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# Slotting Allowances: Empirical Evidence on Their Role in New Product Launches

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## ABSTRACT

The retail practice of charging a fee to stock new products is a relatively new but growing phenomenon. Termed a "slotting allowance", it has attracted considerable scrutiny because of uncertainty about its purposes and consequences. We propose and statistically test several hypotheses to assess the degree of empirical support for each of several extant explanations. Slotting allowances, we find, are charged by relatively large retailers who have an informational advantage over the manufacturer about the likely success of the new product. This result apparently contradicts theorizing about the "informational" content of slotting fees, as well as other pro- and anti-competitive explanations. We also find support for the claim that when retailers fear that manufacturers will not provide post-launch support, they pay relatively high wholesale prices.

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# INTRODUCTION

- *On November 8, 1995, the Federal Trade Commission held hearings to determine if antitrust and consumer protection regulations needed updating in light of the recent emergence of a phenomenon known as "slotting allowances", a lump-sum advance payment that manufacturers pay grocery retailers to stock new products. One expert economist testified that these fees (estimated at between $6-$18 billion a year) can both promote and stifle competition. They promote competition by forcing firms to only launch products that are likely to be successful, and stifle competition by limiting the ability of small manufacturers to enter. A legal expert offered the opinion that slotting fees may be a thinly disguised form of price discrimination, because the fees demanded may vary by the size and brand equity of the manufacturer. This expert also suggested that the practice was spreading to various other consumer-goods industries.*

- *On November 10, 1995, ABC News aired a special report on its 20/20 program. Using a hidden camera, the show documented conversations between an entrepreneur and buyers for two food retailers, during which the buyers indicated that "slotting fees" were more important than sales presentations in gaining shelf space. One buyer indicated that the typical slotting fee was $5,000 per item, while the other buyer indicated that the price was closer to $8,000-$10,000.*

- *In September 1999, a United States Senate committee on Small Business held hearings on slotting fees. Witnesses included two small-business owners who were shrouded in black hoods because they feared retaliation from powerful retailers. In voices that were electronically altered, they spoke of the chilling effect of slotting allowances on their ability to compete.*

Slotting allowances generate strong reactions from those who pay them, from those who charge them, and from those who regulate the players. Manufacturers abhor them, retailers and wholesalers claim that they are necessary in light of the "excessive" rate of new product introductions by manufacturers, and regulators often vehemently argue that the fee is either (a) "anti-competitive" because it discriminates against small firms, (b) inflationary, since it raises manufacturer's costs, or (c) efficient, since it rations scarce shelf space and screens out potentially weak new products.

As the opening vignettes suggest, slotting allowances are a substantial and growing phenomenon – packaged goods companies are believed to spend about a third of their new product marketing budgets on slotting allowances – but their purposes and consequences are not entirely clear. Analysts have offered several explanations for slotting allowances. One is that they solve an information asymmetry problem between manufacturers and retailers. A second is that they equate demand and supply in the market for new products. A third is that they result from an exercise of retailer power. A fourth, converse of the third, emphasizes the impact of manufacturer power on lower slotting allowances.

Their development and further spread in the future depends on which explanation is more nearly accurate. To the extent that slotting allowances are a consequence of retailer power, they are likely to become common in other industries populated by powerful retailers. If they are an efficient response to the proliferation of new products that compete for scarce retail shelf space, they will become popular in industries where new product introductions are frequent and shelf space is scarce. The available evidence is both limited and ambiguous about the purposes that slotting allowances serve. The only extant empirical evidence that is not anecdotal relies on secondary data (Sullivan 1997) and speaks only indirectly to some of the prevailing theories.

To evaluate these explanations, we surveyed individuals who make purchasing decisions at grocery stores and chains. We found that slotting allowances are extracted by well-informed retailers from relatively less informed manufacturers.

# REVIEW OF LITERATURE

## Solving Information Asymmetry

Information asymmetry occurs when one party to a transaction has pertinent information that the other party lacks. Two types of information problems, *adverse selection* or *hidden information* and *moral hazard* or *hidden action*, have been studied in the literature (Bergen, Dutta, and Walker 1992; Rao and Monroe 1996; Mishra, Heide and Cort 1998; Kirmani and Rao 2000). Adverse selection problems occur when one party is uncertain about the *capability* of the other party to fulfill contractual obligations. For instance, a buyer may be unsure if a seller has the requisite skills to manufacture and deliver a high quality product, or, in our context, a retailer may be unsure about the true (unobservable) demand for a new product being offered by a manufacturer. Moral hazard problems occur when one party is uncertain about the *post-transaction intentions* of the other party. For instance, a buyer may be afraid that a seller will reduce quality after the contract has been signed, or, in our context, a retailer may be afraid that a manufacturer will not fulfill commitments to support a new product, after it has been launched.

### *Solving the Adverse Selection Problem*

When manufacturers approach retailers with new products that they wish to have stocked on retailers' shelves, they generally provide information (marketing research data, past successes, advertising and promotion plans, and the like) that speaks to the likelihood of the success of the new product. This information is designed to address retailer concerns that the new product will fail. However, since manufacturers compete with each other for scarce shelf space, it is in their self-interest to project optimistic sales revenues and profits, so that retailers do stock their new product. As a result, all manufacturers

tend to claim their products will be highly successful. (Chu (1992) provides valuable institutional detail that supports this information asymmetry premise and the incentives for some manufacturers to "misrepresent" their private information about unobservable demand). Consequently, the retailer is faced with an adverse selection problem, much like the adverse selection problem faced by consumers contemplating the purchase of a product of unobservable quality (Akerlof 1970). Not all new products are successful, and simply examining pre-launch projections, marketing research data, and the like, frequently does not provide an accurate indication of future demand. The retailer's problem, therefore, is to determine the *type* of the new product (high or low demand). With the explosion in new product introductions, and a commensurate increase in the number of new product failures, the economic consequences of a poor choice are non-trivial, and retailers are therefore forced to exercise considerable circumspection in the choice of which of several new products to stock (Sullivan 1997).

By paying a fee that would not have been paid under full information (i.e., if there had been no uncertainty about demand for the new product), the manufacturer can credibly communicate confidence that the new product that will have *high* demand, since manufacturers of *low* demand products would not be able to recover this expenditure from future sales and therefore would not rationally incur such an expenditure (cf. Spence 1973; Milgrom and Roberts 1986; Bhattacharya 1980; Wernerfelt 1988; Kirmani and Rao 2000). A manufacturer who knew she had a low-demand product, or was unsure about the demand for her new product, would be unwise to pay a slotting fee. Conversely, any manufacturer willing to pay a slotting fee must have accurate private information about the potential success of the new product. In essence, the slotting fee signal can solve the

*adverse selection* problem and should be observed when retailers are uncertain about a new product's success, but the manufacturer is not (Chu 1992).[1]

*Solving the Moral Hazard Problem*

The retailer faces another problem, in addition to the adverse selection problem associated with the likely success of the new product. "Retailers must decide whether a new product has enough support behind it to create consumer demand" (Mendelson 1996). The success or failure of the new product is often contingent upon post-launch actions that the manufacturer needs to undertake, such as advertising, coupon drops, and other forms of in-store support. If the manufacturer does not undertake these actions, the retailer may suffer adverse economic consequences.

In the literature, solutions to such moral hazard or post-contractual hidden action problems emphasize incentives (Klein and Leffler 1981). For instance, it has been demonstrated that price premiums (a price over marginal cost) coupled with repeat purchase provides sellers an incentive to not debase quality (Klein and Leffler 1981; Rao and Bergen 1992; Rao and Monroe 1996). Similarly, manufacturers can offer retailers exclusive territories, which increases retailer profits and thus motivates them to provide desired services (Klein and Murphy 1988). In our setting, it is the *retailer* that may need to provide manufacturers an incentive (analogous to a price premium) to assure that the manufacturer expends adequate post-launch effort (Pelton, Strutton and Lumpkin 1997).

[1]The choice of a slotting allowance over other types of signals (such as advertising, or a generous return policy, which is the equivalent of a performance guarantee) is driven by two factors. *First*, offering a generous return policy may result in the retailer not exerting the effort necessary for the success of the new product, a type of moral hazard problem (Chu 1992). Consequently, even though it may be an inexpensive signal (Kirmani and Rao, 2000), manufacturers prefer not to use it. *Second*, a slotting allowance provides a direct economic benefit to the retailer, therefore retailers prefer that manufacturers pay slotting fees rather than engage in excessive advertising.

One such mechanism is the offer of a relatively high wholesale price. By providing manufacturers "super-normal" margins (over a repeated number of purchases) retailers can motivate manufacturers to support the new.

Notice that the moral hazard problem is resolved through a subtly different mechanism than the adverse selection problem. By emphasizing incentives in a repeated game, one party is able to motivate the other to remain honest. In contrast, signals such as slotting allowances provide information about one party's unalterable (i.e., exogenously endowed) type.[2] Simply providing a higher than normal wholesale price is sufficient to resolve the moral hazard problem as long as the super-normal margins are provided repeatedly. In principle, therefore, slotting allowances should not play a role in resolving moral hazard problems.

**Equating Demand and Supply**

A second class of explanation argues that slotting allowances are a mechanism to "…equate the retail demand for new products with … supply" (Sullivan 1997, p. 463). As the supply of new products increases, the price associated with limited shelf space for new products should increase as well. According to Sullivan's model, the retailer's optimal quantity and number of products carried is a function of the retailer's operating costs, and these costs increase in the number and quantity of products stocked. New product introductions impose significant costs on retailers, who require compensation for the one-time fees associated with entering SKU information into the store's computer system, warehouse placements, and shelving costs, as well as the opportunity cost of the shelf space (Freeman 1986; Hall 1988).

While Sullivan's data are supportive of her pro-competitive argument (that slotting allowances are explained principally by an escalation in new product activity), the level of aggregation makes it difficult to tease out variations in the charging of slotting allowances. Specifically, it is unclear if slotting allowances vary by the size and past successes of manufacturers, their level of information relative to the retailer, the size and costs of the retailer, and other micro level variations that typify inter-organizational governance mechanisms. While she is able to dismiss several rival explanations at the macro level, a more micro-level analysis may reveal additional insights. An implication of her reasoning is that slotting allowances should be higher when the retailer's costs are high. The cost of placing new products on shelves based on the time required to shelve new products, and the opportunity cost of shelf space could vary by retailer, and these costs should be systematically related to the slotting allowances charged. Since we examine retailer level data, we will be able to speak to the direct relationship between costs and slotting allowances.

**The Exercise of Retailer Power**

The third class of explanation suggests that slotting allowances favor larger and more powerful retailers. Manufacturers argue that slotting allowances are a "…polite form of extortion" (*Advertising Age* 1987). Since manufacturers can not sell a new product without access to shelf space, they are left with no choice but to comply with the demands placed on them by the retailer. The general claim is that, with increased consolidation among retailers, they are able to exert power over manufacturers and thus negotiate terms of trade that are considerably advantageous. This implies that that larger retailers should

[2]This distinction between the two types of problems and their solutions has received considerable scrutiny

be able to charge higher slotting fees, and small retailers should not be able to charge slotting fees at all.

Shaeffer (1991) offered another type of anti-competitive argument, that the presence of slotting allowances in combination with a relatively high wholesale price results in lower downstream price competition among retailers, and thus increases their profits. This practice has no effect on manufacturer profits in his model, but leads to the prediction that relatively high wholesale prices should accompany slotting allowances. This is different from the moral hazard argument in which high wholesale prices are an independent mechanism to motivate manufacturers to support new products after they are launched. According to this model, slotting allowances will be accompanied by higher wholesale prices to enhance retailer profits.[3]

**The Role of Manufacturer Power**

A fourth explanation is a variant of the third one above. Underlying many of the arguments in the literature is the premise that new product launches are hazardous because the success of the new product (relative to existing products) is uncertain. Indeed, new product failure rates confirms that a large fraction do not succeed (Urban and Hauser 1993), and that circumspection on the part of retailers is justifiable. It therefore appears reasonable, as retailers indeed argue, that they need to protect themselves against the risk of failure by charging manufacturers an upfront fee, such as a slotting allowance.

However, retailers frequently attempt to reduce this uncertainty by conducting their own market research, and are generally assumed to have more information about local

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in the Economics literature. The interested reader is referred to Kreps (1990) for a lucid exposition.
[3]Lariviere and Padmanabhan's (1997) model also suggests that slotting allowances and wholesale prices may go hand in hand.

demand conditions than manufacturers. If a retailer's market research reveals that success is probable for a new product, then he would like to carry it. To the extent that the manufacturer has also conducted market research that establishes the likely success of the new product, the retailer's ability to charge the manufacturer a slotting allowance may be reduced, since both parties are now well-informed about the likely success of the new product. Conversely, if the manufacturer is less competent than the retailer and has less hard information about the likely success of the new product, the retailer can exploit his informational advantage and extract a slotting allowance from the uninformed manufacturer. The issue of slotting allowance payments can therefore be framed as a tussle about information. The default expectation among all parties is that a slotting allowance will be charged. However, this fee may be waived or reduced when the retailer's market research reveals that the new product will likely be successful, and the retailer realizes that the manufacturer is well aware of this. This perspective is in sharp contrast to the signaling argument, according to which manufacturers who are *better* informed than retailers will pay a slotting allowance to signal their unobservable demand. It is, however, consistent with an argument offered by small manufacturers, who have noted that retailers frequently excuse large manufacturers from paying slotting fees, because these large manufacturers are able to exercise power over the retailer (Freeman and Meyers, 1987). One can envision circumstances in which the manufacturer's power allows her to not pay a distasteful slotting allowance -- while retailer power perhaps enables them to charge slotting allowances, there may be circumstances in which manufacturer power attenuates this effect.[4]

[4]This argument is at odds with the small manufacturers' claim that slotting allowances were invented by

In summary, the literature offers several rival explanations and predictions for the role that slotting allowances play in manufacturer-retailer transactions when new products are launched[5]. Slotting allowances may:

1) signal unobservable demand,

2) serve a pricing role by equating available shelf space with the supply of new products,

3) be a manifestation of retailer power, and be accompanied by higher wholesale prices. Alternatively, to the extent that post-launch commitments are unenforceable, retailers may need to use high wholesale prices as an incentive to ensure that manufacturers fulfill their post-launch obligations,

4) rise when the *retailer's* private information about demand is better than the manufacturer's.

We now turn to a formal statement of testable predictions that emerge from the various arguments described above.

## HYPOTHESES

Our first refutable prediction emanates from the signaling argument (Chu 1992; Lariviere and Padmnabhan 1997). The core claim is that manufacturers who wish to credibly communicate that their new product is of the *high demand type* need to signal this belief by putting their economic interests at risk. Firms with new products that are likely to face *low demand* will mimic the high demand firms at their economic peril.

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large manufacturers as an entry deterrent.

[5]Additionally, slotting allowances may be illegal. Retailers may be in violation of the Robinson-Patman Act for accepting fees that are not available to all retailers. Further, large manufacturers may be guilty of predatory promotion, since they could hypothetically take control of an "essential facility" by paying the

Specifically, a slotting allowance can serve as a credible signal of unobservable future demand for a firm's new product.[6] Therefore:

> H1: Based on the signaling argument, when manufacturers are better informed about the likely success of their new product, the tendency to pay slotting allowances should increase, to credibly communicate this private information.

Our second refutable prediction emanates from the demand-supply hypothesis (Sullivan 1997). According to this perspective, retailers who have high costs should seek higher levels of slotting allowances to compensate for their costs. Specifically,

> H2: Based on the demand-supply and cost compensation argument, slotting allowances should be higher when the retailer's costs are high.

Our third refutable prediction emanates from the retailer power argument. In particular, if retailers are able to exercise power over manufacturers and extract slotting allowances as a means of access to the market, then their wholesale price should be higher when slotting allowances are charged (Shaeffer 1991). Therefore:

> H3: Based on the retailer power argument, higher slotting allowances should be accompanied by higher wholesale prices.

Retailers who enjoy an informational advantage over manufacturers will exploit it and extract a slotting allowance. However, retailers do not enjoy an informational advantage over the manufacturer, they will not be able to extract a slotting allowance from the manufacturer.

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fee (see Cannon and Bloom 1991). This second argument, however, is contrary to the charge that large manufacturers frequently do not pay the fee (see footnote 9, pp. 462-3 in Sullivan (1977)).

[6]Technically, low demand firms will not mimic this signal only if the associated cost can not be recovered through first period margins (see Kirmani and Rao 2000 for a non-technical explanation of the requirements for a signal to work). If the first period margin compensates for the cost of the slotting allowance, then low demand manufacturers will willingly pay the slotting fee and suffer the downstream consequences of no repeat sales. Consequently, the willingness to pay a slotting allowance generates a pooling equilibrium, and slotting allowances fail to signal. In survey research, it is difficult to assess

Therefore:

H4: When retailers are faced with a product they believe is likely to be successful, and the manufacturer is also aware of the new product's likely success, the tendency to pay slotting allowances will decrease, relative to when the manufacturer is unaware of the new product's likely success.

Notice that H1 and H4 make opposite predictions. Under H1, the retailer's power is paramount, whereas under H4, the retailer's power can be countered when both the manufacturer and retailer are aware of the likely success of the new product, and the retailer would therefore like to carry the new product. Additionally, H2, and H3 also invoke the retailer's power in charging slotting fees, either to cover their costs, or to enhance profits by reducing downstream price competition. Further, notice that an alternative interpretation of H3 is consistent with the signaling argument. Here, slotting fees may be offered as a signal but the cost of the fee is recovered through higher wholesale prices.

Finally, if moral hazard is indeed a problem, then retailers will need to offer manufacturers an on-going incentive to fulfill their post-launch commitments. Therefore:

H5: When faced with the possibility of manufacturers' not fulfilling post-launch commitments, retailers will pay higher wholesale prices as an incentive to manufacturers so that they will not renege on their post-launch commitments.

To test these predictions, we conducted a survey of buyers in the retail food industry, as we describe next.

## METHODOLOGY

whether the various assumptions of signaling models do indeed hold. We assume these assumptions are valid, because otherwise, slotting allowances (to the extent they are signals) should not exist.

We engaged in a three-phase data collection exercise. In the first phase, qualitative interviews were conducted with buyers and store managers of a large chain in the Upper Mid-Western United States. In the second phase, a questionnaire was pre-tested on a sample of fifty-nine respondents, all of whom were involved with the purchasing function at grocery stores or chains. In the third phase, a revised instrument was fielded on the same population that responded to the second phase, while ensuring that no respondent from the second phase was contacted in the third phase.

**Phase I**

The purpose of this phase of the data collection exercise was several-fold. Given the sensitive nature of the issue (recall that retailers accepting slotting fees may be in violation of the Robinson Patman Act) our first task was to determine whether retailers would be willing to respond to questions even if their anonymity was assured. Second, in light of the several competing explanations for the existence and size of slotting allowances, designing a good survey instrument required that we determine whether any explanation struck our respondents as singularly incorrect. Third, we needed input on scale items that would tap the constructs that we wished to investigate.

Based on several one-on-one and group meetings with fifteen buyers and managers of this grocery store chain, we concluded that grocery store managers and buyers would be able and willing to provide the information we sought, as long as we were able to assure their anonymity, and as long as the questionnaire was relatively short. Second, while the cost compensation argument was the one everybody subscribed to, nobody dismissed any

of the other arguments.[7] Third, respondents provided input on scale items that allowed us to develop a questionnaire that we pre-tested on a larger sample in Phase II.

**Phase II**

Our purpose in Phase II was to develop multi-item scales for our key constructs, and assess the response of our sample to the length of the questionnaire and the manner in which we solicited responses. Therefore, we developed multi-item scales for the following constructs: receipt of slotting allowances (SAAMT), probability of failure of the new product (PFAIL), informational advantage of manufacturer (INFOR), retailer's costs (COST), and likelihood that the manufacturer will not fulfill post-launch commitments (MHAZ). Further, based on input received in Phase I, we developed a single-item measure for wholesale price (WP). In addition, we developed a host of measures for several control variables.

The questionnaire comprised two major sections. Respondents who indicated that they had charged their last vendor a slotting allowance were then asked to provide responses to a series of 5-point scale items anchored at "Strongly Agree" and "Strongly Disagree", that gathered information on the nature of that particular vendor and that particular interaction. Respondents who had not paid a slotting allowance were directed to a section of the questionnaire that asked for their opinions on several items including the role of slotting allowances, technology, new product introductions and the like, in their industry. Finally, all respondents were asked to provide demographic information and their opinion on what they thought the research was about, and any feedback they could provide the researchers.

[7]In support of the signaling argument, one respondent stated that the willingness to pay a slotting

A quota sampling technique was used to contact respondents by telephone. This procedure attempted to ensure that respondents from every state were contacted in proportion to the number of grocery retailers in that state. The Directory of Supermarket, Grocery and Convenience Store Chains (1997) was used to establish initial contact and solicit participation. Those agreeing to participate were then sent a mail questionnaire with a cover letter on University letterhead, a reply paid envelope, and a postcard inviting them to request a "PAR REPORT" that would describe how their response compared with others in the sample. Reminder postcards were sent out two weeks later.

Of the six hundred people contacted, two hundred sixty agreed to respond. All of these two hundred sixty people were sent the questionnaire, and fifty-eight questionnaires were returned yielding a response rate of 22.31%. The data from these responses were analyzed for the psychometric properties of scale items as well as any insights that the qualitative responses might provide.[8] Based on these analyses, we made several changes to our instrument, which, while they increased the length of the survey, were deemed essential for measurement rigor. The details of the fielding of this second survey are provided next.

**Phase III**

The procedures employed in this phase were identical to those employed in Phase II. Twelve hundred potential respondents were contacted using a quota sampling procedure to attempt representation across geographic areas. Seven hundred forty eight agreed to respond and were sent the eight-page questionnaire with a cover letter on University

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allowance "…separated the men from the boys".

[8]In the interest of brevity, we do not provide details of our analysis of pretest data. The psychometric properties of our scales can be evaluated from our Phase III survey, discussed next

letterhead, a reply-paid envelope, and a "PAR REPORT" request post card. Roughly two weeks later, a reminder postcard was mailed out as well. A total of one hundred sixteen responses were received prior to a pre-specified cut-off date, yielding a response rate of 15.51%.

There were several modifications to the questionnaire that was used in Phase II. First, respondents who indicated that they had not charged their last vendor a slotting fee were asked whether they had ever charged a slotting fee. All respondents who had ever charged a slotting fee proceeded to a section that comprised the indicators for the independent and dependent variables. These items included questions about the vendor, the product, the retailer, the competitive environment, the nature and degree of information asymmetry, cost of stocking shelves, opportunity cost of space, slotting allowances received, and several control variables, many of which had been revised or included based on the analysis of Phase II results. (The key constructs and their reliabilities are provided in the Appendix. A sample of the complete questionnaire may be obtained from the first author). Finally, respondents who had never charged a slotting fee before were directed to a section that asked for their opinions on several issues pertinent to the retail food industry. In light of the fact that they had not charged a slotting allowance, it was obviously not possible to collect information about the drivers of the magnitude of the slotting allowance charged. Finally, demographic information regarding the respondent, as well as descriptive information regarding the retailer was collected from all respondents. After a pre-specified cut-off date, those requesting "PAR REPORTS" were provided mean and standard deviation data on all scale items with a cover letter in which these data were interpreted in lay terms, and the key results were described.

## ANALYSIS AND RESULTS

We divide our discussion of the results into three sections. In the first section we provide descriptive information that speaks to the prevalence of the phenomenon. In the second section, we report on the psychometric properties of our scale items, and in the third section we provide the results of the analyses for the tests of the various hypotheses.

### Descriptive Information

Of the one hundred sixteen respondents, eighty-two respondents (71% of our sample) indicated that they had indeed received slotting allowances. The remaining thirty-four provided responses to items that are not germane to this research. However, a comparison between the two groups of respondents on demographic characteristics is pertinent and is provided in Table 1.

Notice that the only statistically significant difference between those who had charged a slotting allowance and those who had not is that the latter purchased a smaller dollar volume than the former group, suggesting that purchasing volume (consistent with the retailer power argument) has an impact on the ability of the retailer to extract slotting allowances from the manufacturer. On all other dimensions, the differences between the groups are statistically insignificant.

While the comparative analysis of numerical information (years, dollar volume) examined log-transformed data, the raw numbers are revealing. Those who did not receive slotting allowances were involved with purchases that averaged $7.1 million the previous year, while the group that received slotting allowances was involved with purchases that averaged $112 million, a figure that is roughly 16 times higher than the first group's purchases. The recipients of slotting allowances received these fees from a large variety of

firms, ranging from Fortune 100 consumer products companies to relatively obscure regional manufacturers. The magnitude of slotting allowances received per store (respondents could provide the information as dollar figures or as free cases), assuming an average sales volume commitment of fifty cases per week per store, is described in the following frequency table (the total frequency is lower than eighty two because of missing data):

| < $100 | $101-$500 | $501-$1000 | $1001-$5000 | <5 cases | 6-10 cases | 11-15 cases | >21 cases | Do not Know or Cannot Share Information |
|---|---|---|---|---|---|---|---|---|
| 31 | 24 | 2 | 1 | 4 | 3 | 1 | 1 | 10 |

To assess concerns regarding non-response bias, we performed two analyses. First, we compared early and late respondent on the demographic criteria discussed above, and found no statistically significant differences between the two groups on any demographic dimensions. Second, we compared the data on dollar value of purchases in our overall sample and that of the population from which we drew. That analysis suggests that our respondents were at the high end of the spectrum. While the average store in a chain that comprises more than two hundred one stores (the category with the highest per-store sales volume) had an annual sales volume of $10.5 million, our respondents were, on average involved with purchases of over $78.6 million. Since we do not have information on the distribution of sales volumes of stores in the population, and since our measure is a measure of the respondent's involvement in purchases (which may include multiple stores) we do not interpret this difference further. However, we do caution that our results are may not generalize to the population of retail stores nationwide.

**Measures**

We provide information on our scale items and their inter-item reliability values in the Appendix. A correlation matrix and the output of a principal components based exploratory factor analysis are provided in Tables 2 and 3 respectively. These analyses speak to the psychometric qualities of our measures as we discuss below.

*Classification Variable*

Recall that the retailer power argument (H4) suggested that when manufacturers were less certain about the success of a new product than retailers, and when the outcome was in fact likely to be favorable, higher slotting fees would be extracted. To distinguish between new products about which retailers had relatively little *ex ante* uncertainty versus those about which they had considerable *ex ante* uncertainty, we developed a three-item scale (PFAIL). A median split on this data allowed us to perform a focussed test of the hypothesis based on new products that would likely be successful.

*Dependent Variable*

Our principal dependent variable, the slotting allowance charged (SAAMT), was measured with a three-item scale that compared the fees received for this product to fees received for other products, from other manufacturers, and by other retailers. Another variable, the wholesale price (WP) was a single-item scale that served as an independent variable in the test of one hypothesis, and as a dependent variable in the test of another hypothesis.

*Independent Variables*

Our first construct of interest was the informational advantage of the manufacturer relative to the retailer (INFOR), for which we used a six-item scale. To measure the retailer's costs (COST), we used three items to capture both direct costs of shelving new

products as well as the opportunity costs of shelf space. Finally, we used a four-item scale to assess the retailer's perceptions about his ability to enforce manufacturer commitments to provide post-launch support (MHAZ).

To assess discriminant validity, convergent validity and unidimensionality, we examined the correlation matrix and factor loadings. With one exception, scale items load as desired. The exception is C3, the third item in the cost scale, which loads marginally better on the first factor (MHAZ) rather than the third factor (COST). An examination of the semantic content of the item and the inter-item reliability of the three-item scale suggests that, from a face validity standpoint, this item should indeed be an indicator for COST, not MHAZ, and given the marginal difference in loading, we used our discretion to retain the item as a COST indicator[9]. Further, the reliability values of all our multi-item scales (see Appendix) were greater than the .60 cut-off level prescribed for exploratory research (Nunnally 1967).

**Tests of Hypotheses**

To assess support for the hypotheses, we estimated several multiple regression models. Variables in these models were the composite measures that were generated by computing the average value of the purified scale items.

According to H1-H3, three key factors that explain variations in slotting allowances are:

INFOR: the manufacturer's private information about the likely success of the product (H1)

COST: the retailer's costs (H2)

WP: the wholesale price (H3)

(The interaction hypothesis predicted in H4 was estimated using a different approach, which we will describe below). These hypotheses were tested simultaneously through an estimation of the following equation:

$$SAAMT = \beta_0 + \beta_1(INFOR) + \beta_2(COST) + \beta_3(WP) \quad (1)$$

In addition, to test H4, we performed a median split on the data on the PFAIL construct, since it was hypothesized that the effect of INFOR on SAAMT would only be observed when the new product was likely to be successful.[10] Then, we estimated the following equation on both sub-samples:

$$SAAMT = \beta_0 + \beta_1(INFOR) \quad (2)$$

Finally, to test H5, we estimated the following equation:

$$WP = \beta_0 + \beta_1(MHAZ) \quad (3)$$

For equation (1) we examined the data for outliers, as well as influential data points, and evaluated the model for multicollinearity.[11] It was not necessary to exclude any observations based on this analysis; further the multicollinearity diagnostics reveal no source for concern (Table 3). The highest variance inflation factor ($VIF_{max}$) is very low, while the smallest eigenvalue ($\lambda_{min}$) is quite large, and the condition number ($\phi$), which is the ratio of the largest to the smallest eigenvalues, is relatively low (Meyers 1986). The results of the estimation of the regression models are reported in Table 4.

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[9]The substantive results from the regression analysis are no different if we use only the first two items for COST.

[10]We chose not to run a model with an interaction term (PFAIL*INFOR) because of obvious multicollinearity concerns.

[11]The only response that arrived after the cut-off date was found to be an outlier (based on hat diagonal (>.11) and studentized residual (>2.11) values) and was therefore not included in the analysis.

The estimates of equation 1, which tests H1-H3 are striking. The coefficient for INFOR is significant but in the direction *opposite* to that predicted. This suggests that there is no support for the signaling argument that higher slotting allowances will be observed when manufacturers have more information than retailers do about the potential success of the new product. In fact, the evidence suggests precisely the opposite effect -- enhanced vendor information results in significantly lower slotting allowances. Further, and again contrary to extant theory, COST is *negatively* related to slotting allowances. The sign of this coefficient is puzzling, and suggests that, contrary to H2, when retailer costs are high, slotting allowances drop. One possibility is that more efficient retailers tend to have lower costs, and are also more savvy. It is these savvier retailers who are able to extract higher slotting allowances. Finally, the coefficient for WP is not significant, suggesting that slotting allowances and wholesale prices are not systematically related, contrary to the "anti-competitive" argument that slotting allowances will facilitate the charging of higher wholesale prices. [12] This finding is consistent with Messinger and Chu (1994), who suggest that wholesale prices play a role in placing existing products on retailers' shelves, but need not supplant slotting allowances as signals of unobservable demand for new products.

Examination of the coefficients for models 2 and 3 explains the lack of support for H1. Clearly, support for the rival hypothesis H4 is significant and suggests that when retailers are faced with a product that they expect will be successful, and they recognize that the manufacturer's superior market research also reveals the likely success of the new product

[12]Several other factors that did not have an impact on slotting allowances included the length of the relationship between retailer and manufacturer, whether the new product was a brand extension, the competition in the retailer's or manufacturer's market, and the dependence of a one party on the other.

to them, slotting allowances drop significantly. Conversely, when retailers are faced with a product that they expect will be successful, and they recognize that the manufacturer's inferior market research places the manufacturer at an informational disadvantage, they extract significantly higher slotting allowances. When the product is not expected to be successful (i.e., PFAIL = High), there is no significant relationship between slotting allowances and the retailers informational advantage.

The results from model 4 (based on eq. 4) confirm the moral hazard based predictions offered in H5. When retailers fear that manufacturers may not fulfill post-launch commitments, they offer significantly higher wholesale prices, to provide an incentive to the manufacturers to fulfill post-launch obligations.

## DISCUSSION

### Summary

The trade press is rife with anecdotal evidence on the prevalence and variation in slotting allowances (Boehning 1996). We report on the first ever systematic primary data collection exercise on this phenomenon, which is of pragmatic as well as theoretical significance. The pragmatic significance of the phenomenon is borne out by the sheer magnitude of the monetary expenditure associated with slotting allowances; estimates range from 4.2% of trade promotion expenditures to 30-55% of trade promotion expenditures (see Sullivan 1997, footnote 2). The theoretical significance of the issue is apparent from an examination of the various seemingly conflicting explanations for why slotting allowances have emerged, and what causes them to vary from one setting to the next (cf. Shaeffer 1991; Chu 1992; Lariviere and Padmanabhan 1997; Sullivan 1997).

Our results provide powerful and unambiguous support for the claim that slotting allowances are extracted by well-informed retailers from relatively less informed manufacturers. At first blush, this finding is clearly at odds with the signaling argument according to which *well informed manufacturers* will attempt to credibly reveal their private information about high unobservable demand by posting a slotting allowance as a bond (cf. Wernerfelt 1988; Ippolito 1990). Further, the "anti-competitive" claim that slotting allowances are a mechanism to *raise* wholesale prices so as to reduce retail price competition also is not supported.[13] Conversely, there seems to be some merit to the claim that well-informed manufacturers are excused from having to pay slotting allowances. Finally, a surprising finding is that retailers' costs are *negatively* related to the tendency to charge slotting allowances.

The moral hazard based finding received powerful support. Seemingly, manufacturers who have the potential to renege on post-launch commitments face less pressure on wholesale prices. Conversely, "reputable" manufacturers who are less likely to renege on post-launch commitments are likely to face greater pressure on wholesale prices.

**Implications**

*Theoretical Implications*

Based on this data, it is tempting to dismiss the signaling argument in favor of the retailer power argument, for the emergence and continued existence of slotting allowances. However, such a conclusion would be premature. In fact, it may be possible to interpret our findings from an information asymmetry perspective. Specifically, when manufacturers believe in the success of their new product, they may use slotting

[13]In the interest of brevity, and because pretest interviews suggested that retailers would be unwilling and

allowances as a signal of potential success *instead of* good marketing research data. In other words, well-informed manufacturers can signal based on the perceived quality of their market research information, while relatively ill informed manufacturers could signal with slotting allowances. However, this *post hoc* argument is noticeably different from the prevailing prediction that well-informed manufacturers will signal the quality of their information *with* a slotting allowance. Another information asymmetry based interpretation of our results is that when the retailer has *knowledge* (based on superior market research) about the likely success of a new product, and the manufacturer has only a *belief* about the likely success of the new product, the information asymmetry favors the retailer, and consistent with other information asymmetry models, the party with the informational advantage is able to capitalize on resulting price distortions.

The significant negative relationship between slotting allowances and retailer's costs is, as we noted earlier, surprising. The SAAMT scale contains two items that compare fees within the same store (thus not capturing inter-store variation). We reasoned that comparing cost variations and slotting allowance variations between stores may reveal an empirical regularity worthy of further scrutiny, and so examined the correlation between SA1 (an item that compared slotting allowances across retailers) and COST, but found that correlation to not be significant. Clearly, while our speculation that stores with lower costs may also be more powerful and may thus be able to extract slotting allowances from less powerful vendors is one reasonable hypothesis, other plausible hypotheses need to be developed and tested, perhaps using objective cost data rather than perceptual measures.

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unable to provide accurate pricing strategy information, we did not collect data on retail pricing policies.

Finally, the moral hazard finding that less trustworthy suppliers may receive higher prices is consistent with recent empirical observations. Both Rao and Bergen (1992) and Montgomery and Wernerfelt (1992) independently concluded that reputable (or umbrella branded) manufacturers tended to receive lower price premiums because buyers expected them to be more trustworthy than reputation-less (or non-umbrella branded) suppliers.

*Managerial Implications*

There are several implications for practitioners. *First*, retailers do charge slotting allowances as the default option when asked to stock a new product. Manufacturers can, however, reduce the magnitude of the fee by coming armed with a product that is likely to be successful, and coming armed with convincing market research data that demonstrates their superiority over the retailer on this dimension. From our analysis, retailers seemingly respect manufacturers with market research expertise and reward them by reducing their slotting allowance demands.

*Second,* manufacturers can elect to refuse to pay a slotting allowance if they are willing to suffer the consequences of limited distribution. Smaller chains, that comprised nearly 30% of our sample, do not receive slotting allowances.

*Third,* retailers need to be cognizant of the drivers of slotting allowances. If their costs are systematically related to their ability to charge slotting allowances, then reducing costs may be a mechanism that generates other efficiencies that result in an increased ability to charge slotting allowances. *Fourth*, the absence of a relationship between slotting allowances and wholesale prices would merit some scrutiny. If retailers' perceptions are inconsistent with practice (i.e., the theory is correct, and wholesale prices are indeed higher when slotting allowances are charged, but, retailer perceptions of

wholesale prices are biased downward), then slotting allowances may indeed be raising wholesale prices, a possibility that individual retailer's may wish to examine.

*Fifth*, retailers seemingly recognize that manufacturers are as susceptible to incentives as they are. Hence, the provision of higher wholesale prices to assure compliance with contractual terms is one of several devices that retailers may wish to consider as an incentive to motivate manufacturers to fulfill post-launch commitments. Low-reputation manufacturers may wish to bear this finding in mind as well, since their low reputation may yield them higher wholesale prices.

*Finally,* from a public policy perspective, given the prevalence of slotting allowances, and variance in the degree to which it is charged, regulators may wish to consider the efficiency, power and other reasons for the emergence of the phenomenon. Additionally, both manufacturers and retailers may wish to consider the legal ramifications of the practice.

**Limitations and Future Research**

Much like other survey research that focuses on perceptual measures, our research is subject to several limitations. Conceptually, rigorous tests of signaling predictions are difficult even in experimental settings (cf. Boulding and Kirmani 1993; Rao, Qu and Ruekert 1999). The need to specify the precise circumstances under which separating equilibria will be observed make survey based tests of signaling predictions particularly difficult. Therefore, the observation that variations in slotting allowances are not easily explained by information asymmetry does not necessarily mean that slotting allowances can not be used to signal. Our observation that slotting allowances are apparently not used to signal is a descriptive finding; the normative claim that slotting allowances can be

used to signal may nevertheless be true. Future research that focuses on manufacturers' decision to use a slotting allowance as a signal will shed more light on whether slotting allowances can signal.

Our response rate is relatively low. However, given the sensitive nature of the data that we were collecting, this was to be expected. The low response rate restricts our ability to generalize our findings, but is not inconsistent with recent survey based tests of information asymmetry predictions in a channels setting (e.g., Mishra et. al. 1998).

Finally, our models have relatively low explanatory power based on fit statistics (i.e., the $R^2$ and $R^2_{adj}$ are low), though the low PRESS statistic values are encouraging (Meyers 1986). However, given our interest in the relationships between particular theoretically defensible variables, our focus was on the significance of the coefficients rather than the total variance explained. Consequently, while a complete explanation of variations in slotting allowances will likely require the inclusion of other factors, the particular empirical regularities we observe are theoretically interesting.

**Conclusion**

New product launches are hazardous. Some estimates place failure rates in the grocery industry as high as 80% (Wolfsenberger 1991). This failure rate coupled with the observation that the number of new product introductions increased about five-fold between 1978 and 1987, while the amount of available space barely doubled (Sullivan, 1997), has forced retailers to exercise great circumspection in selecting which new products to stock, since they are unable to tell *a priori* which new product is likely to succeed. This circumspection is a source of considerable tension between retailers and manufacturers in the food industry, and therefore represents a nice setting in which to

study the mechanisms that emerge to resolve the information asymmetry about future demand for new products. Our research sheds some light on the factors that influence the charging of slotting allowances and the mechanisms that are used to reduce *ex ante* and *ex post* governance problems.

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TABLE 1

Demographic Information

| Item | Receive Slotting Allowances | Don't Receive Slotting Allowances |
|---|---|---|
| N | 82 | 34 |
| Log (Dollar value of purchases)[*] | 16.41 (2.00)[**] | 14.84 (1.39) |
| Log (Years in Purchasing) | 2.51 (0.87) | 2.91 (0.61) |
| Age Category | 2.83 (0.80) | 3.11 (0.83) |
| Log (Tenure with current employer) | 2.44 (1.00) | 2.64 (0.89) |
| Level of Management | 4.27[***] (0.79) | 4.49 (0.85) |
| Type of Organization | 1.40[****] (0.49) | 1.32 (0.48) |

[*] Significant at $p < .05$.

[**] Figures in parentheses are standard deviations.

[***] 4 = "Senior Management" and 5 = "Top Management".

[****] 1 = "Large National Chain" and 2 = "Regional Chain".

Table 2

Correlation Matrix

| | SA1 | SA2 | SA3 | INFOR1* | INFOR2* | INFOR3* | INFOR4* | INFOR5 | INFOR6 | COST1 | COST2 | COST3 | PFAIL1* | PFAIL2* | PFAIL3 | MHAZ1 | MHAZ2 | MHAZ3 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | **SA1-3** ask about the relative size of this Slotting Allowance | | | **INFOR1-6** concern who has superior information about the market for this product | | | | | | **COST1-3** concern the size and type of costs to the retailer if this product fails | | | **PFAIL1-3** ask about the likelihood of market success for this product | | | **MHAZ1-3** ask about issues pertaining to Moral Hazard. | | |
| **SA2** | ***0.46*** | | | | | | | | | | | | | | | | | |
| **SA3** | ***0.53*** | ***0.62*** | | | | | | | | | | | | | | | | |
| **INFOR1** | 0.08 | 0.11 | ***0.24*** | | | | | | | | | | | | | | | |
| **INFOR2** | 0.12 | 0.14 | ***0.25*** | ***0.53*** | | | | | | | | | | | | | | |
| **INFOR3** | ***0.29*** | 0.12 | 0.06 | ***0.34*** | ***0.46*** | | | | | | | | | | | | | |
| **INFOR4** | 0.11 | 0.07 | 0.09 | ***0.36*** | ***0.59*** | ***0.54*** | | | | | | | | | | | | |
| **INFOR5** | 0.19 | 0.11 | 0.09 | ***0.37*** | ***0.47*** | ***0.63*** | ***0.50*** | | | | | | | | | | | |
| **INFOR6** | 0.09 | 0.04 | 0.04 | ***0.43*** | ***0.44*** | ***0.48*** | ***0.33*** | ***0.63*** | | | | | | | | | | |
| **COST1** | 0.07 | 0.13 | 0.10 | 0.06 | -0.10 | -0.08 | -0.15 | -0.03 | 0.05 | | | | | | | | | |
| **COST2** | 0.19 | ***0.31*** | ***0.39*** | 0.19 | 0.18 | -0.10 | 0.00 | 0.08 | 0.02 | ***0.28*** | | | | | | | | |
| **COST3** | 0.07 | 0.22 | 0.17 | 0.15 | -0.05 | -0.16 | -0.04 | 0.01 | 0.08 | 0.40 | ***0.68*** | | | | | | | |
| **PFAIL1** | -0.00 | 0.09 | 0.06 | -0.07 | -0.03 | 0.18 | 0.11 | -0.03 | -0.08 | -0.19 | 0.03 | 0.07 | | | | | | |
| **PFAIL2** | 0.02 | 0.04 | -0.15 | ***-0.24*** | ***-0.24*** | 0.03 | -0.05 | -0.15 | -0.13 | -0.14 | -0.08 | 0.04 | ***0.34*** | | | | | |
| **PFAIL3** | -0.01 | -0.12 | -0.10 | ***-0.35*** | ***-0.25*** | 0.01 | -0.17 | -0.10 | -0.13 | -0.19 | 0.07 | 0.12 | ***0.30*** | ***0.46*** | | | | |
| **MHAZ1** | ***0.27*** | 0.20 | -0.01 | -0.07 | 0.05 | 0.11 | 0.07 | 0.12 | 0.15 | -0.03 | 0.16 | ***0.29*** | 0.14 | ***0.28*** | ***0.28*** | | | |
| **MHAZ2** | -0.08 | 0.01 | -0.20 | -0.05 | -0.12 | -0.01 | -0.13 | 0.22 | ***0.26*** | ***0.26*** | ***0.24*** | ***0.43*** | -0.14 | 0.17 | 0.19 | ***0.39*** | | |
| **MHAZ3** | 0.14 | 0.19 | 0.01 | 0.22 | -0.02 | 0.21 | -0.07 | 0.22 | ***0.34*** | 0.20 | 0.02 | 0.20 | 0.00 | 0.06 | 0.01 | ***0.24*** | ***0.44*** | |
| **MHAZ4** | 0.03 | 0.02 | 0.00 | 0.12 | -0.05 | -0.14 | -0.16 | 0.02 | ***0.23*** | 0.21 | 0.12 | ***0.27*** | 0.06 | -0.08 | -0.01 | ***0.37*** | ***0.47*** | ***0.41*** |

Note: 1) Items in ***bold italics*** indicate correlation significant at $p < .05$

2) Column and row headings correspond to specific questionnaire items used for measurement. Thus, SA1 is the first item used to measure "Slotting Allowances", SA2 is the second item used to measure "Slotting Allowances" and so on. More detailed information about each item is in the Appendix.

* Reverse coded items.

TABLE 3

Factor Pattern

| Item | MHAZ | INFOR | COST | PFAIL | SAAMT |
|---|---|---|---|---|---|
| | **MHAZ1-3** ask about issues pertaining to Moral Hazard. | **INFOR1-6** concern who has superior information about the market for this product | **COST1-3** concern the size and type of costs to the retailer if this product fails | **PFAIL1-3** ask about the likelihood of market success for this product | **SA1-3** ask about the relative size of this Slotting Allowance |
| SA1 | .27 | .27 | .04 | .03 | ***.51*** |
| SA2 | .28 | .16 | .26 | .03 | ***.59*** |
| SA3 | .09 | .25 | .45 | .07 | ***.55*** |
| INFOR1 | .12 | ***.67*** | .35 | -.12 | .02 |
| INFOR2 | -.01 | ***.80*** | .18 | .20 | -.01 |
| INFOR3 | .17 | ***.70*** | -.31 | .01 | .06 |
| INFOR4 | -.03 | ***.70*** | .02 | .34 | -.20 |
| INFOR5 | .26 | ***.70*** | .04 | -.21 | -.17 |
| INFOR6 | .38 | ***.62*** | -.05 | -.38 | -.15 |
| COST1 | .29 | -.28 | ***.47*** | -.23 | .07 |
| COST2 | .50 | .05 | ***.70*** | .31 | -.01 |
| COST3 | .63 | -.20 | ***.60*** | .15 | -.07 |
| PFAIL1 | .13 | .05 | -.12 | ***.42*** | .41 |
| PFAIL2 | .26 | -.30 | -.28 | ***.50*** | .18 |
| PFAIL3 | .33 | -.32 | -.24 | ***.41*** | .02 |
| MHAZ1 | ***.79*** | .07 | -.40 | .32 | -.08 |
| MHAZ2 | ***.77*** | -.28 | -.01 | -.24 | -.32 |
| MHAZ3 | ***.61*** | .02 | -.26 | -.42 | .45 |
| MHAZ4 | ***.61*** | -.08 | -.10 | -.29 | .06 |
| % variance explained | 25 | 17 | 12 | 9 | 6 |

Note: Column headings correspond to specific constructs measured. Thus, MHAZ refers to Moral Hazard. Similarly, row headings refer to specific questionnaire items used to measure constructs. Thus, SA1 is the first item used to measure "Slotting Allowances", SA2 is the second item used to measure "Slotting Allowances" and so on. More detailed information about each item is in the Appendix.

TABLE 4

Regression Analysis Results

Dependent Variable is SAAMT: Slotting Allowance Amount for Models 1-3

WP: Wholesale Price for Model 4

| | Model 1 | Model 2 | Model 3 | Model 4 |
|---|---|---|---|---|
| A. Parameter Estimates | | | | |
| Intercept | 1.82* | 2.75* | 2.09* | 2.61* |
| INFOR | -0.19* | -0.07 | -0.30* | --- |
| COST | -0.17* | --- | --- | --- |
| WP | 0.04 | --- | --- | --- |
| MHAZ | --- | --- | --- | 0.27* |
| B. Model Statistics | | | | |
| $F$ | 4.82* | 0.29 | 4.28* | 5.01* |
| df | 3,64 | 1,39 | 1,26 | 1, 73 |
| $R^2$ | .06 | .01 | .14 | .06 |
| $R^2_{adj}$ | .05 | -.01 | .11 | .05 |
| PRESS | 22.33 | 14.80 | 9.20 | 74.72 |
| C. Multicollinearity Diagnostics: | | | | |
| $VIF_{max}$ | 1.11 | --- | --- | --- |
| $\lambda_{min}$ | 0.02 | --- | --- | --- |
| $\phi$ | 189.20 | --- | --- | --- |

* $p < .05$

Note: Model 1 corresponds to eq. (1), Model 2 corresponds to eq. 2 for PFAIL = High, Model 3 corresponds to eq. 2 for PFAIL = Low, and Model 4 corresponds to eq. 3.

INFOR: Composite variable based on variables measuring who has superior information about the market for this product, vendor or retailer

COST: Composite variable measuring costs to retailer of a product failure

WP: Measure of the Wholesale Price

MHAZ: Composite variable measuring the vendor's Moral Hazard

# APPENDIX

## SCALE ITEMS AND RELIABILITY

| Construct | Scale Items | $\mu^a$ | $\sigma^b$ | Item-total correlation | $\alpha^c$ |
|---|---|---|---|---|---|
| Slotting Amount SAAMT<br><br>5-point scale anchored at 1 = "Much Lower" and 5 = "Much Higher" | Compared to the slotting fees other retailers received for this product, was the amount you received (SA1) | 2.74 | .74 | 0.52 | 0.77 |
| | Compared to the slotting fees you receive from other vendors, was the amount you received from this vendor (SA2) | 2.99 | .77 | 0.59 | |
| | As compared to slotting fees received for other products, the slotting fee received for this product is (SA3) | 2.96 | .72 | 0.68 | |
| Information INFOR<br><br>5-point scale anchored at 1= "Strongly Agree" and 5 = "Strongly Disagree" | We have better information about who buys the product than this vendor does (reverse coded). (INFOR1) | 2.92 | .99 | 0.53 | 0.85 |
| | We have better information about whether consumers for this product will buy more at lower prices than this vendor does (reverse coded). (INFOR2) | 3.52 | 1.04 | 0.67 | |
| | Our marketing research is as good as our vendor's (reverse coded). (INFOR3) | 2.54 | 1.07 | 0.71 | |
| | We know the market for this product as well as our vendors do (reverse coded). (INFOR4) | 3.12 | 1.08 | 0.61 | |
| | This vendor's market research information about this product is better than ours. (INFOR5) | 2.15 | 1.03 | 0.66 | |
| | This vendor has more information about demand for the product than we do. (INFOR6) | 2.30 | 1.08 | 0.61 | |
| Costs COST<br><br>5-point scale anchored at 1= "Strongly Agree" and 5 = "Strongly Disagree" | If this product fails, we stand to lose a lot of time and money because we allocated expensive shelf space to it. (COST1) | 3.23 | 1.13 | 0.37 | 0.72 |
| | It is expensive to restock a shelf to accommodate a new product. (COST2) | 2.31 | 1.11 | 0.59 | |
| | It is very time consuming to restock a shelf to accommodate a new product. (COST3) | 2.38 | 1.18 | 0.68 | |
| Probability of new product failure PFAIL<br><br>5-point scale anchored at 1= "Strongly Agree" and 5 = "Strongly Disagree" | Our market research indicated that this product would do very well (reverse coded). (PFAIL1) | 3.45 | .86 | 0.35 | 0.62 |
| | This product has a good chance of success, because the vendor has been very successful with past new product introductions (reverse coded). (PFAIL2) | 3.89 | .87 | 0.48 | |
| | We are not sure that this product will be successful. (PFAIL3) | 2.91 | .90 | 0.46 | |

| | | | | | |
|---|---|---|---|---|---|
| Moral Hazard MHAZ | If this vendor does not fulfil promises about advertising support for this product, there is not much we can do about it. (MHAZ1) | 3.13 | 1.59 | 0.43 | 0.70 |
| 5-point scale anchored at 1= "Strongly Agree" and 5 = "Strongly Disagree" | We assumed that this vendor would fulfil promises about advertising support for this product, since there was no way to tell for sure. (MHAZ2) | 2.43 | 1.32 | 0.59 | |
| | It would be very time consuming for us to check up on whether this vendor does plan to fulfil promises about advertising support for this product. (MHAZ3) | 2.67 | 1.26 | 0.44 | |
| | It would have been very costly to make sure that the vendor kept promises about advertising support for this product. (MHAZ4) | 2.73 | 1.09 | 0.54 | |
| Wholesale Price WP | This vendor charges a wholesale price that is very high for this product. | 3.38 | 1.01 | ----- | ----- |
| 5-point scale anchored at 1= "Strongly Agree" and 5 = "Strongly Disagree" | | | | | |

[a] Item mean

[b] Standard deviation

[c] Composite inter-item reliability (Cronbach's $\alpha$)