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Introduction

This special issue arose as a result of an Intensive Advanced Course and Workshop on the Analysis of Retail Activities. Both were organized under the auspices of the European Institute of Advanced Studies in Management (EIASM). The first half of the course followed earlier work by Betancourt and Gautschi (1988). It centered on the economic role of distribution services as outputs of retail enterprises, and as fixed inputs into the production functions of consumers. Such a focus led to emphasizing two important characteristics of retail markets: the bundling of distribution services with the items sold at retail, and the shifting of distribution costs between consumers and retailers in the provision of these services. These characteristics were shown to alter the profit-maximizing pricing policies of monopolistically competitive firms and the welfare effects of competition in retail markets. For instance, in areas where the opportunity cost of time is high, retailers will provide higher levels of distribution services and/or lower price policies than in one where such an opportunity cost is low. Moreover, competition is more likely to be beneficial to consumers in those areas where the opportunity cost of time is high.

In the move from the first to the second half of the course, attention shifted to the appropriate conceptual framework for empirical analysis of the role of distribution services in retail activities, empirical measurement of these distribution services, and presentation of some preliminary results based on 1982 Census data for four countries, the USA, France, Germany and the UK. The empirical role of distribution services addressed in the course was as determinants of retail margins. A model based on the definition of profits was presented and contrasted to one based on a mark-up model and to another on the hedonic approach. The difficulty of measurement of these distribution services in comparable form across the four countries was aired, and descriptive statistics, as well as preliminary results, were presented. The latter showed that distribution services play an important role as determinants of retail margins in all four countries. This result is robust with respect to the conceptual framework one adopts for introducing these services into the statistical analysis of retail margins.

Following this one-day course, there was a two-day workshop in which a wide variety of topics relevant for the analysis of retail activities was discussed. We selected eight of the papers presented at the Workshop for inclusion in this issue. These papers capture the wide range of topics addressed, as well as the variety of approaches brought to bear on them. While the call for papers asked for contributions that were substitutes, as well as complements, to the B–G framework, we view these approaches and topics as complementary in arriving at a deeper understanding of the nature of retail activities and of the role that distribution services play.

Service activities are receiving increasing attention in economics and marketing, for a variety of reasons. One of the most important is the realization that in every country a substantial part of GDP is accounted for by these activities. It is thus fitting that the first paper in this issue presents a novel perspective on the nature of retail banking services. Ellen Hanak points out that banks are institutions that specialize in the provision of explicit intermediation services in conjunction with implicit distribution services. Moreover, increases in these intermediation services by retail banking institutions have as their main effects the lowering of the distribution costs experienced by households in smoothing out their consumption activities over time and risk levels. To analyze these issues, Hanak adopts and adapts the B–G framework. A notable feature of her analysis is the introduction of a two-period model of household behavior, where distribution services play the same role as in the B–G framework but where the assets and liabilities of banks can be an essential part of household activities.

A number of results in the Hanak paper shed new light on questions that have persisted in the banking literature. To mention two, Hanak demonstrates that many banking products are gross complements with each other; in contrast, the literature frequently assumes them to be gross substitutes. She also shows how empirical work in this area is biased against detecting cost complementarities because of its failure to account for the costs of increasing assortments. Hanak goes on to derive

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new insights from her model for other important issues, e.g. the nonseparability of pricing decisions on loan and deposits, the monopolistic nature of market structure in banking, and the inability of banking deregulation to equate service fees and the marginal costs of these services.

The second paper in this issue addresses a completely different topic, from a radically different perspective. In the previous model the supplier to the retailer plays a passive role, providing funds at a given rate, and the analysis focuses on the interaction between the retailer and the consumer. Coughlan and Lal, in contrast, develop a model in which manufacturers can effectively set prices at all levels in the channel structure, taking into account known market conditions and response functions at all levels in the channel, including the retail level. The modeling framework is, thus, one where manufacturers hold most (if not all) of the power in transacting with middlemen. The structure of the model is a game-theoretic one where two manufacturers each produce a single differentiated product, exclusively used downstream. For a given channel length, the middlemen at any level act as Nash competitors, maximizing profits given upstream transfer prices and taking into account downstream response functions. Across channel levels, the upstream player behaves as a Stackelberg leader. Once the solution to the manufacturer's Nash game is obtained in terms of their transfer prices, the equilibrium values for all the decision variables along the channel structure can be found.

Coughlan and Lal emphasize in their literature review that their model is designed to investigate one dimension in the determination of optimal channel length—the role of competition. This is captured in their model by a parameter that is directly related to the degree of substitutability between products in a linear demand function. They show that as the degree of competition at retail increases, so does the optimal channel length. Thus, the fall in retail price as a result of more competition is reduced, but not eliminated, by the increase in retail price generated by the additional layer of middlemen. This result holds whether optimality is defined in terms of maximum channel profits or maximum manufacturer's profits. Hence, more price competition at retail provides an economic incentive for duopolistic producers to increase the number of exclusive-dealing layers of middlemen.

With the third paper by Rao, we return to a situation where the focus of attention is on the interaction between consumers and retailers, particularly on the role of price promotions in an oligopolistic setting. Consumers are explicitly modelled as heterogenous: a brand-loyal segment (insensitive to price promotions) and a price-sensitive one. Furthermore, among the price-sensitive consumers there are two groups, those that search for the actual prices and those that do not. Retailers face the same nonnegative fixed costs and zero marginal costs. Given the total size of the market, they choose prices to maximize expected profits, which depend on sales to all three segments of consumers. Firms can select pure or mixed strategies. The latter entail price promotions. Consumers can also elect to randomize their search behavior. Thus, there is strategic interaction across both sides of the market. The concept of equilibrium is the Nash noncooperative equilibrium.

Rao shows in this paper that if the proportion of brand-loyal consumers is the same for every brand, there is a Nash equilibrium; if these proportions differ across brands, numerical analysis becomes necessary. The latter nonsymmetric case leads to multiple equilibria and at least two of the three retailers in the examples will engage in price promotions. Finally, equilibrium in one of the examples contains a segment of consumers that employ mixed strategies. An interesting question raised by Rao's model is what happens to the nature of equilibria when brand loyalty is endogenously determined (perhaps through choosing the level of a distribution service) by cost-raising activities of retailers.

In the next two papers the focus of attention shifts to empirical issues. Ratchford and Stoops develop an econometric model of a retail firm that captures important aspects of two of the distribution services in the B–G framework. In their model what B–G call 'assurance of product delivery in the desired form' is directly related to the amount of selling effort by the retailer through the use of labor, and information is directly related to the amount of advertising expenditures by the retailer. Higher values of these two variables imply lower distribution costs for consumers, which can be described as consumers facing a lower 'full' price for the explicit products, as well as higher costs for retailers. Through clever manipulation of the theoretical concepts, they develop a hedonic relationship between selling effort, measured by the demand for labor, and the other determinants of the 'full' price paid by the consumer. Judicious specification of

functional forms permits identification of the parameters of interest.

Results are obtained by estimating the hedonic relationship between selling effort, measured by labor, the determinants of the full price faced by consumers, and other variables. The observations are drawn from a retail firm with nine stores and 132 monthly observations on each store. Among the main results is that a 1% increase in the wage rate facing the store relative to the consumer's wage rate leads to a 0.62% decline in service through selling effort by the store. Information in the form of advertising expenditures operates as a substitute for selling effort. The results also imply that selling effort through labor services has a far more powerful effect in lowering consumers' acquisition time than information through advertising (the ratio of the elasticities is 20 to 1).

Reinsdorf provides an interesting alternative for investigating the empirical role of distribution services on the basis of a natural experiment generated by the selection of new outlets for inclusion in the CPI. Every five years in any given US city a new sample of outlets is selected for inclusion. This sample is chosen such that an outlet's probability of providing prices for a specific item is equal to its share of consumers' expenditures for that item. When samples are rotated, both old and new samples are priced. Therefore, it is possible to calculate the average price of an item at different outlets using the old sample of outlets as well as the new one. The old sample reflects the old stores, however, and if there is substitution toward lower-priced outlets, the difference should be negative because the new share for the lower-priced outlets should be higher. A similar experiment arises from a comparison of inflation rates in the average price series from BLS and the corresponding CPI component.

Evidence from both experiments is gathered by Reinsdorf. For the first he presents estimates of the mean price-level differences for US cities undergoing outlet rotation between January and December 1987 and between July 1988 and June 1989. The comparison is limited to food items and motor fuel. The mean differences for both categories are negative, although only one is statistically significant at the 5% level. In the second experiment the results also provide evidence of outlet substitution. These results can be interpreted as giving support for the existence of costly consumer search behavior as well as for the importance of explicitly accounting for distribution services in the analysis of price behavior. Reinsdorf develops the former explanation in the third section of his paper and one version of the latter, based on declines in distribution services, in the seventh section. Here we note that the evidence of outlet substitution toward lower-priced outlets is also consistent with an increase in distribution services if these are generated by increases in the opportunity cost of time to consumers.

The last three papers in this issue are shorter empirical analyses of different aspects of retail activities. Lieberman and Ayal investigate the shifting of market power between manufacturers and retailers over stages of the life cycle. Their analysis of three non-durable consumer brands in the Israeli market finds some support for a brand life-cycle theory. That is, in the early stages of a brand's introduction to the market, manufacturers are better advised to allocate resources disproportionately to securing channels of distribution, rather than to advertising. In the context of the B–G framework this would suggest that potential consumers are more likely to respond to the information services provided by the retailer rather than the information advertising of the manufacturer. Moreover, the distribution service provided by the retailer that the manufacturer must exploit at this stage is 'accessibility of location'. If the brand successfully enters the growth stage, the information to be conveyed to the consumer is that which distinguishes the brand from other brands available at retail. This is information that retailers are unlikely to convey to the market. During this stage the wholesale price is likely to rise, shifting more profits to the manufacturer. Since distribution is secured during the maturity phase of the life cycle, advertising becomes an effective competitive tool for the manufacturer, drawing consumers into the retail market and, thus, reinforcing the pricing flexibility of the manufacturer.

Mikonnen presents an interesting discussion of the spatial aspect of retailing, focusing on the evolution of retail supply and demand in a well-circumscribed area. His data describe changes in retail floor space (supply) for the daily products trade in an area surrounding Vaasa, Finland. This measure of retail supply is, perhaps, most closely related to the distribution service 'assurance of product availability' in the B–G framework. Demand is represented by population. In the areas under study, Mikonnen reports fluctuations in both retail supply and demand. Employing an empirical wave function model, he is able to identify periods

when retail supply and demand are in equilibrium and to explain the directions in which retail supply would change when the regional daily products markets are in states of disequilibrium. Mikonnen presents some evidence suggesting that equilibria will vary temporally and regionally, depending upon the technologies of households and retailers, as well as upon levels of economic development or stages in the business cycle. The results of Mikonnen's empirical analysis are, generally, consistent with central place theory and gravity models of economic geography.

Sybrandy and Tuninga, in the final paper, perform a comparative analysis of the marketing flows in the German Federal Republic (*ca* 1980) and the Netherlands (*ca* 1963). The authors note certain limitations of institutional studies of the number and types of retailers in explaining the dependence of retail structure on the activities in other sectors of the economy. They derive from input–output tables trade flow tables that capture the marketing flows among producer, wholesaler, and retailer sectors of the two countries under study. The marketing flows of the two countries are remarkably similar except in a few respects. One significant difference arises in agriculture, where there appears to be a greater incidence of short distribution channels in Germany, as virtually all of the Dutch agricultural trade flows through wholesalers. This difference is likely to relate to differences in 'assurance of product delivery' in both time and form, and it is most probably influenced by differences in the assortment of agricultural products flowing through the two systems. A second noticeable difference appears with respect to the trade flows emanating from the public sector. The Dutch public sector (*ca* 1963) distributed a far greater percentage of goods and services directly through retailers, as compared to Germany (*ca* 1980). This could suggest a greater involvement of state enterprise in the Dutch economy, thus a greater incidence of price management and lower levels of distribution services, in general, as compared to Germany. Alternatively, it could suggest the need to incorporate an aspect of distribution that the trade flows framework only captures indirectly: namely, the changing role of the consumer in the performance of the work of the distribution system.

The papers in this special issue represent a rather wide variety of theoretical and empirical approaches to the economic analysis of retail activities. Each uncovers limitations of the extant literature and offers some contribution to our understanding of the complex and important activity of the marketing intermediary known as the retailer. While we have read these papers with our own framework of distribution costs and services in mind, we hope the juxtaposition of ideas in this issue will have synergistic effects on the reader similar to those it has had on the editors.

REFERENCE

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