

FINAL

ORGANIZED RETAILING IN INDIA: ISSUES AND OUTLOOK

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August 18, 2011

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## ABSTRACT

Sales for organized (i.e. “large”) retailers grew four times faster than the sales for unorganized (i.e. “small”) retailers in India during 2005-09. However, unorganized retailers captured as much as 85% of the increase in retail sales over this time period. We estimate a time-series model that suggests that retail sales can continue to grow at the post-2005 rates in the short run. If so, organized retailers may increase their share of sales from 4.8% to 9.1%, and unorganized retailers may still capture three quarters of the total increase in retail sales, during 2009-16. We discuss the relative advantages for organized and unorganized retailers, and conclude that unorganized retailers are likely to coexist with organized retailers in the long run.

We also argue that “large” multinational retailers, in particular, whose entry is much feared, have the potential to benefit consumers, farmers, and manufacturers; and that they can make investments in, and improve the efficiency and performance of, the distribution system in India. Besides, we contend that they are unlikely to decimate the “small” retailers in India.

We examine widespread concerns about the potential misuse of economic power by large retailers. Several of these concerns are improbable. In any event, we propose that anti-competition outcomes can be minimized in several ways: by developing electronic markets that allow open access to buyers and sellers; by facilitating collective buying by cooperatives representing unorganized retailers; and by requiring the use of common, inter-operable standards in the design of information systems that support supply-chain activities.

## I. INTRODUCTION

Where India shops in the future is at the center of a vigorous and ongoing debate. On one side of the debate are the millions of street and pushcart vendors and small retail stores that have dominated Indian retailing for centuries. On the other side are large Indian and multinational corporations seeking new opportunities in retailing.

Small retailers claim that large firms, especially multinational retailers, will rob them of their livelihoods. Large businesses say that they can provide better and cheaper products and bring badly needed investment, efficiency, organization, and know-how to retailing.

Policymakers in India believe that they face a difficult dilemma. They do not want to harm small retailers (known in a similar and earlier Japanese debate as mom-and-pop stores), and are wary of making changes that might harm them and even throw millions of them out of work. But they also seek to promote greater efficiency and productivity via the growth of the large retailers, especially as retailing (as we show below) is an important and rapidly growing sector of the economy. We contend, however, that this dilemma is largely illusory. The expansion of the large retailers will not be at the expense of the small ones.

The modernization of Indian industry has traditionally been held up by yet another fear, which is now being extended also to the modernization of the retail sector: that the large retailers will lead to monopoly and hence should not be permitted. This fear is implausible. But we argue that anti-competition practices could be minimized in a variety of entry-facilitating ways rather than by shooting oneself in the foot by denying the benefits of a modern retail sector.

## II. SOME SALIENT FACTS

1. Restricted Foreign Entry: Retailing is presently one of the few sectors in which the Indian government limits entry by foreign firms. Some retailers have entered the Indian market under a provision allowing them up to 51% equity ownership in their Indian operations provided that they sell products under a single brand name. Examples of such firms are Louis Vuitton, Cartier, Armani, Reebok, Marks and Spencer, Debenhams, Next, Bodyshop, Oshkosh, and Carter's.

International firms that want to sell multiple brands cannot open retail stores but can own 100% equity in wholesale stores. Their customers must be institutional buyers who pay in cash and carry the merchandise from the store shelves. From 2000-2010, multinational companies like Wal-Mart and Metro invested about \$1.8 billion in such cash-and-carry stores that sell to retailers, cooperatives, hotels, restaurants, caterers, and various food and non-food traders (Department of Industrial Policy and Promotion 2010). They offer lower prices and wider assortments than traditional wholesalers and are open for longer hours. Still, most multinational firms see cash-and-carry wholesaling as a point of entry into India. Their aim is to obtain government approval for 100% foreign direct investment (FDI) in multi-brand retailing.

2. Defining “Small” and “Large” Retailers: Retailers, like manufacturers, are categorized in India as either formal or informal and as organized or unorganized.

- (i) The informal sector (generally synonymous with “small” retailers) consists of unincorporated businesses that are owned and run by individuals or households. These businesses are not legally distinct from their owners, who raise capital at their own risk and have unlimited personal liability for debts and obligations. Informal businesses typically employ family members and casual labor without formal contracts. The formal sector, on the other hand, includes corporations, limited companies, and businesses run by or on behalf of cooperative societies and trusts.
- (ii) The organized sector comprises incorporated businesses. Information about this sector is available from company budgets and reports. Importantly, partnerships, private and limited companies, and businesses run by cooperative societies and trusts are not considered to be organized businesses in India. Instead, they are classified as part of the unorganized sector, which also includes all businesses in the informal sector.

The precise relationship between these two sets of definitions of “small” and “large” retailers is set out in Figure 1. As seen there, organized retailing includes some large incorporated stores, and all chain stores, supermarkets, hypermarkets, department stores and store-in-stores. Unorganized retailing includes all informal retailers, including mom-and-pop stores (which are called “kirana” stores in India), vegetable and fruit stalls, paan shops (which sell beetle nut wrapped in a leaf, cigarettes and tobacco), pushcarts, street hawkers and street vendors. It also includes general merchants, chemists, appliance stores, and various specialty stores that are

part of the formal sector but that operate as partnerships, private and limited companies, cooperatives, or trusts.

3. Retail Employment: Retailing is the second largest employer in India after agriculture. According to the National Survey Sample Organization (64th Round), retail businesses employed 33.1 million people --- an estimated 7.2% of all workers in the country --- in 2007-08 (Department of Industrial Policy and Promotion 2010).

The composition of the retail sector employment is heavily biased in favor of informal retailing. Thus, informal retailing provides employment to the individuals and families who run the country's 12 million or so kirana stores and to the casual workers such as shop and delivery boys whom they employ. Informal retailing also provides employment to about 3.4 million street vendors and several million-pushcart vendors who sell products door to door and on the street.

In contrast, organized retailing, a category that includes supermarkets and hypermarkets, employs only about 500,000 people, almost all in urban areas. Supermarkets and business hubs have grown particularly in newly expanding “rural towns,” rather than in the traditional large cities like Mumbai and Kolkata (Reardon, Timmer and Minten 2010).

While the retail sector employment is sizeable, its growth is another matter. In fact, retail employment grew at a slower rate than overall employment in India from 2005-06. More recently, the two have grown at about the same rate because retail employment rates have risen and overall employment rates have fallen.

This acceleration of retail employment has been predominantly in the rural areas. Between 1999-2000 and 2004-05, employment in retailing grew by more than 30% in rural areas but by only less than 3% in urban areas.

4. Retail Sales: As for retail sales, the story is somewhat similar but not quite the same.

Retail sales, both at current and constant prices, have accelerated since 2002 (see Figure 2) though they have not grown at the same rate as GDP. As a result, the ratio of retail sales (which is a gross value) to GDP (which is value added) has fallen since mid-1990s (see Figure 3), much in line with the relative growth rates in retail and total employment.

As for the composition of the sales growth, we do not have systematic year-to-year data on the distribution of retail sales between the organized and unorganized retailers. However, recent data for 2005-2009 suggest that organized retailers had 3.3% share of retail sales in 2005, and 4.8% share of retail sales in 2009, implying that the growth was biased in favor of the organized sector: see Table 1.<sup>1</sup>

Table 1 shows the corresponding sales for organized and unorganized retailers in 2005 and 2009, and the average annual growth rates over the five-year period. The most striking conclusion from Table 1 is that organized retailing grew from 2005-09

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<sup>1</sup> Our major source for the information on market shares is the study by Malhotra, Agarwalla and Chaudhury (2010). The 4.8% share for organized retailing in 2009 that they report is consistent with the figure of about 5% share noted in the report by the Parliamentary Standing Committee on Commerce (2009). However, Joseph et. al. (2008) report that organized retailing had 3.3% share of retail sales in 2003-04, not in 2005. We use the later date reported by Malhotra, Agarwalla and Chaudhry (2010) because it is from a more recent study, and because it provides a more conservative assessment of the performance of unorganized retailing, which is the major issue of concern for policy makers.

at a four-fold faster rate than unorganized retailing, and gained 1.5% share of retail sales. On the other hand, unorganized retailing captured the vast bulk of the increase in retail sales over this time period because it was growing from such a large sales base.

If organized and unorganized retail sales were to continue to grow at the same rate as they did from 2005-09 (13.65% and 3.07%, respectively), then the share of organized retailing should increase from 4.8% in 2009 to 9.1% in 2016. But before alarmists conclude that this spells difficulties for the unorganized sector, remember that unorganized retailing would still account for about 76% of the \$138 billion increase in retail sales (at constant 2009 prices) from 2009-16.

Are these projections plausible, however? We assess this issue (see the Appendix) affirmatively by using a time-series model to predict total retail sales in 2016. This model predicts that retail sales (in constant 2009 prices) will be \$574.2 billion in 2016. The confidence interval associated with the prediction includes the \$610 billion in total retail sales if organized and unorganized retailing continue to growth at the observed post-2005 rates.

5. A Closer Look at Chain Stores: An important segment of the organized sector is the corporate retail chains. These retail chains sell either or both of food and non-food products.

Table 2(a) shows the performance of 33 important retail chains based on the analysis of Reardon, Timmer and Minten (2010). These retail chains have become a



substantial part of organized retailing, growing their combined share of organized retail sales from 8.2% in 2005 to 22.54% in 2009.

Table 2(b) shows that, during 2005-09, nominal sales increased by \$4.2 billion for these 33 chains, which amounted to 36.02% of the sales increase for all organized retailers, and 3.03% of the sales increase for all retailers. Overall, these retail chains have grown at a nominal annual rate of nearly 50% per year from 2001-09, and are likely to gain more share of organized retailing.<sup>2</sup> But so far, the growth in total retail sales has been large enough to have both accommodated these retailers, and allowed unorganized and other organized retailers to share about 97% of the sales increase from 2005-09.

The rapid growth rates for these retail chains are not surprising. Their sales are growing from a small sales base; as sales increase, the same dollar increase represents a smaller percentage growth in sales. Thus, if all \$60.26 billion of the increase in real retail sales from 2005-09 were attributed to unorganized retailing, this sector would still have grown at no more than 3.6% per year.

But we also observe that much of the sales growth for retail chains is a result of new store openings. For example, Reliance Industries launched its first retail store, Reliance Fresh, in November 2006. It had 590 stores across 13 states by March 2008, and close to 1,000 stores by February 2009 (Knowledge at Wharton 2009). Rapid sales growth is thus neither surprising nor a sign of commercial success. Instead, it is a measure of the investments these firms have made to establish market presence.

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<sup>2</sup> Reardon and Minten (2011) report similar growth rates for 26 major national and regional food chains.

Eventually, these firms will need to focus on returns on investments, which have so far been difficult for many retail chains.

It is notable that unsustainable growth was said to be a key reason for the demise of Subhiksa, which was once the second largest retail chain in India with about 1,600 discount food stores. Its annual sales grew by 139% in 2006 and 211% in 2007, before cash flow and profitability problems led to its closure in 2009. The issue afflicts all forms of organized retailing.

6. Food and Non-Food Retail Sales: Finally, some observations regarding the relative performance of food and non-food retail sales are in order. In 1994, 75.5% percent of all retail purchases were for food products; by 2009, this percentage had dropped to 65.6% (Figure 4). A time-series model (see the Appendix) predicts that if the trend continues, food sales will further decline to 60.4% of total retail sales in 2016. The model also predicts that retail sales may grow at about 5% per year for non-food products, but only at about 2% per year for food products, between 2009-16.<sup>3</sup>

Organized retailers should benefit from this trend because many non-food products require investments that are infeasible for most unorganized retailers.

Durable goods, in particular, have high growth rates and low levels of household penetration, and represent a significant, long-term, opportunity for organized retailers.

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<sup>3</sup> These average growth rates are estimated as follows : (1) Total retail sales were \$471.271 billion in 2009. Food sales were 65.6% (\$301.18 billion), and non-food sales were 34.4% (\$162.09 billion) of the total retail sales. (2) As described in the Appendix, total retail sales are projected to be \$574.2 billion in 2016. Food sales are projected to be 60.4% (\$346.82 billion) and non-food sales are projected to be 39.6% (\$227.38 billion) of the total retail sales.

On the other hand, unorganized retailers should also be able to provide necessary maintenance and repair services, and compete in second-hand markets for durable goods, which have long replacement cycles in India. But there are also other reasons why the unorganized retailers will continue to prosper: in many ways, discussed immediately below, they have competitive advantages vis-à-vis the organized retailers.

### III. RELATIVE ADVANTAGES OF LARGE AND SMALL RETAILERS

While our analysis of short-term trends strongly suggests that both the unorganized and organized retailers will grow significantly in the near future, the reasons why this is so is that each sector enjoys different relative advantages, generally speaking but particularly in the Indian context, so that the organized sector cannot overwhelm the unorganized sector in competition.

1. Advantages for Unorganized Retailers: Unorganized retailers in India typically have lower fixed and operating costs, and are more efficient in using resources, than organized retailers.

They convert their homes into shops, use them to store goods, have few overhead and utility costs, hire no managers or sales clerks, use unskilled labor, and have little loss due to stealing and pilferage. In contrast, organized retailers rent or buy stores, incur substantial fixed and overhead costs, pay salaries and benefits to employees, and cannot easily fire workers.

Kirana stores use most of the store space to stock products, and use one or two people to pick out and pack customer orders. On the other hand, chain stores need more space to display products and allow consumers to walk through aisles. Surveys show that self-serve layouts in Indian stores are often poorly managed. In some, products are placed on three or four shelves in each aisle; in others, shelves go to the ceiling, where customers cannot reach them. Fresh produce is often scattered on the floor and large boxes lie partially opened in the middle of aisles.

Moreover, small retailers can cater to a variety of different needs in ways that organized retailers cannot. Thus, most small stores will accept product returns, exchange damaged goods, and give credit to customers with whom they have longstanding relationships (Vishwanathan, Rosa and Ruth 2010, Martinez and Haddock 2007). They know the likes and dislikes of individual customers, recommend new products to them, and adjust prices for different customers. Organized retailers typically cannot, and indeed do not, provide such services.

Consumers also build routines around and derive pleasure from the many small aspects of shopping: the daily call of a vegetable seller, haggling over price at the weekly street bazaars, the nightly paan and cigarette, and the chai shop, are all part of the rhythm of Indian life. Such rhythms may change but not quickly.

Unorganized retailers benefit from the fact that most Indian consumers make small but frequent purchases. Over three-quarters of the Indian population still lives on less than \$2 per day. Prahalad (2005) observes that there are millions of consumers at the “bottom of the pyramid” in India who can afford to buy only the quantities they

need for their daily needs. This is why sachets of such products as shampoos, beauty creams, detergents, edible oils and spices are sold widely in India.

An added reason for small purchases is that fewer than 20% of Indian homes have refrigerators and can buy no more perishable goods than can be consumed in a day or two.<sup>4</sup>

Moreover, while most Indian homes store supplies of wheat, rice and lentils, they keep only small quantities of non-perishable goods because they have small homes with limited storage space.

India's high population density (like Japan's where the expansion of the large retail stores, after the abolition of restrictions on their expansion under US pressure, did not lead to the feared decimation of the mom-and-pop stores) is an added factor that benefits small retailers. They are able to offer, at minuscule or no cost, services like phone orders and free home delivery to nearby customers. Moreover, because there are large numbers of consumers in a neighborhood, unorganized retailers can survive by offering a different mix of merchandise, or by catering to a different market segment, than organized retail stores. There is typically a mix of more and less affluent customers in most Indian neighborhoods. Some of them cannot (or choose not to) travel to a more distant chain store in the traffic; others buy from both chain stores and small local stores; and still others prefer buying from a store owner they trust or from a vendor who comes to their doorstep.

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<sup>4</sup> Data obtained from Euromonitor (2011) show that refrigerator ownership increases with income and over time. However, even among households in the highest income decile, refrigerator penetration was only 55.5% in 2009.

2. Advantages for Organized Retailers: Proponents of organized retailing often note that these firms can offer wider product assortments and lower prices to consumers than unorganized retailers can.

But among the important benefits obtained by consumers is also the fact that these firms are likely to sell safer products. Food-borne illnesses and contamination are long-standing issues in India. Counterfeit drugs are alleged to account for 20-25 per cent of total pharmaceutical sales in the country (Express India 2009). Multinational retailers have the experience of sourcing products from low-cost countries that meet safety and quality norms in developed countries; and all organized retailers have the incentive to implement product-safety standards because they are more likely to face scrutiny and liability than unorganized retailers.

A significant advantage for organized retailers relates also to prices. The organized retailing corporations have the ability to seek out the lowest-costs suppliers around the world. This ability spurs opposition to multinational retailers, and feeds suspicions that firms like Wal-Mart, which have the reputation of destroying mom-and-pop stores in countries like the United States, will do the same in India (see, for example, Swamy 2011). But India itself is one of the low-cost countries from which multinational firms buy products. Although mom-and-pop stores outside India have no easy access to these low-cost producers, unorganized retailers can buy from the same (or similar) sources, possibly through representative cooperatives like Bhartiya Udyog Vyapar Mandal. As long as there is competition in supplier markets, efficiency and scale benefits obtained by organized retailers may be shared with unorganized retailers.

Many organized retailers, especially large multinational firms, also have deep knowledge and the ability to operate lean distribution systems (see, e.g., Basker 2007). The specifics of the Indian situation promise significant gains, in particular to the farmers, from such lean distribution systems. Thus, the organized retailers can cut distribution costs by working directly with farmers, and simultaneously improve their incomes. These farmers typically earn a third (instead of the international norm of two-thirds) of the final price of their produce. Indian farmers earn lower prices partly because of greater waste and inefficiency in the traditional distribution system; and partly because farmers have been at the mercy of wholesalers who are allowed to operate as monopolists by the State Agricultural Produce and Market Committee (APMC) Acts (Panagariya 2008).

There is evidence now that both domestic and multinational retailers in the organized sector have begun working with farmers and other rural workers to improve their growing and harvesting practices (Bajaj 2010). These retailers now buy directly from farmers and handle all aspects of distribution, including food processing, transportation, warehousing, storage, and retailing. Multinational firms like Wal-Mart are keen to invest in farm-to-consumer delivery systems; and domestic organized retailers, like Reliance Industries, are already investing in direct farm-to-store distribution (Edge Singapore 2009).

Organized retailers can also achieve lower private and social costs by building cold storage, warehouses and processing facilities, which are badly needed in India. The state of essential cold-storage facilities in particular is abysmal. A report by the Department of Industrial Policy and Promotion (2010) notes that that 25-30% of fruits

and vegetables produced in the country spoil each year because of the lack of cold-storage facilities. Similarly, the lack of adequate warehousing has resulted in spoilage of 5-7% of food grains. Millions of tons of wheat and rice are stored under tarpaulin or left out to rot in the monsoon (Halarnkar and Randhawa 2010).<sup>5</sup>

Organized retailers can also have lower logistics (i.e., transportation, inventory, warehousing, packing and handling) costs, which are estimated to be around 14% of GDP in India whereas the comparable figure is 8% of GDP in United States (Technopak Retail Outlook 2008). Manoj (2008) observes that moving a cargo container over a distance of one kilometer costs 50% more in India than in the United States (even without adjusting for the lower absolute prices in India). Part of the reason is that road transportation, which accounts for the movement of about 77% of goods, is largely unorganized and fragmented, and has few economies of scale or scope.<sup>6</sup>

Systemwide improvements in logistics and supply-chain operations may be achieved by allowing multinational retailers, who have built substantial expertise in the area, into India.

#### IV. LONG-TERM PROSPECTS FOR RETAILERS

With real retail sales likely to increase by about a trillion dollars over the next quarter century in India, it is certain that the advantages we have discussed for both unorganized

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<sup>5</sup> Basu (2010) observes that India needs a redesign of the mechanisms by which the country acquires and releases food to the market.

<sup>6</sup> Sriram et al. (2006) report that small businessmen do the vast bulk of transportation, and that operators who have twenty or more trucks are responsible for only 6% of the traffic.



and organized retail sectors will enable both the sectors to grow; and that the fear, voiced for example by Swamy (2011) that the unorganized retail sector will shrink with the expansion of the organized sector is not justified.

The likely scenario of the growth of the two sectors should reflect certain trends in Indian urbanization that favor the organized sector without entailing the decline of the unorganized sector. India currently has the second-largest number of urban dwellers in the world. As in many other developing countries, urbanization has increased in India, from 16% in 1950 (Lucas 2004) to just under 30% in 2009 (UN World Development Prospects 2010).<sup>7</sup>

A study by McKinsey Global Institute (2010) predicts that India's urban population will increase by 250 million from 2008-30, by which time 40% of its people will live in towns and cities. The study predicts that the number of cities will increase from 42 in 2010 to 68 in 2030, and that six cities will have populations of 10 million or more. Mumbai's population is expected to exceed 33 million, Delhi's population to exceed 25 million, and Kolkata's population to exceed 22 million. The McKinsey study estimates that the share of GDP for urban areas will increase from 58% in 2008 to 69% in 2030, creating about 120 million new jobs.<sup>8</sup>

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<sup>7</sup> According to census reports, the number of people living in Indian cities grew from 290 million in 2001 to 380 million in 2008, at a growth rate that was 58% higher than the country's population growth rate as a whole. About 80% of the urban growth resulted from the expansion of city boundaries and the reclassification of rural areas (the rest was due to migration).

<sup>8</sup> Their analysis assumes annual GDP growth of 7.4% from 2008-30, with urban GDP growing 8.3% per year and rural GDP growing 5.9% per year. The study also predicts that the number of urban households earning less than Rs. 90,000 per year will fall below 20%, and the number of people earning between Rs. 200,000 and Rs. 1 million per year will increase fourfold from 32 million to 147 million. In contrast, 75% of urban

The forecast increase in urban markets is likely to favor, at the margin, the organized retailers who are generally seen to focus on urban markets currently. Towns and cities should be able however to accommodate both organized and unorganized retailers (since, as we have argued, both sectors have different advantages).

The likely scenario therefore is that of a growing urban-based organized retailing sector that also contributes to the rural economy by investing in rural food-processing facilities, warehouses, and transportation and shipment hubs. Some of these investments are likely to be made in rural areas close to towns and cities (e.g., warehousing), others closer to farmers and suppliers (e.g., food processing, storage), and still others (e.g., trans-shipment points, distribution hubs) at locations that are suitable from a logistics perspective.

Policies to restrict and even prevent the growth of the organized sector, based on the unjustified fear that it would decimate the unorganized retailers and even harm the rural communities in consequence, would therefore be harmful. The organized sector offers prospects of better-paid jobs which also permit the accumulation of skills and offers the workers the opportunity to rise within an organization. Equally, it is necessary that there be substantial improvements in the inefficient and wasteful distribution system in the country.

## V. YET OTHER CONCERNS

With protectionism, if one set of critiques is refuted, another crops up. The same is true with the opposition to large retailers. The fear that their growth will displace and

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populations today are in the lowest income segment with average earnings of about Rs. 80 (about \$1.80) per day.

eliminate the small retailers can be refuted, as we have shown. But then the opponents of the large retailers claim implausibly that the large retailers will resort to predatory pricing and this will force out the small retailers. Or some NGOs, reflecting uncritically some Western NGOs' opposition to Wal-Mart, embrace this position to oppose all large retailers.

On the first issue, we may cite a report by the Parliamentary Standing Committee on Commerce (2009) which has expressed concern that organized retailers might use predatory pricing, selling below cost to force out small retailers, and also Kalhan and Franz (2009), who have expressed similar apprehensions about the potential use of predatory pricing by organized retailers to enter new markets.

Predatory pricing can be a concern in markets with high barriers to entry, so that a firm can raise the lowered prices and earn excess profits once its competitors have exited the market. However, unorganized retailers have low entry barriers, which is the reason they are widespread in India. Pricing below cost may succeed temporarily in driving out unorganized retailers from a market, but once prices return to normal levels, the same or other unorganized retailers can reappear. Thus, it is difficult, if not impossible, to point to sustainable benefits that can be obtained by an organized retailer using predatory pricing.

A related argument is that organized retailers might collude to carve up parts of a larger market into sub-markets, in which they can operate as virtual monopolies (Joseph et al. 2008). This, too, is improbable in the absence of high entry barriers. If there are monopoly profits to be made, there will surely be an incentive for other, unorganized and organized, retailers to enter the market.

Kalhan and Franz (2009) and Singh (2010) have suggested that large retailers can exercise excessive monopsonistic power by extracting better prices from suppliers. But is this credible when there are several large players in the market and farmers cannot be effectively prevented from shifting among them?

Besides, monopsonistic power can be checked by governmental policies to strengthen the functioning of competitive markets. In fact, policies have tended to do the opposite (just as local monopolies were created earlier in the pre-1991 period by governmental licensing restrictions on entry by domestic and foreign competitors). As noted in a report by the Inter-Ministerial Group (2011), the State Agricultural Produce and Market Committee (APMC) Acts has had the unintended consequence of allowing buyers to set up cartels.

An important alternative policy option that could accompany the freer entry of large retailers in India, and reduce the low probability of their turning into monopsonies still further, would be to facilitate cooperatives that can compete effectively by equally obtaining price reductions. Bhartiya Udyog Vyapar Mandal, the largest national-level association of kirana stores, is leading one such effort. They negotiate better prices from manufacturers, bypass middlemen, and obtain financing at terms that are otherwise available only to large organizations (Dave 2008).

Is there any likelihood that, like Standard Oil in 19<sup>th</sup> century America, the large retailers could acquire monopolistic control over distribution networks to lock our rival firms? However unlikely this scenario is, it makes sense to require the use of common, inter-operable standards, creating an effective electronic market that can be accessed at low cost by multiple suppliers and buyers.

It is also important that, as with manufacturing, the Monopolies Commission should be able to entertain complaints and cases against the exercise of monopoly and monopsony power by firms in the retail sector as well.

Finally, while the concern about large retailers exercising monopoly and monopsony power is implausible and, in any case, can be effectively laid to rest by the suggested policy actions, the NGO opposition to the large retail stores is impossible to take seriously. True, the opposition to Wal-Mart in the US comes from some NGOs. But while their opposition is to the fact that Wal-Mart brings in cheap imports, Indian NGOs should support Wal-Mart because it would enable India to export. Unfortunately, much of such agitation proceeds on the principle of “monkey see, monkey do”, and works to the disadvantage of India’s interests. It should be rejected firmly and summarily.

## APPENDIX

### *A1. Autoregressive Model for Ratio of Retail Sales to GDP*

Let  $t = 0, \dots, 14$ , corresponds to the year 1994,  $\dots$ , 2009. Let  $s_t$  denote the retail sales in year  $t$ ; and let  $g_t$  denote the GDP of India in year  $t$ . Let

$$x_t = \ln\left(\frac{s_t}{g_t - s_t}\right),$$

where  $g_t - s_t$  is the difference between GDP and retail sales in year  $t$ . Note that we can interpret  $x_t$  as the logit-transformed value of the ratio of retail sales to GDP:

$$x_t = \ln\left(\frac{s_t}{g_t - s_t}\right) = \ln\left(\frac{s_t/g_t}{1 - (s_t/g_t)}\right).$$

As Figure 3 shows, the value of  $s_t/g_t$  (and thus  $x_t$ ) decreased from 1994-2009. This is consistent with the observation that consumption (of which retail purchases are a part) has grown at a slower rate than GDP in India.

We consider the first-order autoregressive model:

$$x_t = \alpha_0 + \alpha_1 x_{t-1} + \alpha_2 t + \varepsilon_t,$$

where  $|\alpha_1| < 1$ . The  $x_{t-1}$  term on the right hand side of the above equation captures the serial dependence in the values of  $x_t$ . As the ratio of retail sales to GDP decreases over time, we expect  $\alpha_2 < 0$ . The value of Durbin's  $t$ -statistic is 2.544 ( $p=0.012$ ), which suggests the presence of first-order autocorrelation in the data.

We use a maximum-likelihood procedure to estimate the model parameters. The estimated model is:

$$\widehat{x}_t = 0.7412x_{t-1} - 0.0425t$$

standard error    (0.1906)            (0.00349)

The intercept term is not statistically significant ( $p > 0.10$ ) and is therefore not included in the above equation. The coefficients  $\alpha_1$  and  $\alpha_2$  are both statistically significant ( $p < 0.05$ ). The estimated model explains almost all of the variance in the data (Total  $R^2 = 0.991$ ).

The model predicts  $\widehat{x}_t = -0.940$  in 2016; the corresponding 95% confidence interval for  $x_t$  is  $(-1.1413, -0.7384)$ . The predicted value of  $s_t/g_t$  in 2016 is

$$\frac{e^{\widehat{x}_t}}{1 + e^{\widehat{x}_t}} = \frac{e^{-0.940}}{1 + e^{-0.940}} = 0.281.$$

That is, the model predicts that retail sales will decline to 28.1% of GDP in 2016. The corresponding 95% confidence interval for  $s_t/g_t$  is  $(0.2421, 0.3234)$ . Figure A1 shows the predicted values and 95% confidence intervals for  $s_t/g_t$  until 2016.

To estimate the value of predicted retail sales, we use GDP projections from the International Monetary Fund, which forecasts real GDP in India will grow at an average, annual rate of 6.67% until 2016. This implies that the GDP of India (in constant 2009 prices) will be \$2,043.92 billion in 2016. Thus, the model predicts that retail sales in constant 2009 prices will be  $\widehat{s}_t = \$574.2$  billion ( $0.281 \times 2043.92$  billion) in 2016. The corresponding 95% confidence range, in billions of dollars, is  $(\$494.78, \$660.92)$ .

## A2. Autoregressive Model for Ratio of Retail Food Sales to Total Retail Sales

As in the preceding analysis, let  $t = 0, \dots, 14$ , corresponds to the year 1994, ..., 2009. Let  $s_t$  denote the retail sales in year  $t$ ; and let  $f_t$  denote the retail food sales in year  $t$ . Let

$$y_t = \ln\left(\frac{f_t}{s_t - f_t}\right),$$

where  $s_t - f_t$  is the difference between GDP and retail sales in year  $t$ . We can interpret  $y_t$  as the logit-transformed value of the ratio of retail sales to GDP:

$$y_t = \ln\left(\frac{f_t}{s_t - f_t}\right) = \ln\left(\frac{f_t/s_t}{1 - (f_t/s_t)}\right).$$

Figure A2 shows that the value of  $f_t/s_t$  (and thus  $y_t$ ) decreased from 1994-2009.

We consider the first-order autoregressive model:

$$y_t = \beta_0 + \beta_1 y_{t-1} + \beta_2 t + \varepsilon_t,$$

where  $|\beta_1| < 1$ . The  $y_{t-1}$  term on the right hand side of the above equation captures the serial dependence in the values of  $y_t$ . As the ratio of retail food sales to total retail sales (Figure 4), decreases over time, we expect  $\beta_2 < 0$ . The value of Durbin's  $t$ -statistic is 2.544 ( $p=0.012$ ), which suggests the presence of first-order autocorrelation in the data.

We use a maximum-likelihood procedure to estimate the model parameters. The estimated model is:

$$\begin{array}{rcccl} \widehat{y}_t & = & 1.1126 & + & 0.8257y_{t-1} & - & 0.0314t \\ \text{standard error} & & (0.0166) & & (0.1431) & & (0.00161) \end{array}$$

Each of the coefficients is statistically significant ( $p < 0.0001$ ). The estimated model explains most of the variance in the data (Total  $R^2=0.996$ ).



Figure A2 shows the predicted values and 95% confidence intervals for  $y_t$  until 2016. The predicted value of  $f_t/s_t$  in 2016 is

$$\frac{e^{\hat{y}_t}}{1 + e^{\hat{y}_t}} = 0.604.$$

The corresponding 95% confidence interval is 0.588-0.620.

Food sales in 2016 can thus be estimated to be  $0.604 \times \$574.2$  billion = \$346.82 billion, where  $\hat{s}_t = \$574.2$  billion is the value of predicted retail sales (in constant 2009 prices) obtained in Section A1.

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Table 1: Share of Sales, Dollar sales and Average Growth Rates for Organized and Unorganized Retailers in India: 2005-2009

Share of retail sales	Year	
	2005	2009
Organized retailers	3.30	4.80
Unorganized retailers	96.70	95.20

Data source: Malhotra, Agarwalla and Chaudhry (2010).

**Retail sales in Billions of Dollars (US)**

Year	Nominal sales		Sales in constant (2009) prices	
	2005	2009	2005	2009
Organized retailing	10.97	22.62	13.56	22.62
Unorganized retailing	321.59	448.65	397.45	448.65
Total retail sales	332.56	471.27	411.01	471.27

Data sources: Malhotra, Agarwalla and Chaudhry (2010) and Economist Intelligence Unit (2011)/Planet Retail

**Average annual growth rate:**

2005-2009	Nominal sales	Sales in constant (2009) prices
Organized retailing	19.82%	13.65%
Unorganized retailing	8.68%	3.07%
All retailing	9.10%	3.50%

Data sources: Malhotra, Agarwalla and Chaudhry (2010) and Economist Intelligence Unit (2011)/Planet Retail

Table 2: Performance of Modern Retail Chains in India

(a) Performance of 33 modern retail

	Year		
	2001	2005	2009
Sales for 33 retail chains*	0.20	0.90	5.10
Organized retail sales*		10.97	22.63
Total retail sales*		332.60	471.30
Percent share of organized retail sales		8.20	22.54
Percent share of total retail sales		0.27	1.08

\*Nominal sales in billions of US dollars.

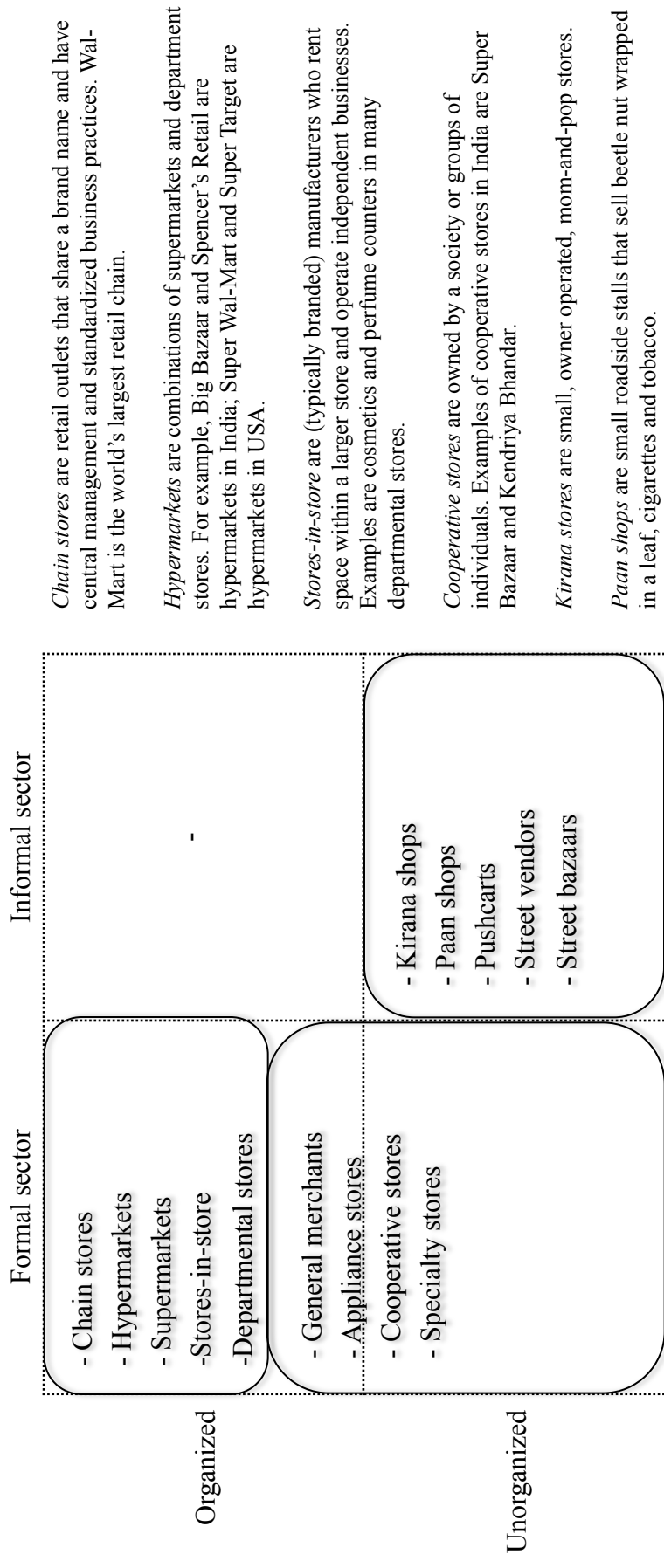
(b) 2005-2009 increase in nominal retail sales

Δ sales for 33 retail chains	\$4.20 billion
Δ sales for organized retailing	\$11.66 billion
Δ sales for all retailing	\$138.70 billion
Δ sales for 33 retail chains/Δ sales for organized retailing**	0.3602
Δ sales for 33 retail chains/Δ sales for all retailing**	0.0303

\*\* Proportions; multiply by 100 to obtain percentages.

Data sources: Sales data for the 33 retail chains were obtained from Reardon, Timmer and Minten (2010). Data on organized and total retail sales were obtained from Economist Intelligence Unit (2011)/Planet Retail.

Figure 1: Classification of Retailers in India



*Chain stores* are retail outlets that share a brand name and have central management and standardized business practices. Wal-Mart is the world's largest retail chain.

*Hypermarkets* are combinations of supermarkets and department stores. For example, Big Bazaar and Spencer's Retail are hypermarkets in India; Super Wal-Mart and Super Target are hypermarkets in USA.

*Stores-in-store* are (typically branded) manufacturers who rent space within a larger store and operate independent businesses. Examples are cosmetics and perfume counters in many departmental stores.

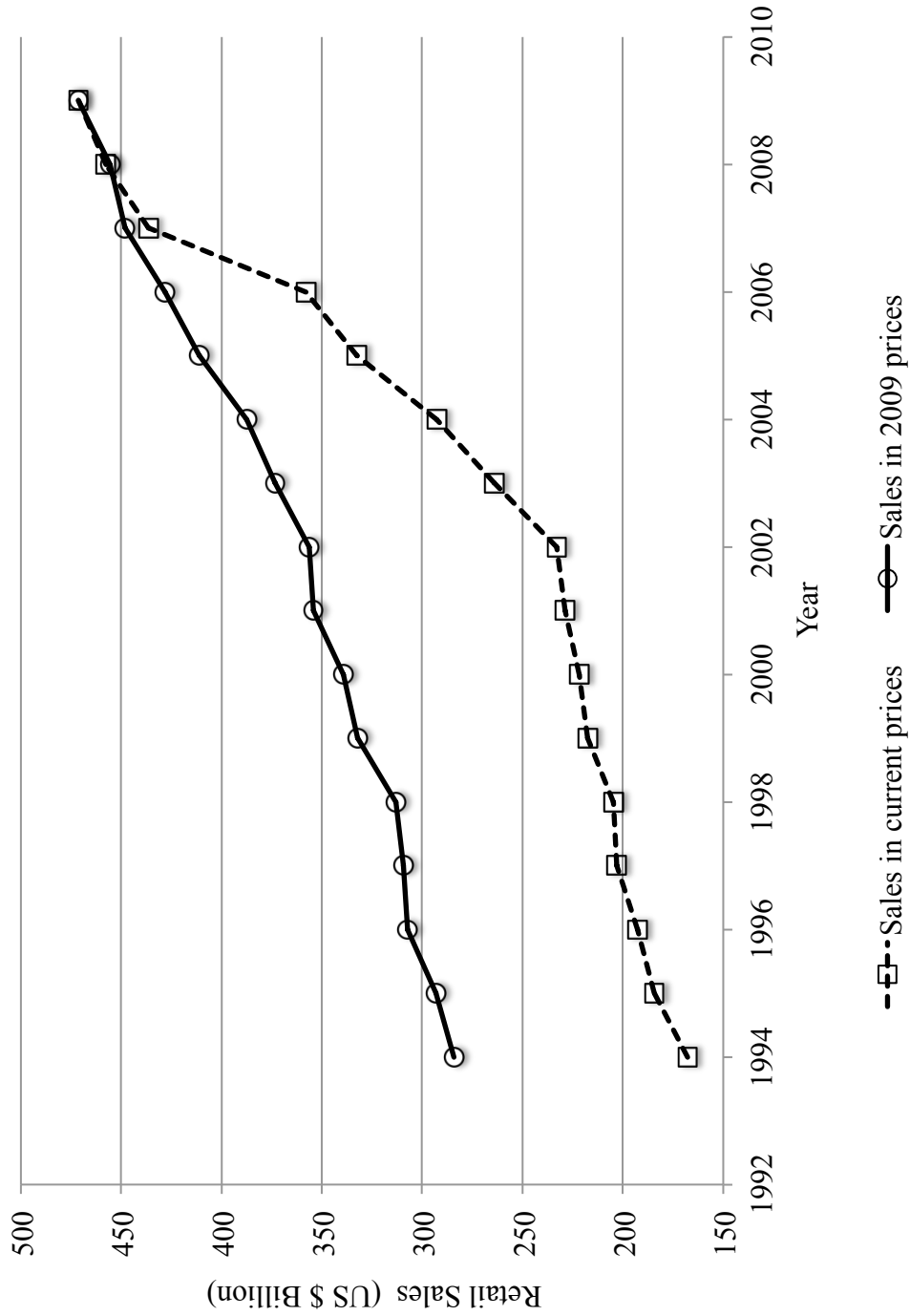
*Cooperative stores* are owned by a society or groups of individuals. Examples of cooperative stores in India are Super Bazaar and Kendriya Bhandar.

*Kirana stores* are small, owner operated, mom-and-pop stores.

*Paan shops* are small roadside stalls that sell beetle nut wrapped in a leaf, cigarettes and tobacco.

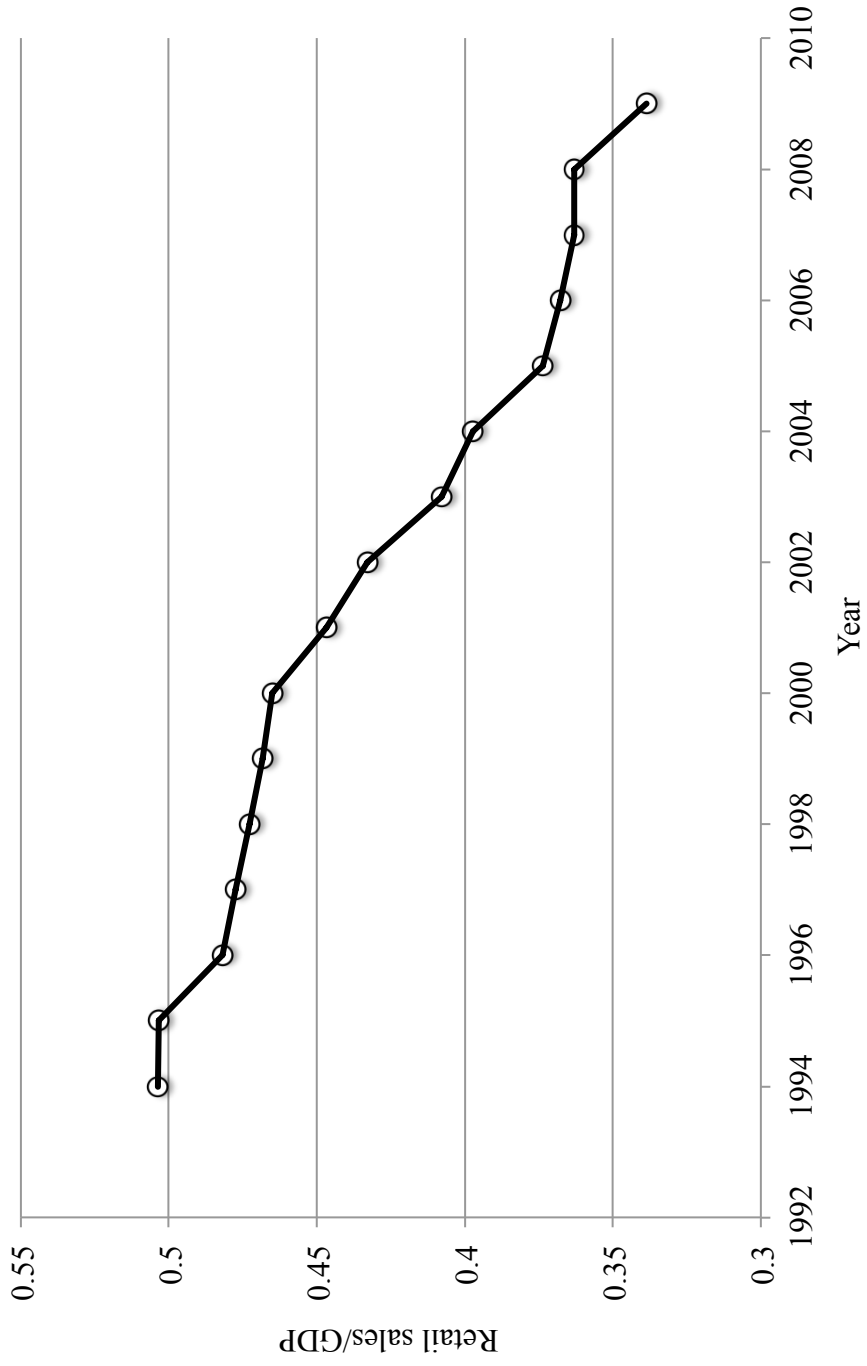


Figure 2: Retail Sales in India at Current and Constant Prices: 1994-2009



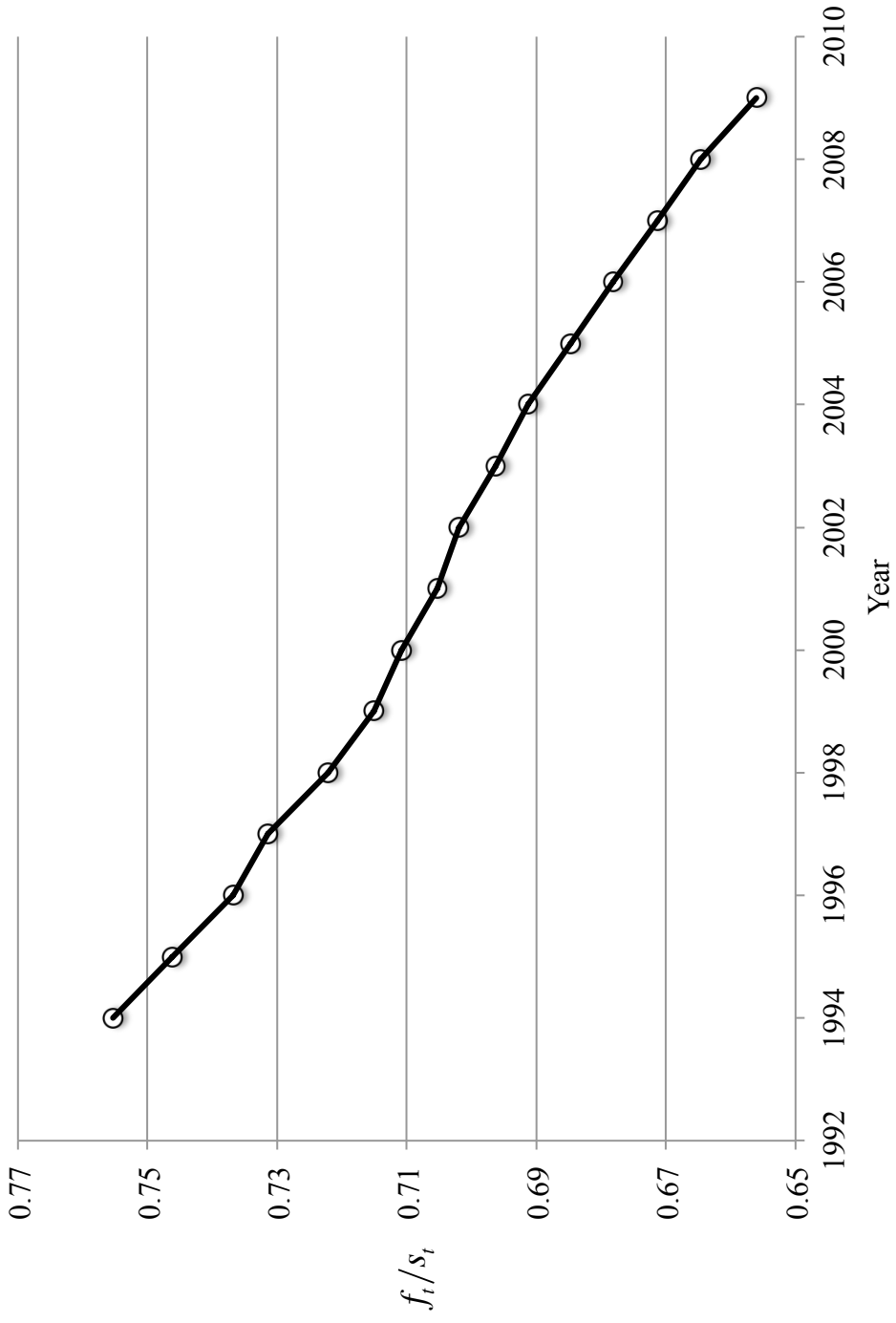
Data source: Economist Intelligence Unit (2011)/Planet Retail

Figure 3: Ratio of Retail Sales to GDP in India: 1994-2009



Data source: Euromonitor/Planet Retail (2011)

Figure 4: Retail Food Sales ( $f_t$ ) as a Fraction of Total Retail Sales ( $s_t$ ) in India: 1994-2009



Data source: Economist Intelligence Unit (2011)/Planet Retail

Figure A1: Fit and Predictions from Autoregressive Model of Retail Sales ( $s_t$ ) as a Fraction of GDP ( $g_t$ ) in India: 1994-2016

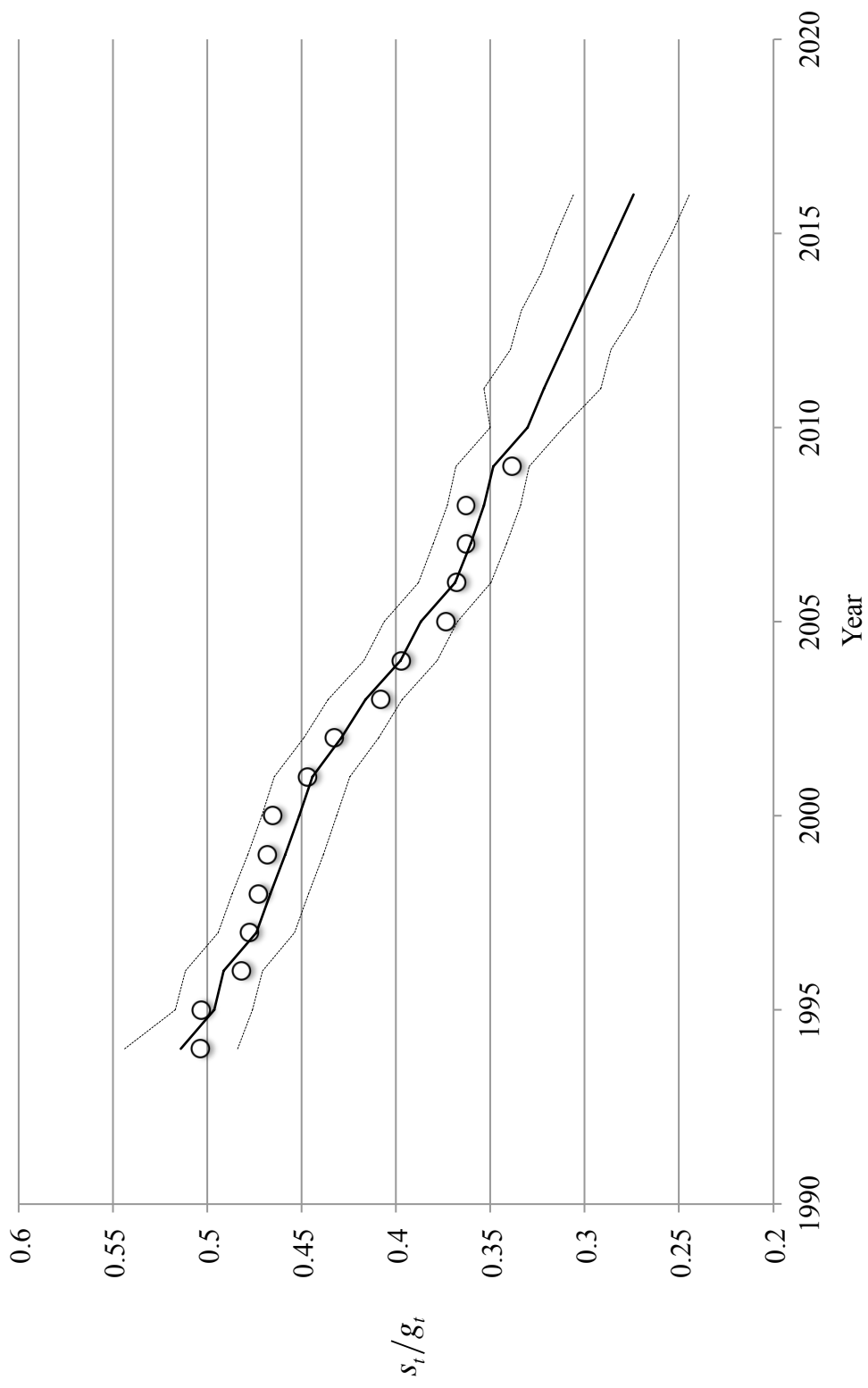
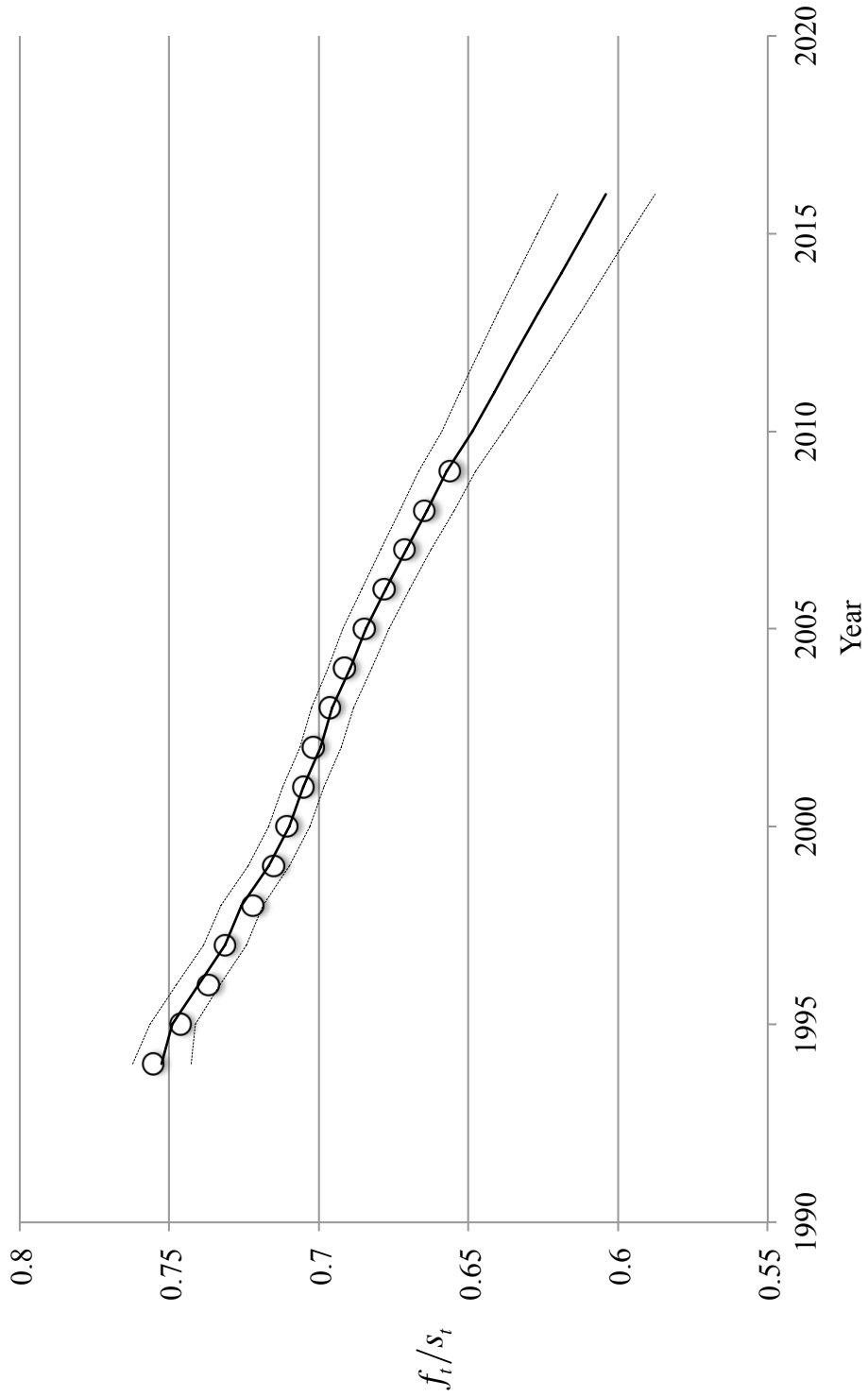


Figure A2: Fit and Predictions from Autoregressive Model of Retail Food Sales ( $f_t$ ) as a Fraction of Total Retail Sales ( $s_t$ ) in India: 1994-2016



Data source: Economist Intelligence Unit (2011)/Planet Retail.