$) on loyalty. When trust-benevolence is introduced in the equation, the distributive fairness coefficient becomes nonsignificant ($beta = 0.137, ns$) and the trust-benevolence coefficient ($beta = 0.306, p < 0.001$) is significant. Thus, Hypothesis H2b is supported because the distributive fairness-loyalty relationship is completely mediated by trust-benevolence.

Though not part of our formal hypotheses, we also tested the remaining two mediating effects: a) trust-benevolence on the procedural fairness-loyalty relationship, and b) trust-credibility on the distributive fairness-loyalty relationship. We did not find either of these mediating effects to be significant either fully or partially.

DISCUSSION, IMPLICATIONS, AND CONCLUSIONS

The results provided support for the study hypotheses and have significant implications for supply chain research and practice. The study has several theoretical and managerial implications and suggests future research directions and limitations.

Theoretical Implications

This study examined the alignment between the two dimensions of trust with the two dimensions of fairness. We hypothesized and found that procedural fairness is more important for the “credibility” dimension of trust than the “benevolence” dimension. But, when we tested the impact of distributive fairness, we found that it had a stronger effect on the “benevolence” dimension of trust than the “credibility” dimension. This is an interesting result in view of the

literature, which suggests that, while the dimensions of trust are conceptually distinct, they may turn out to be so intertwined that they are operationally inseparable (Larzelere and Huston 1980). We found that both procedural and distributive fairness have clear differential effects on each dimension of trust (credibility and benevolence). This validates trust as a multidimensional concept, and antecedents to trust can influence different dimensions of trust differently.

Further, we found that trust-credibility partially mediates the procedural fairness-loyalty relationship, and does not at all mediate the distributive fairness-loyalty relationship. Trust-benevolence, however, fully mediates the distributive fairness-loyalty relationship, but does not mediate the procedural fairness-loyalty relationship. Again, we were able to parcel out the mediating effect of the two dimensions of trust separately, which extends the research on this topic one step further.

Managerial Implications

The findings of this study underscore the importance of both procedural and distributive aspects of fairness in channel or supply chain relationships but each plays a more prominent role for fostering a particular type of trust. Managers at the supplier end seeking to develop trusting relationships with their buyers need to demonstrate procedural and distributive fairness accordingly. Relationships founded on trust tend to garner buyers' loyalty. The mediating role of trust is important for managers in understanding the process of developing loyal relationships in a supply chain.

The results of this study also can benefit the supplier-buyer relationships in several ways. First, the results indicate that suppliers should consider procedural fairness to be more relevant than distributive fairness when attempting to establish the credibility aspect of trust. To foster the benevolence aspect of trust, which is based on the buyer's belief that the supplier has intentions

beneficial to the buyer, they should focus more on distributive fairness. Second, by further developing and expanding the existing fairness-relationship quality (trust) model to include an outcome variable of loyalty, this study should create awareness among suppliers that developing trust is an important step toward creating a group of loyal buyers. The aforesaid findings could be generalized to any supplier-buyer setting except where there isn't adequate buyer choice among suppliers.

Limitations and Directions for Future Research

This study's limitations could also serve as fertile ground for future research. First, this is a cross-sectional study, and, hence, measuring the dynamic nature of some of the constructs (such as trust) was not possible. Second, all the constructs were measured only from the buyer's point of view. The supplier's perspective is not assessed in this study. A third limitation concerns the generalizability of the results. The pharmaceutical channel is somewhat unique due to the product, the directed nature of the demand, and stringent government regulation. Also, changes in technology, buying groups, and third-party payer influences are important factors that may limit the generalizability of the findings. Finally, an investigation of the antecedents to fairness promises to unearth additional insights as to how organizations can manage their customers' perceptions of distributive and procedural fairness and thereby enhance buyer trust and loyalty.

REFERENCES

- Anderson, Erin and Barton Weitz. 1992. "The Use of Pledges To Build and Sustain Commitment in Distribution Channels." *Journal of Marketing Research* 29 (February): 18-34.
- Anderson, Erin and Barton Weitz. 1989. "Determinants of Continuity in Conventional Industrial Channel Dyads." *Marketing Science* 8 (4): 310-323.
- Armstrong, J. Scott and Terry S. Overton. 1977. "Estimating Nonresponse Bias in Mail Surveys." *Journal of Marketing Research* 14 (August): 396-403.
- Baron, Reuben M. and David A. Kenny. 1986. "The Moderator-Mediator Variable Distinction in Social Psychological Research: Conceptual, Strategic, and Statistical Considerations." *Journal of Personality and Social Psychology* 51 (6): 1173-1182.
- Blodgett J.G., Hill D.J., and S.S. Tax. (1997) The Effects of Distributive, Procedural, and Interactional Justice on Postcomplaint Behavior. *Journal of Retailing*, 73(2), 185-210.
- Bradach Jeffrey L. and Robert G. Eccles. 1989. "Price, Authority and Trust: From Ideal Types to Plural Forms." *Annual Review of Sociology* 15, 97-118.
- Doney, Patricia M. and Joseph P. Cannon. 1997. "An Examination of the Nature of Trust in Buyer-Seller Relationships." *Journal of Marketing* 61 (April): 35-51.
- Dwyer, Robert F., Paul H. Schurr, and Sejo Oh. 1987. "Developing Buyer-Seller Relationships." *Journal of Marketing* 51 (April): 11-27.
- Folger, Robert. 1986. "Rethinking Equity Theory: A Referent Cognitions Model." In Hans Werner Bierhoff, Ronald L. Cohen, and Jerald Greenberg (Eds.), *Justice in Social Relations*. New York: Plenum, 145-162.
- Frazier, Gary L. 1983. "Interorganizational Exchange Behavior in Marketing Channels: A Broadened Perspective." *Journal of Marketing* 47 (Fall): 68-78.
- Frazier, Gary L., Robert E. Spekman, and Charles R. O'Neal. 1988. "Just-In-Time Exchange Relationships in Industrial Markets." *Journal of Marketing* 52 (October): 52-67.
- Gambetta, D. 1988. Can We Trust Trust?" In *Trust: Making and Breaking Cooperative Relations*, ed. D. Gambetta. New York: Blackwell.
- Ganesan, S. 1994. "Determinants of Long Term Orientation in Buyer-Seller Relationships." *Journal of Marketing* 58 (April): 1-19.
- Grayson Keny and Tim Ambler. 1999. "The Dark Side of Long-Term Relationships in Marketing Services." *Journal of Marketing Research* 36: 132-141.

Griffith, David A., Michael G. Harvey, and Robert F. Lusch. 2006. "Social Exchange in Supply Chain Relationships: The Resulting Benefits of Procedural and Distributive Justice." *Journal of Operations Management* 24(2): 85-98.

Gundlach, Gregory T. and Patrick E. Murphy. 1993. "Ethical and Legal Foundations of Relationship Marketing Exchanges." *Journal of Marketing* 57 (October): 35-46.

Kaufmann, Patrick J. and Louis W. Stern. 1988. "Relational Exchange Norms, Perceptions of Unfairness and Retained Hostility in Commercial Litigation." *Journal of Conflict Resolution* 32 (September): 534-552.

Kish, Leslie. 1965. *Survey Sampling*. New York: John Wiley.

Kumar, Nirmalya, Lisa K. Scheer, and Jan-Benedict E. M. Steenkamp. 1995. "The Effects of Supplier Fairness on Vulnerable Buyers." *Journal of Marketing Research* 32 (February): 54-65.

Kwon, Ik-Whan G. and Taewon Suh. 2004. "Factors Affecting the Level of Trust and Commitment in Supply Chain Relationships." *The Journal of Supply Chain Management* 40(1): 4-14.

Kwon, Ik-Whan G. and Taewon Suh. 2005. "Trust, Commitment and Relationship in Supply Chain Management: A Path Analysis." *Supply Chain Management: An International Journal* 10(1): 26-33.

Lambert, Douglas M. and Martha C. Cooper. 2000. "Issues in Supply Chain Management." *Industrial Marketing Management* 29(1): 65-83.

Larzelere Robert E. and Ted L. Huston. 1980. "The Dyadic Trust Scale: Toward Understanding Interpersonal Trust in Close Relationships." *Journal of Marriage and Family* 42 (3): 595-604.

Lejeune, Miguel A. and Nevena Yakova. 2005. "On Characterizing the 4 C's in Supply Chain Management." *Journal of Operations Management* 23 (2005): 81-100.

Lind, E. A. and T. R. Tyler. 1988. *The Social Psychology of Procedural Justice*. New York and London: Plenum.

Moorman, Christine, Gerald Zaltman, and Rohit Deshpande. 1992. "Relationship Between Providers and Users of Market Research: The Dynamics of Trust Within and Between Organizations." *Journal of Marketing Research* 29 (August): 314-328.

Moorman, Christine, Gerald Zaltman, and Rohit Deshpande. 1993. "Factors Affecting Trust in Marketing Research Relationships." *Journal of Marketing* 57 (January): 81-101.

Morgan, Robert and Shelby Hunt. 1994. "The Commitment-Trust Theory of Relationship Marketing." *Journal of Marketing* 58(3): 20-38.

Paulraj, A. and I.J. Chen. 2005. "Supply Management and Supply Chain Quality Performance." *The Journal of Supply Chain Management* 41(3): 4-18.

Pelton, Lou E., David Strutton and James R. Lumpkin. 1997. *Marketing Channels: A Relationship Management Approach*. Chicago: Irwin.

Price, James L. and Charles W. Mueller. 1986. *Handbook of Organizational Measurements*. Marshfield, MA: Pittman.

Seiders, Kathleen and Leonard L. Berry. 1998. "Service Fairness: What It Is and Why It Matters." *Academy of Management Executive* 12(2): 8-20.

Tyler, Tom R. and E. Allen Lind. 1992. "A Relational Model of Authority in Groups." *Advances in Experimental Social Psychology* 25: 115-191.

Wong, Yui-Tim, Chi-Sum Wong, and Hang-Yue Ngo. 2002. "Loyalty to Supervisor and Trust in Supervisor of Workers in Chinese Joint Ventures: A Test of Two Competing Models." *International Journal of Human Resource Management* 13(6): 883-900.

APPENDIX

Measures

Distributive Fairness: $\alpha = 0.86$

(4 items, 7-point Likert scale, "Strongly Disagree to Strongly Agree")

1. This wholesaler provides us fair gross margins on the purchases made from them.
2. This wholesaler provides us a fair share of the earnings for the effort we have made to support their product lines.
3. This wholesaler provides us fair prices compared to other pharmacies in our industry.
4. This wholesaler provides us fair service levels for the investment we have made to support their product lines.

Procedural Fairness: $\alpha = 0.88$

(6 items, 7-point Likert scale, "Strongly Disagree to Strongly Agree")

1. This wholesaler promotes bilateral communication with the pharmacies.
2. This wholesaler does not differentiate but rather treats all pharmacies similarly.
3. This wholesaler sometimes alters its policies in response to a pharmacy's objections.
4. This wholesaler provides valid reasons for any changes in their policies affecting the pharmacies.
5. This wholesaler makes great effort to learn local market conditions under which our pharmacies operate.
6. This wholesaler treats the pharmacies with respect.

Trust (Credibility): $\alpha = 0.94$

(6 items, 7-point Likert scale, "Strongly Disagree to Strongly Agree")

1. The wholesaler keeps promises it makes to our pharmacy.
2. This wholesaler is reliable.
3. If problems arise, this wholesaler is honest about the problems.
4. This wholesaler has been consistent in terms of their policies.
5. We are confident in the information that this wholesaler provides us.
6. Whenever this wholesaler gives our pharmacy advice on our business operations, we know that they are sharing their best judgment.

Trust (Benevolence): $\alpha = 0.87$

(5 items, 7-point Likert scale, "Strongly Disagree to Strongly Agree")

1. This wholesaler is genuinely concerned that our pharmacy achieves its goals.
2. When making important decisions, this wholesaler considers our welfare before its own.
3. This wholesaler considers our interests when problems arise.
4. This wholesaler has gone out of its way to help us.
5. This wholesaler has made sacrifices for us in the past.

Buyer Loyalty: $\alpha =$ not applicable for two items

(2 items, 7-point Likert scale, "Strongly Disagree to Strongly Agree")

1. We will not switch from this wholesaler at any cost.
2. We will shift more business to this wholesaler.

Purchase Volume

What percentage of your total annual dollar purchase of prescription drugs do you obtain from this particular wholesaler? _____%

TABLE 1
Means, Standard Deviations, and Intercorrelations

Variables	Mean	SD	Correlations				
			2	3	4	5	6
1. Buyer Loyalty	4.45	1.19	0.370	0.549	0.556	0.534	0.186
2. Distributive Fairness	5.17	1.07		0.714	0.584	0.612	0.072
3. Procedural Fairness	4.42	1.12			0.780	0.694	0.025
4. Trust (Credibility)	4.85	1.47				0.742	0.024
5. Trust (Benevolence)	4.21	1.29					0.133
6. Purchase Volume	84.47	25.34					-

Note: All correlation coefficients > 0.36 are significant at $p < 0.01$, whereas correlation coefficients > 0.13 are significant at $p < 0.05$.

TABLE 2
Structural Model Results

Hypothesized Relationship	Chi-Square_{diff}	df_{diff}	Significance
H1a. $PF \rightarrow TC > PF \rightarrow TB$	17.381	1	<0.0001
H1b. $DF \rightarrow TB > DF \rightarrow TC$	8.575	1	0.003
H1c. $PF \rightarrow TC > DF \rightarrow TC$	46.611	1	<0.0001
H1d. $DF \rightarrow TB > PF \rightarrow TB$	3.911	1	0.045

TABLE 3
Mediating Role of Trust-credibility Between Procedural Fairness and Loyalty

Variables	Model 1	Model 2	Model 3
Purchase Volume	.208**	.196**	.219***
Procedural Fairness		.491****	.337 ***
Trust-credibility ¹			.216*
Adjusted R-Square	.036	.275	.331
F Statistic	6.49*	28.43****	20.965****

 **** $p < .0001$, *** $p < .001$, ** $p < .01$, * $p < .05$

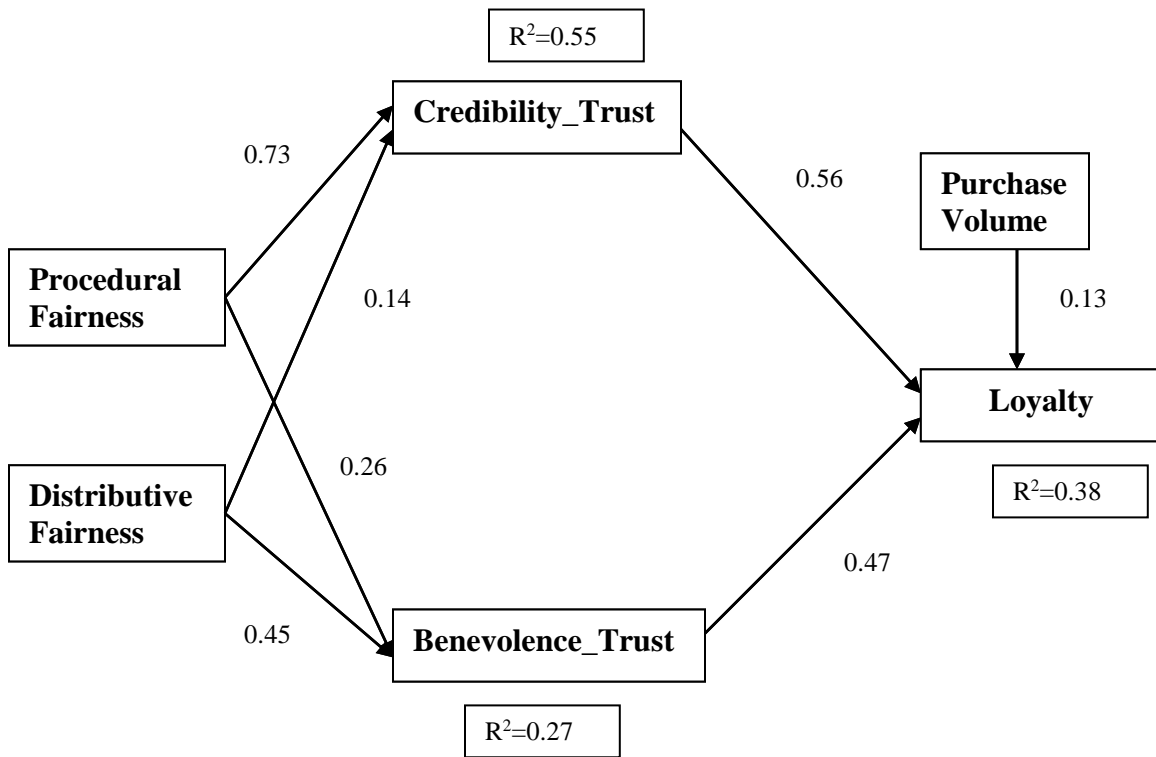
¹Mediating variable.

TABLE 4
Mediating Role of Trust-benevolence Between Distributive Fairness and Loyalty

Variables	Model 1	Model 2	Model 3
Purchase Volume	.208**	.182*	.117
Procedural Fairness		.269***	.137
Trust-benevolence ¹			.306***
Adjusted R-Square	.036	.102	.168
F Statistic	6.490*	9.267****	10.761****

 **** $p < .0001$, *** $p < .001$, ** $p < .01$, * $p < .05$

¹Mediating variable.



All coefficients are significant at $p < 0.05$.

FIGURE 1
Path Model of Fairness-Trust-Loyalty Relationships