# Franchising Agreements in New Car Retailing: An Empirical Investigation

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*The retail distribution of new cars in the UK is controlled by a system of franchised dealerships. The relationship between the dealers and the manufacturer represents an individually agreed contract for selling new vehicles through the manufacturer's selected dealers. Meanwhile, the number of franchised dealerships is in decline due to weak trading conditions in the UK new car market. This means that dealers have to compete for a reduced volume of new cars. This research paper empirically tests five hypotheses about the effects of incentive payments and management control on brand investment, retail level of service, and monitoring frequency of the dealer's business. It was found that high financial reward to the dealerships resulted in higher investment level in retail services. Management control cost positively affects monitoring frequency, and monitoring costs negatively affect service levels. It finds strong empirical support for the hypothesis that management control costs inversely affect manufacturer's monitoring frequency of the dealer's business. The paper analytically extended previous knowledge in management control cost relevant to new car retailing in the United Kingdom.*

Motor car dealerships in the United Kingdom have been restricted by the franchise system which, by limiting them to a single car brand, effectively makes them manufacturers' car retail outlets. This eliminates competition within the showroom, despite new car retailing exhibiting highly competitive characteristics. Such a system seems to work to the manufacturers' advantage and ensures that the product and not the dealer is uppermost in the customer's mind when purchasing a car. Similarly, the single product line means there is no immediate competition from other car brands once the customer is inside the showroom.

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However, the declining profitability from new car sales, combined with high investment costs in dealership facilities, low retained margins and intense competition between dealers, have forced the sale and closure of less profitable dealerships. These factors have also created pressure on the dealers to demand better incentive payments from the manufacturers. Similarly, these factors have constrained the dealerships into multi-franchising firms in the UK car retail marketing environment.

In a new car franchising agreement, manufacturers want control of distribution channels for better execution of their retail marketing strategies. The dealers are assumed to want control of their business to avoid being bound by manufacturer-determined retail policies. Retail marketing philosophy reasoned that channel control is accomplished by the exercise of retail marketing power. Thus, identifying the determinants of car retail distribution power has been an important research objective in the past. Channels research has consistently argued that asymmetric channel relationships are more dysfunctional than those characterised by symmetric interdependence. Similarly, relationships with greater total interdependence exhibit higher trust, stronger commitment, and lower conflict than relationships with lower interdependence [Kumar et al., 1995].

This study examines the role of new car manufacturers' fairness in developing long-term relationships with the dealerships through new car franchised agreements. The author used primary data to test empirically five hypotheses about new car manufacturer's franchising agreement with the car dealerships on the basis of the theoretical models presented in the past studies [Lal, 1990; Kumar et al., 1995; Agrawal and Lal, 1995]. The author analytically introduces new constructs relevant to car marketing into the established models to incorporate heterogeneity in monitoring costs among solos franchise dealers to provide empirical support for the derived hypotheses.

## LITERATURE AND THEORETICAL REVIEW

Our understanding of vertical car distribution relationships has been based on the large body of empirical research conducted in the past decades [Emerson, 1962; Beier and Stern, 1969; El-Ansary and Stern, 1972; Hunt and Nevin, 1974; Etgar, 1978; Sibley and Michie, 1981; Lusch and Brown, 1982; Gaski, 1984; Lusch and Ross, 1985; Butaney and Wortzel, 1988; Manaresi and Uncles, 1994]. These previous research goals have not been fully realised. Krueger [1991] suggested that much of the past research focused on dyadic relationships in the commercial subset of the distribution channel. Butaney and Wortzel [1988], explained that the only important determinant of power is the relative strength of the two contractual components (the manufacturer versus the retailer).

Most of the findings of the previous research into distribution relationships are somewhat contradictory. Etgar [1978] found significant relationships between channel leader control and certain environmental variables. Emerson [1962], and Bonoma and Johnston [1978] have emphasised the need to identify extradyadic variables that could increase the understanding of power within channel positions. The implicit assumption [Uncles *et al.*, 1994] is that channel strategies and relationship management techniques can be set by considering only the supplier and the retailer.

Marketing channels are sets of interdependent organisations involved in the process of making a product available to the end-user. The pioneering channels work on dependence [Brown, Lusch, and Muehling, 1983] examined relationships between one firm's dependence on its partner, their use of influence strategies, and their associated attitudes. Frazier *et al.* [1989] indicated that the dealership's dependence on its supplier increases conflict and the supplier's use of coercion, whereas other studies [Frazier and Rody, 1991] reported an opposite effect.

Other empirical investigations of interdependence within the manufacturer-dealer dyads [Anderson and Narus, 1990; Noordewier *et al.*, 1990; Frazier and Rody, 1991; Buchanan, 1992; Heide, 1994] have incorporated both the manufacturer and the dealer's dependence, either from the manufacturer's perspective or by querying the dealer [Lal, 1990; Ganesan, 1994; Kumar *et al.*, 1995] about its respective dependence. Anderson and Weitz [1989] provided empirical evidence supporting Stern and Reve's [1980] proposition that channel relationships that are asymmetric in dependence and power are more dysfunctional, less stable, and less trusting than symmetric relationships. However, all symmetric relationships are not identical. Buchanan [1992] found that increasing total interdependence in symmetric relationships enhances performance. It is important to disentangle the effects of interdependence asymmetry from total interdependence. Consequently, it is necessary to explore how the dealers' perception of both interdependence asymmetry and total interdependence affect their business relationship with the manufacturers in terms of conflict, trust, and commitment.

The interdependence structure of a dyadic relationship encompasses each firm's dependence, the magnitude of the firm's total interdependence, and the degree of interdependence asymmetry between the firms. 'Bilateral deterrence theory' asserts that, all things being equal, increasing interdependence asymmetry is associated with higher levels of aggression and conflict by both parties [Cook and Emerson, 1978; Bacharach and Lawler, 1981; Lawler *et al.*, 1988; Molm, 1989]. As the channel interdependence structure becomes more asymmetric, the relatively

powerful firm has increasingly less motivation to avoid conflict. Retaliation becomes both less likely and less damaging, because the firm can inflict proportionally more serious damage on its weaker partner than it would suffer in return. The relatively dependent partner therefore, increasingly expects to be exploited or attacked regardless of its own behaviour. It is more likely to engage in a pre-emptive strike or rebellion against the more powerful firm's domination [Lawler *et al.*, 1988]. Thus, bilateral deterrence theory suggests that both the more powerful car manufacturer and its (supposedly) weaker dealers are increasingly likely to engage in conflict as the relationship becomes more asymmetric, albeit for different reasons.

Specific to franchising agreements, two related studies have emerged from the literature. The first set of studies [Caves and Murphy, 1976; Rubin, 1978; Brickley and Dark, 1987; Norton, 1988; Brickley, Dark, and Weisbach, 1991; Krueger, 1991; Gallini and Lutz, 1992; Lafontaine, 1992] test various theories of owning versus franchising and identifies the factors that affect the proportion of stores that are franchised rather than company owned. The second set of studies [Blair and Kaserman, 1982; Mathewson and Winter, 1985; Lal, 1990; Charnes, Huang, and Mahajan, 1992; Sen, 1993; Agrawal and Lal, 1995] investigated the factors that affect the various elements in franchising agreements, in particular, incentive payments, the royalties, and franchise fees.

## STUDY OBJECTIVES

The conclusion that could be drawn from such past evidence is that new car franchising arrangements are different from other forms of distribution arrangements because of their use of incentive payments, retail quality service, common hours of operation, and provision that allow for monitoring the dealership outlets. The empirical analysis mentioned so far has made a significant contribution to our understanding of franchising agreements. However, since most studies to date have used aggregate secondary data and proxy measures, the literature will benefit from more direct and micro level measures of various constructs relevant to the UK motor industry. Previous work have not investigated the use of incentive payments in relation to the monitoring costs in new car franchising agreements. This study tests five hypotheses, which have not been previously tested, using direct measures obtained through a primary data gathering effort.

## DEVELOPMENT OF HYPOTHESES

One important aspect of this study is the assumption of the sequence of decisions made by the manufacturer and the dealers. The manufacturer

offers a contract to the prospective dealers by specifying the incentives, and the desired service level. The dealer decides whether to take up the offer; if it does accept, it decides its business operation and the actual level of service to be provided to its customers. Simultaneously, the manufacturer decides on the actual investments and the frequency with which to monitor the dealers' business operation. This sequencing of decisions has important implications for empirical analysis. Both the incentives and monitoring cost are a function of the prospective dealer's business location and size, fixed at the time the manufacturer makes an offer to the dealer. Thus, both the incentives and the monitoring costs are variables determined in the first stage, and subsequently affect car model investments and monitoring frequency chosen by the manufacturer, and the service level chosen by the dealer.

This sequence of decisions also leads to many dealership problems [Mathewson and Winter, 1985; Kumar *et al.*, 1995], which include shirking responsibility by both the dealers and manufacturers on investments in retail service and new car model, respectively, because neither the dealer nor the manufacturer capture the entire benefits of these investments. To empirically validate the dealership problems, the researcher proposes to test five hypotheses in the context of an on-going relationship in which, for example, the incentive is set at the time of agreement, and investments and service are measured some time later.

### Incentives versus Investment and Service

The behaviour of motor car manufacturers with respect to investments in a new car (model) brand and that of dealers with respect to the service offered at the retail level is based on two assumptions:

1. Two variables affect demand at the retail level, namely, service level offered by the dealers and the investments made by the manufacturer; and

2. Investments in each of these factors cannot be easily verified by the other party.

Significantly, if only one of these variables (service) were to affect demand at the retail level, the optimal incentive would be either zero or one and the incentive payments would satisfy the minimum profitability constraint for the dealers. Blair and Kaserman [1982] argue that if these factors are observed and verified by both parties and, therefore, could be specified in a contract, the optimal contract would not include high incentive. In these circumstances, holding everything else constant, the level of service offered by a dealer decreases, and the size of the investments increases with an increase in the incentive payment. These two forces characterising the

usefulness of incentive payments in a manufacturer-dealer relationship result in the first two hypotheses.

$H_1$    The incentive payments made by the manufacturer to the dealers positively affects the amount invested by the manufacturer in a new car brand.

$H_2$    The incentive payments made by the manufacturer to the dealers positively affects the level of service provided by the dealers.

### Monitoring Effects

The concept of 'mixed strategy equilibrium' is employed in the analytical framework, which requires that the dealer delivers a higher level of service with a frequency chosen to equal the profits to the manufacturer from monitoring and non-monitoring strategies [Lal, 1990]. Alternatively, the manufacturer chooses only one strategic option all the time. Making the profit equal to the manufacturer's monitoring and non-monitoring costs results in a frequency of monitoring or non-monitoring and leads to the provision of delivering a higher or lower service level. The average service level is therefore, inversely related to monitoring costs. Thus, the third hypothesis is:

$H_3$    The cost to the manufacturer for monitoring the dealers' business negatively affects the level of service provided by the dealers.

The researcher assumes that the manufacturer monitors less often if the difference in the profits to the dealer when delivering a higher and lower level of service increases. Since dealership profit margins increase with increased incentives, the difference in profit margins when delivering a higher or lower level of service also increases with increased incentives. Hence, in equilibrium, incentive payment is directly related to the frequency of monitoring, which is the fourth hypothesis.

$H_4$    The incentive payments made by the manufacturer to the dealers positively affects the frequency with which the manufacturer monitors the dealers.

The evaluation of past literature further suggest the fifth hypothesis:

$H_5$    The cost to the manufacturer for monitoring the dealers' business positively affects the frequency with which the manufacturer monitors the dealers.

This fifth hypothesis is a direct result of the mixed strategy equilibrium employed by the manufacturer. The probability of monitoring increases with the cost of monitoring allows the dealers to shirk responsibility more

frequently which has to be countered by a higher frequency of monitoring by the manufacturer. However, this result appears contrary to a marginal cost/benefit argument. Given the counter intuitive nature of this hypothesis, and given the fact that monitoring costs are likely to vary across dealerships, an investigation of how $H_5$ is affected if heterogeneity in monitoring costs among dealers serving the same manufacturer are included.

### Specific Assumptions

It is assumed that the cost of monitoring the dealers $c_m1$ and $c_m2$ to be cm and cm, respectively. The monitoring costs might differ among the dealers because of their physical dispersion (some are located closer to the manufacturer and involve less travelling costs). The nature and size of the dealership business may affect the monitoring costs. Typically, the time spent in inspection is greater in bigger businesses than in small scale operations.

Let $\Psi_{mi}$ be the probability with which the manufacturer monitors dealer. Let $\Psi_{si}$ be the probability with which dealer i offers the higher service level $\bar{\delta}$ at a cost $c_s$, and let $\bar{p}_i$ be the price it charges when offering the higher level of service. Correspondingly, let dealer i offer a lower service level 0 with probability $(1 - \Psi_{si})$ and set a price $\bar{p}_i$ when offering the lower service level. Let the monetary value of the penalty imposed on the dealer if caught shirking on service be $K_1$; and the gains to the manufacturer from catching a shirking dealer be $K_0$.

The probability with which dealer i delivers the higher service level is expressed as $\Psi*_{si} = 1 - c_{mi}/K_0$, and the probability with which the manufacturer monitors dealer i in equilibrium is,

$$\Psi * mi = 1 - (\bar{\pi_i} - \pi_i)/K_1,$$

where     $\bar{\pi}_i = \Psi_{sj}\{1 - \theta\ \bar{p}_i + (1+\beta)\ \bar{\delta}\}\ \bar{p}_i + (1-\Psi_{sj})\ \{1 - \theta\ \bar{p}_i + \bar{\delta}\}\ \bar{p}_i - c_s,$

and     $\pi_i = \Psi_{sj}\{1 - \theta\ \bar{p}_i + \beta\ \bar{\delta}\}\ \bar{p}_i + (1 - \Psi_{sj})\ \{1 - \theta\ \bar{p}_i\}\ \bar{p}_i - K_1;$

$$i = 1, 2, j = 3 - i$$

Differentiating $\bar{\pi}_i$ with respect to $\bar{p}_i$ and setting it equal to 0 yields,

$$\bar{p}*_i = \frac{1 + \bar{\delta}(1 + \beta\Psi_{sj})}{2\theta}.$$

Similarly,     $$\bar{p}^{\cdot}_i = \frac{1 + \bar{\delta}\beta\Psi_{sj}}{2\theta}.$$

Substituting for $\bar{\pi}_i$ and $\pi_i$ in the expression for $\Psi*_{mi}$ above and using the values of $\bar{p}*_i$ and $p*_i$ yields,

$$\Psi*_{mi} = 1/K_1 [C_s - 1/2\theta\{\Psi_{sj}\beta\ \bar{\delta}^2 + \bar{\delta}(1+\ \bar{\delta}/2)\}]$$

Finally substituting $\Psi*_{sj} = 1 - C_{mj}/K_0$ in the above equation yields,

$$\Psi*_{mi} = 1/K_1\{C_s - \bar{\delta}\{2+(1+2\beta)\ \bar{\delta}/4\theta\} + \bar{\delta}^2\beta C_{mj}/2\theta K_1 K_0$$

From the above equation, if $C_{mi} > C_{mj}$, then $\Psi*_{mi} < \Psi*_{mj}$, keeping everything else constant. The analysis therefore, suggests that when both the demand and supply arguments for monitoring and heterogeneity in monitoring costs are taken into account, the manufacturer monitors the dealers more frequently. This is more so when the monitoring cost is lower. Indeed from the above explanation, the average monitoring frequency $(\Psi_{mi} + \Psi_{mj})$ /2 continues to be positively related to the average cost of monitoring $(C_{mi} + C_{mj})$ /2, as in $H_5$. However, the analysis indicates that within a motor car franchise system, the manufacturer always monitors the dealers with the lower cost of monitoring more frequently.

Figure 1 summarises the five hypotheses, the direction of the implied causality, and the expected sign of the relationship. One of the main difficulties with this approach is that new car franchise agreement in a particular place is, to some extent, shaped by the local competitive situation and consumer buying patterns. Thus, there is a need to be sensitive to the presence of other factors that could vary among geographic areas and affect the manufacturer's decisions concerning incentive payments and the monitoring of the dealers on the one hand and the dealers' decisions on service provision on the other.

FIGURE 1

SUMMARY OF THE HYPOTHESES PROPOSITION
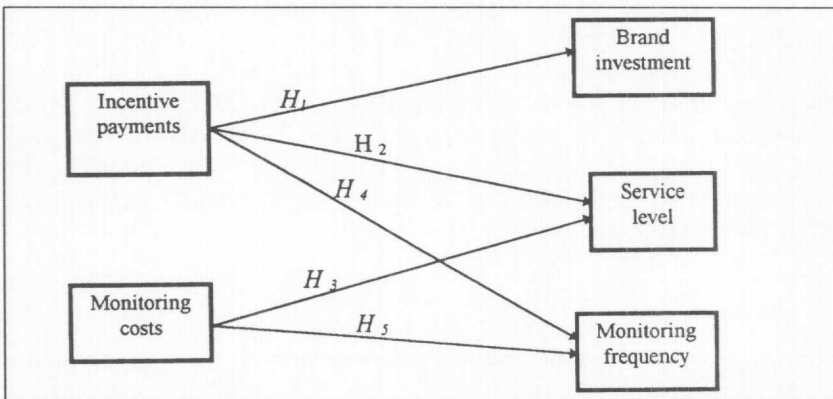
METHODOLOGICAL APPROACH

The findings of previous research work relevant to this study [Lal, 1990; Agrawal and Lal, 1995] suggested that identical monitoring costs across dealerships should be tested among the manufacturers who have the upper hand in new car franchising agreements. Although it is theoretically possible to obtain all data needed to test $H_1$ to $H_5$ from the manufacturers alone, in practice it is impossible to reach and obtain data from the specific persons responsible for monitoring the local dealers. Based on such impracticality, data were obtained from manufacturer-dealership dyad. A cross-sectional data collected from the same manufacturer-dealership dyad was used to test the hypotheses, $H_1$ to $H_5$.

Over 2,000 franchised new car dealers were identified who were located and operated within approximately a 30-mile radius of London. Duplicated listings and those with no contact name were deleted, leaving 1,530 new car dealers to whom survey questionnaires with covering letters were mailed. Four weeks later, follow-up letters to non-respondents were sent. Responses were received from 543 new car dealers, a response rate of 35 per cent. When questionnaires with excessive missing data were eliminated, the final sample consisted of 428 dealers. Using Armstrong and Overton's [1977] procedure, no significant differences ($p > .10$) were found between early and late respondents for any of the constructs which suggests that non-response bias was not a problem.

The sampling frame for testing $H_1$ to $H_5$ was the outcomes from the manufacturer/dealership dyadic survey. The respondents in the dealership survey were the directors, who in many cases happened to be the owner. Non-response was mainly due to refusal to give data on monthly sales or to termination of a franchise agreement. The final questionnaire used for data collection was pre-tested with 50 different dealerships that were not included in the final sample.

Data relating to advertising spending, total sales, number of franchised dealers, full-time support staff, and types of ongoing services offered were collected through personal interviews from the new car manufacturers including: Ford group; General Motors (GM) BMW group; Peugeot group; Volkswagen group; Fiat group; Renault; Nissan; Toyota; Volvo; Mercedes-Benz; and Honda. Data on the general nature relating to the manufacturers' performance was gathered from the Society of Motor Manufacturers and Traders (SMMT).

VARIABLE MEASUREMENTS

*Advertising inputs (ADV)* is a direct measure of the manufacturer's

investment in developing a new car model. Advertising expenditure is divided by total annual sales to address the size differences. A higher sales volume represents higher advertising expenditure due to the size of operations. Advertising spending figures were obtained from the manufacturers' claim for advertising expenditure on a specific new brand of car.

*Number of solus dealers (NSD)* is similar to the one used by Lafontaine [1992]. She uses the total number of outlets displaying the trade name as a measure of brand-name investment. Data was obtained on this measure from the Society of Motor Manufacturers and Traders (SMMT) and in some cases directly from the manufacturers.

*Brand investment* refers to the efforts made by the manufacturer that affect the value of its new car model and, therefore, directly or indirectly affect the demand at the retail level. Thus, for example, advertising by a manufacturer, which communicates a desirable image of a certain model's design, quality, and innovation or the manufacturer's assistance to the dealer in managing their businesses is considered investments in a brand. A manufacturer's investment in brand, then, may take several forms. The brand inputs were therefore measured to capture the investment inputs and create a composite measure to operate the construct.

*Manufacturer's Full time staff (NFT)* – staff investment reflects the commitment expressed by the manufacturer in terms of maintaining a support staff for the dealers and helping them with advice that can affect demand at the retail level. Once again this variable is adjusted for size differences by dividing the number of manufacturer's full-time staff by the number of solus dealers. The data sources for this measure were from SMMT and directly from the respective manufacturers.

*Dealership support (DLS)* relates to another dimension of the manufacturer's efforts that can affect demand at the retail level and is operated by summing the number of different kinds of service, such as central data processing, field operation evaluations, field training, inventory control, news letters and hotlines, that are made available to the dealers by the manufacturer. The data sources for this measure were gathered from the SMMT and the National Franchised Dealers Association (NFDA).

*Incentive (INCT)* refers to the total percentage of gross annual sales that the manufacturer pays to the dealer on a regular basis. Incentive payment information was obtained for each manufacturer-dealer dyad as a self-

reported measure from the dealers. As in Lafontaine's [1992] study, this measure includes the advertising contribution.

*Cost of monitoring to the manufacturer (CMM)* refers to the total cost of inspecting a dealer to ensure the required business format and service level. Monitoring costs include labour costs (personnel time) and travel costs. One indicator of labour costs is the amount of time spent on-site to conduct a review in the form of spot checks on quality, consistency, procedural details, and equipment checks. Since it is difficult to measure travel costs accurately, inspection time (time in minutes) was used as the measure of cost of monitoring; and were collected from the dealerships.

*Level of service* refers to the dealer's investments in service offered at the retail outlet. Service provided at the retail level is affected not only by the manpower employed by the dealer but also by the location of the store and other financial investments that can affect the atmosphere of the retail store. Since the location is generally known before a dealer enters a franchising agreement, this dimension of service cannot be directly affected by the dealer. Similarly, because the franchising agreement often specifies the initial financial investment for the site, and the manufacturer tries to offer the same atmospheric environment throughout its chain, this dimension of service might not be affected to the same extent by the dealer as would be possible if the manufacturer did not impose a standard format on all its dealerships. Thus, compared to location and financial investments, a dealer has more discretion in employing manpower for providing service in the store.

Consistent with the conceptual framework, the researcher operates a dealership's choice of service level by the total number of work-hours per week employed by the dealer and divide it by the dealer's monthly sales measured in value to adjust for differences in store sizes across the sample. Thus, it was assumed that the consumers were likely to find better service (cleanliness, promptness of service) with a higher number of work-hours employed per sale.

*Frequency of monitoring (FM)* refers to the frequency of visits made by the manufacturer to ensure that dealers follow the required business format and provide the required level of service. This was operated by the actual number of unannounced visits made by the manufacturer's employees per month and obtain it as a self-reported measure from the dealer. This measure does not include announced visits because such visits allow the dealer to prepare for inspection and, therefore, are not helpful in detecting shirking by the dealers.

To test $H_1$ to $H_5$, the theoretical analysis assumes that both the incentive and monitoring costs are predetermined variables that affect subsequent choices of the actual new car investments and the monitoring frequency made by the manufacturer, and the actual level of service provided by the dealership.

TABLE 1

VARIABLE MEASUREMENTS

| Construct | Measures | Variable Label | Source of Data |
|---|---|---|---|
| Incentives and Brand Price | Model price and advertising contribution, (%) | PRICE | Price versus gross margin sales ratio. Ratio of ADV to sales. |
| Monitoring Costs | Time spent on inspection, (minutes) | TIME | Time take to inspect dealer's business. |
| Service | Work-hour per unit sales | SERVICE | Average work-hour per week. Annual sales estimate. |
| Monitoring frequency | Frequency per month | FREQ | No. of surprise inspections. Frequency of surprise inspections. |
| Investment | ADV spent per unit | ADV | Manufacturer's claim |
| | No. of franchised dealers | NSD | SMMT [1995] |
| | No. of staff | NFT | SMMT [1995] |
| | Support services offered | DLS | NFDA [1995] |

Consistent with this sequence of decisions in the model, three linear statistical models [Brickley and Dark, 1987; Norton, 1988] to test these hypotheses were estimated. To mitigate the potential problem of model mis-specification, it was decided to include cost of monitoring as an additional independent variable in the model equation, though it was not necessary to postulate a sign for its coefficient.

$$BRAND_i = \alpha_0 + \alpha_1 INCT_i + \alpha_2 COST_i + \Sigma_j \alpha_j D_j + \xi_1^1 \qquad [1]$$

$$SERVICE_i = \beta_0 + \beta_1 INCT_i + \beta_2 COST_i + \Sigma_j \beta_j D_j + \xi_i^2 \qquad [2]$$

$$FREQ_i = \gamma_0 + \gamma_1 INCT_i + \gamma_2 COST_i + \Sigma_j \gamma_j D_j + \xi_i^3 \qquad [3]$$

Where i (i = 1 to 428) refers to motor car franchise business, and $BRAND_i$ is the amount of investment made by the manufacturer in producing and marketing a new car brand; $INCENTIVE_i$ is the payment made by the manufacturer to the dealers; $COST_i$ is the cost to the manufacturer of monitoring the dealer's business; $SERVICE_i$ is the level of service provided by the dealer; $FREQ_i$ is the frequency with which the dealer is monitored; and Djs are the 0-1 car industry specific dummy variables included to capture any industry-specific differences on variables such as consumer demand, competitive conditions, and penalty for shirking responsibility.

It is hypothesised that $\alpha_1 > 0$, $\beta_1 > 0$, $\beta_2 < 0$, $\gamma_1 > 0$, and $\gamma_2 > 0$. Significantly, the relationships posited in equations 1 to 3 [Sen, 1993] differ from those expressed and estimated by Lafontaine [1992] and the difference is directly related to the sequence of decisions described previously. Both Lafontaine and Sen empirically investigated the effect of the *relative importance* of service and brand-name investments in affecting retail demand on the optimal royalty rate specified in the contract. Accordingly, they treat the royalty rate as a dependent variable. In contrast, this study focuses on the decisions, such as actual new car brand investment and service levels, made by the manufacturer and the dealers after the franchising contract is established. Thus, incentive payment is treated as an independent variable in the analysis. Nevertheless, an investigation of the effects of importance of service and brand-name investments in estimating equations 1 to 3 found the results presented to be robust.

ESTIMATION OF RESULTS

This discussion is centred on the results of tests of the hypotheses $H_1$ to $H_5$. To test these hypotheses, equations 1 to 3 were estimated using 'Seemingly Unrelated Regression' (SUR) estimators (regression metrics not shown here). Since these equations all refer to car franchising systems and are, therefore theoretically related, the SUR approach to obtain efficient estimates presented in Table 2 is deemed appropriate.

To test H1, it was necessary to standardise each of the brand investment variables (ADV, NSD, NFT, and DLS) within the car industry and then sum them to obtain a composite dependent measure called the BRAND. The results in Table 2 indicate that, as hypothesised in H1, incentive payment positively affects brand investment ($p < .05$). The results also indicate that, as hypothesised in H2, incentive payment negatively affects the level of service provided by the dealer ($p < .01$).

The evidence for both H1 and H2 lends significant empirical support to the incentive-based explanation for the use of incentive payment in new car

TABLE 2

ESTIMATION OF RESULTS (SUR ESTIMATES)

| Hypotheses<br>Independent<br>variables | 1<br>Brand<br>Investment | Sig | 2 and 3<br>Service<br>Level | Sig | 4 and 5<br>Monitoring<br>Frequency | Sig |
|---|---|---|---|---|---|---|
| Constant | - 3.454 | 0.10 | 9.896 | 0.01 | 0.234 | N/S |
| Incentive | .209 | 0.05 | -.286 | 0.01 | 0.159 | 0.05 |
| Time | .204 | | -.297 | 0.10 | -.096 | 0.05 |
| Motor Industry Factors | | | | | | |
| F1 | -.258 | N/S | -.852 | N/S | -.598 | N/S |
| F2 | .-.368 | N/S | 1.234 | N/S | -.345 | N/S |
| F3 | 1.497 | N/S | 3.105 | 0.10 | .784 | N/S |
| F4 | .567 | N/S | 3.936 | N/S | .093 | N/S |
| F5 | -.334 | N/S | 1.784 | N/S | -.498 | N/S |
| WTD $R_2$ | | | .376 · | | | |

N = 428
The F1 to F5 variables capture motor car industry specific effects for $H_1$ to $H_5$.

franchising contracts: the optimal incentive achieves a balance between the inputs of the manufacturer and the dealer, both of which affect retail demand, and, hence, the overall profitability in the channel. Despite the potentially negative impact of incentive on retail service, its use in franchising contracts provides motivation to the manufacturer to invest in its brand.

The estimates in Table 2 indicate that, consistent with $H_3$, the time it takes to inspect a dealer's business ($p < .10$) negatively affects the service level offered by the dealer. The results indicate that, as $H_4$ posits, the incentive payment positively affects the frequency with which a manufacturer monitors a dealer ($p < .01$). However, contrary to $H_5$, monitoring costs negatively affect the monitoring frequency ($p < .05$).

CONCLUSION

This study empirically tests five hypotheses relevant to the dyadic contractual agreement between the car manufacturer and the franchised dealers. The theoretical analysis describes the UK motor car industrial environment on which the service level provided by the dealers and the car brand investments undertaken by the manufacturer, are assumed to affect demand at the retail level. However, investments in new car brand is assumed not to be observable to the dealers at the time of franchised

agreement. In this context, the study shows that whereas the motive for the dealers to offer better service are inversely related to the incentive payments, the motive for the manufacturer to invest in a new car brand is directly related to the incentive payments to the dealers. Thus, the optimal payment is hypothesised to balance the incentives to the manufacturer and the dealers to invest in their respective inputs. The results of this empirical analysis of 428 manufacturer-dealership dyads among 12 car manufacturers lend support to the hypotheses, and thereby offer empirical support to the role of the incentive payments posited in the study.

Another important dimension of the study is the theoretical analysis relating to the use of the mixed equilibrium concept in characterising the optimal monitoring and service strategies for the manufacturer and the dealers, respectively. The analysis concludes that the level of service offered by the dealers should decrease with the cost of monitoring, and the frequency with which the manufacturer monitors the dealers should increase with the incentive payments. The data again lend support to these conclusions. The study finds a negative and significant relationship between service level and monitoring costs, and a positive relationship between monitoring frequency and incentive payments.

## LIMITATIONS

One of the major limitations of this study is that it is too general in nature. Since the data are representative of only a few car manufacturers and dealers and focused on London, it will be useful to collect additional data to validate the result beyond the current sample. This study could also be improved by examining more closely the cost of monitoring and service to individual car manufacturers. It may be more appropriate to get estimates of the cost of monitoring from different respondents to improve its construct validity. Similarly, it might be useful to seek multiple measures of service.

## FURTHER RESEARCH

A useful direction for further research will be to consider information asymmetries that may exist in new car franchising contexts in Europe. More specifically, if the solus dealers are better informed by the manufacturers about the factors that affect new car retail demand, it could impact on the incentive payments. Alternatively, further research could be channelled into investigating the variance in the car franchising arrangements among specific dealer groups.

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