

Consumer Behavior and Competition in Indian Retailing

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This note argues that consumer behavior may be as important as firm behavior for the level of competition in consumer industries such as retailing. Using data on 1,948 retail stores in India, the note highlights three important findings. First, the number of nonworkers in the household, a proxy for the time costs of shopping, has a large effect on competition. Moving from the city with the least to the most number of nonworkers increases competition by 84 percent of its average level. Second, competition is higher in cities with lower incomes. However, this income-competition relationship disappears once we account for differences in the number of nonworkers across cities. The result casts doubt on the explanation of the negative income-competition relationship reported in the existing literature. Third, some of the popular beliefs on competition in Indian retailing do not find support in the data.

“Active consumers who are prepared to check and shop around to ensure they get a good deal are a key driving force in helping to create truly competitive markets” (Stephen Byers, Secretary of State, UK; Department of Trade and Industry, 2000).

The simple idea that consumer behavior matters for competition in consumer industries such as retailing is at the heart of a small but growing body of research. This research emphasizes the role of consumer behavior in defining competition policies in addition to the number of firms or firm behavior.

A good example of the importance of consumer behavior for market competition is a recent study by Giuliatti et al. (2005) on the deregulation of the natural gas supply market in the UK. This study finds that the incumbent (monopolist) continued to enjoy significant market power even after complete deregulation (free entry) and that the cost of deregulation outweighed the benefit. According to the study, the main reason for this failure was the perception among

consumers that the cost of searching and switching to a new supplier would be more than the associated benefit. However, the perceived cost was much higher than the true cost. Therefore, the study recommends correcting consumer perceptions through, for example, an information dissemination campaign, as a key ingredient for a successful deregulation effort.

In summary, understanding how and why consumers behave the way they do in the market is important for competition policy. Based on Amin (2008a), this note takes a step in this direction by highlighting consumer attributes such as the number of nonworkers and children per household as determinants of the level of competition in retailing. Some popular beliefs on competition in Indian retailing are also discussed and shown not to be supported by the data. The data used constitute a stratified random sample of 1,948 retail stores in 41 large cities of India collected by the World Bank's Enterprise Surveys in 2005.¹

Low Competition in Indian Retailing

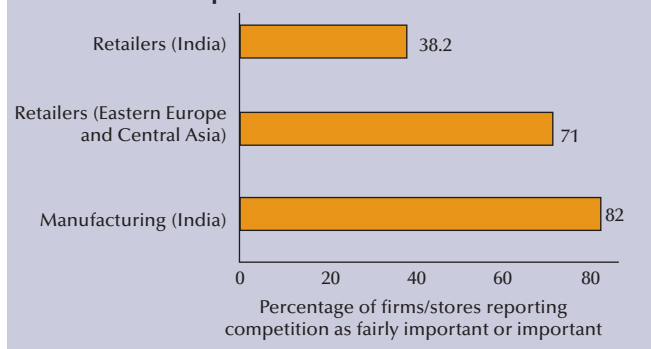
The Enterprise Survey asked retailers if competition from other retailers is not at all important, slightly important, fairly important, or important for the prices of the store's main products. Without much loss of generality, this note defines competition as significant if a store reported competition as fairly important or important.

Interestingly, despite the fact that India boasts of one of the highest densities of retail stores in the world, only 38.2 percent of the stores report facing significant competition. This is low by international standards and also when compared with the registered manufacturing sector in India (figure 1). Further, contrary to popular belief, competition is lower among small relative to large stores and also lower in the metropolitan cities (Bangalore, Chennai, Delhi, Hyderabad, Kolkata, and Mumbai) vs. the rest, even though the metropolitan cities are the retailing hubs of the country (figure 2). One popular belief that does find support in the data is the geographical fragmentation of the market. Even closely located cities show significant differences in the level of competition. For example, while 23 percent of the stores in the city of New Delhi report facing significant competition, only 15 percent do so in the neighboring city of Noida.

Household Shopping Time Opportunity Cost Matters for Competition

Households with more nonworkers are likely to have more time to spend shopping for best prices and deals. Hence, the number of nonworkers per household in the city is a reasonable proxy for the shopping time opportunity cost (henceforth, time cost) of households. For the cities in our

Figure 1 Percentage of Firms Facing Significant Competition



Source: Enterprise Surveys and Business Environment and Enterprise Performance Survey (BEEPS, 2005).

A move from the city with the least number of nonworkers (Noida) to the most (Patna) increases the proportion of stores facing significant competition by 32.1 percentage points.

sample, nonworkers varies between 2.0 (city of Noida) and 3.9 (city of Patna,) with a mean value of 2.85.²

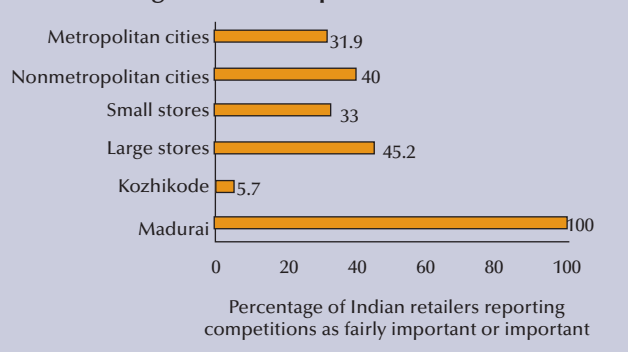
Based on the discussion above, the prediction is that competition is higher in cities with more nonworkers. Figure 3 confirms this prediction. It implies that a move from the city with the least number of nonworkers (Noida) to the most (Patna) increases the proportion of stores facing significant competition by 32.1 percentage points. This is a large effect, given that only 38.2 percent of the stores in the full sample face significant competition.

These findings are especially important for a country such as India, where nonworkers are rapidly declining, in part due to the ongoing economic boom. For example, between 1991 and 2001 and averaged over the 14 major states of the country, nonworkers per household declined by 7.2 percent (from 2.84 to 2.64). The decline was as sharp as 18.6 percent in the state of Haryana and over 12 percent in Punjab and Kerala. If this trend continues, competition in retailing could see a rapid decline in the near future (assuming there is no other compensating factor).

Do More Nonworkers Simply Reflect Less Development?

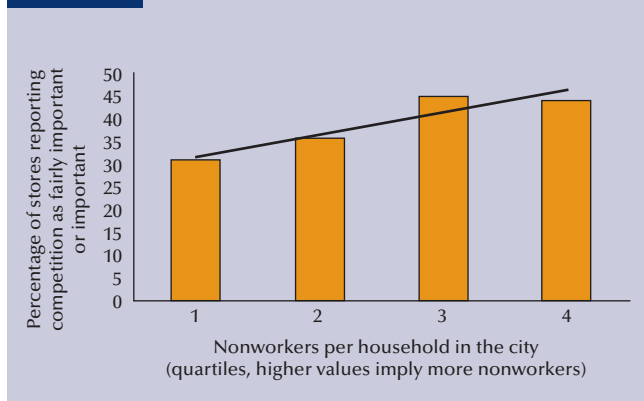
One could argue that nonworkers may be a proxy for some aspect of underdevelopment. This argument seems unlikely, since less development is normally associated with less competitive markets. Nevertheless, comparing how nonworkers and the number of children per household in the city affect the level of competition can be revealing. The first possibility is that both nonworkers and children are proxies

Figure 2 Percentage of Indian Retailers Facing Significant Competition



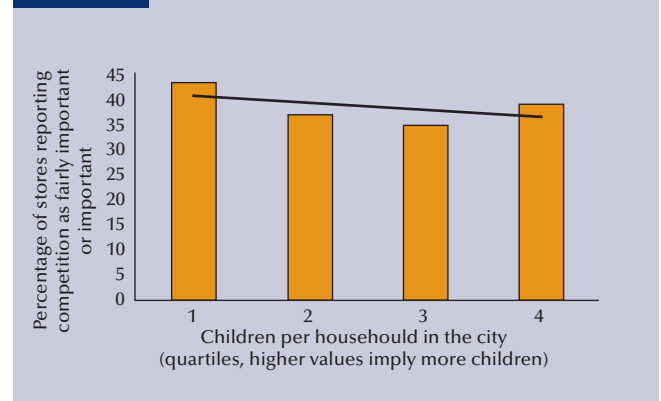
Source: Enterprise Surveys. Metropolitan cities include Bangalore, Chennai, Hyderabad, Kolkata, Mumbai, and New Delhi. Small stores include traditional stores selling grocery items. Large stores are large-size stores selling various consumer items and usually part of a larger shopping complex.

Figure 3 Competition and Nonworkers



Source: Enterprise Surveys and Census of India (1991). The horizontal axis shows the number of nonworkers per household in the city grouped by their quartile values. A higher quartile indicates more nonworkers.

Figure 4 Competition and Children



Source: Enterprise Surveys and Census of India (1991). The horizontal axis shows the number of children per household in the city grouped by their quartile values. A higher quartile indicates more children.

for a lower level of development, and therefore have similar effects on competition if a lower level of development is the critical variable affecting competition. The second possibility is that more children raise the cost of time spent shopping, lowering search intensity and therefore the level of competition. In this case, the predicted effect of nonworkers on competition is just the opposite. Figure 4 shows that the relationship between children and competition is negative compared to the positive relationship between nonworkers and competition (figure 3). Therefore, the nonworkers variable has an independent effect on competition and is unlikely to be merely a proxy for a lower level of development.

What Drives the Income-Competition Relationship?

One view in the literature is that poor households tend to search more intensively than the rich households because the marginal utility of a rupee saved (from more intensive search) is greater for the former. Consequently, competition in retailing should be higher in the relatively poorer cities.

The data show that competition is indeed greater in the poorer cities but not when we take into account the fact that poorer cities also have more nonworkers.³ This result casts doubt on the marginal utility explanation of the income-competition relationship. The possibility that competition is higher in the poorer cities because such cities have more nonworkers rather than higher utility from a rupee of savings cannot be ruled out. Distinguishing between these two cases is important for optimal remedial measures and requires a more detailed analysis.

Competition policies that are currently focused exclusively on firm behavior should pay more attention to consumer behavior and the factors that shape this behavior.

Competition Matters for Efficiency

The findings discussed above are important not just for understanding how markets work but also for the strong implications for the efficiency of retailing in India. Using the same data as above, Amin (2008c) shows that increasing competition from its lowest to the highest level

increases average productivity of labor by over 84 percent of its current level. This is a large effect given that the retail sector is one of the largest sectors in India accounting for close to 14 percent of the national GDP and over 10 percent of formal employment.

What Can Policy Makers Learn from These Results?

The main lesson of the findings above is that competition policies that are currently focused exclusively on firm behavior should pay more attention to consumer behavior and the factors that shape this behavior. Some attributes such as nonworkers may not be directly amenable to competition policies. However, even in such cases, indirect policy measures can help to alleviate declining competition. For example, cities with fewer nonworkers or cities where nonworkers are rapidly decreasing can be targeted with better e-commerce facilities, longer operating hours for retail stores, lower entry barriers for new businesses, and better information dissemination of product prices.

Notes

1. The retail sector in India provides 10 percent of all formal jobs and contributes 14 percent to the national GDP. These numbers are for formal (registered) retailing and based on data from

National Accounts Statistics, Government of India. Anecdotal evidence suggests that over 95 percent of retailing in the country occurs in the informal sector.

2. Data source for nonworkers is Census of India (1991). Adults are all individuals above 7 years of age; a nonworker is someone who has voluntarily opted out of the labor market (neither working nor searching for a job); and a household is a set of individuals living under a single roof and sharing a common kitchen.

3. The analysis uses per capita expenditure of households averaged at the city level as the closest available proxy for per capita incomes. Data source for per capita expenditure is National Sample Survey Organization (NSSO, 50th Round). Data used are for the urban part of the district. Districts are bigger than cities.

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