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MILK PRICE REGISTRATION AND REGULATIONS IN VIETNAM: WILL IT LOWER MILK PRICES?

Introduction

On August 12, 2010 the Ministry of Finance issued Circular 122/2010/TT-BTC on the registration and regulation of prices. The new regulations, which come into effect on October 1, 2010, cover a range of key consumer and producer goods, including milk and milk powder.¹ It empowers the Minister of Finance and Chairmen of Provincial People's Committees to "apply price stabilization measures" when domestic prices rise faster (or fall slower) than input costs.² Price stabilization measures described in the circular include setting maximum and minimum prices or price ranges for the goods on the controlled list. Producers, distributors and retailers of these goods must register prices when the goods are first put on the market and whenever prices are changed.³ Companies found to be in violation of the regulations are subject to warning, fines, revocation of business licenses and other administrative penalties.

Price control regulations have until now applied only to enterprises in which the state controls a majority stake. The decision to extend these regulations to private and foreign enterprises reflects official concern over the acceleration of price inflation in the second half of 2009. Although inflationary pressure has moderated since then, the government is keen to avoid a repeat of the sharp price rises and resulting macroeconomic instability that the country experienced in 2008.

Production, wholesale and retail enterprises will be required to provide information on production costs to the Ministry of Finance. Advertising and promotion costs are not to exceed ten

¹ The new circular amends and supplements a previous circular (104/2008/TT-BTC dated November 13, 2008), which contained implementing regulations for Government Decree 170/2003/ND-CP dated December 25, 2003. A draft of the circular was first released to the public in December 24, 2009. The full text of the circular is available in Vietnamese on the Ministry of Finance website (http://vbpq.mof.gov.vn/download.aspx?Docmain_ID=31730). The circular covers the following goods as set out in Decree 75/2008/ND-CP and Decision 116/2009/QD-Ttg: petrol and oil; cement; construction steel; liquefied gas; chemical fertilizers; pesticides; veterinary medicines; salt; milk; sugar (white and refined); paddy and rice; pharmaceuticals on the Ministry of Health's list of major medicines used at healthcare facilities; rail tickets; animal feed (later specified to include concentrated feed for pigs and chickens and mixed feed pellets for catfish and prawns). Milk formula powder is explicitly added to the list of products for price registration in the most recent circular (section VI). Provincial People's Committees may add other commodities to this list with the approval of the Ministry of Finance.

² Section 2.1.a of the new circular stipulates that "price increases in excess of increases in imported 'input' costs" or higher than the cost of goods imported by organizations, producing individuals or companies based on calculations of price formation (production costs, circulation, profits, etc.) not in accordance with policies, economic and technical norms and price regulations issued by the competent authorities." The circular does not maintain specific price bands for goods as set out in Circular 104/2008/TT-BTC. For example, under the latter circular retail milk prices could not rise "above the market price" by 20 percent or more over a period of 15 consecutive days.

 $^{^{3}}$ As set out in Article VII of the circular and using the forms provided as appendices to the circular.

This case study was prepared by Jonathan Pincus, lecturer at Fulbright Economics Teaching Program. Fulbright Economics Teaching Program's cases are intended to serve as the basis for class discussion, and not to make policy recommendations.

percent of total costs as set out in existing regulations. It is not clear from the regulations what the government considers to be a "reasonable" return on investment. Once prices are registered, the authorities will review any price changes to determine whether they are justified on the basis of "natural" factors (in other words, input cost increases other than advertising and promotion that do not affect the rate of profit). The ministry expects that publication of registered prices will provide consumers with the information they need to avoid overpaying for the products on the control list. However, it is not clear how the government plans to publish this price information to the public, or whether the government has the capacity to inform the public of locally specific prices of hundreds of distinct products in a timely and accurate manner.

A major political motivation for the new policy is the government's desire to respond to public concerns over price rises for essential goods like rice, fuel, construction material, pharmaceuticals, fertilizers and animal feed. No prices are more politically sensitive than prices of infant and child milk powder. Over the past three years Vietnamese newspapers have run numerous stories about the rising price of baby formula, and over time the tone of these articles has become more strident. For example, in April of 2009 a number of stories appeared claiming that Vietnam's milk prices "are the highest in the world," a charge that was repeated on the Communist Party of Vietnam website and seemed to have taken on a life of its own.⁴ The focus on milk prices can be partly explained by the surge in international milk powder prices in 2007 and 2008, which passed through directly to domestic prices given Vietnam's dependence on imports. Yet when world prices retreated in 2008 and 2009, milk powder prices remained high, fueling suspicion that consumers were being over-charged for milk products.⁵ More recently, the press has reported sharp rises in milk prices before October 1 when the new regulations come into effect.⁶

This case study raises three interesting and important public policy issues. First, are Vietnam's milk prices really the highest in the world? If yes, why? If not, why do so many people think they are?

Second, is the domestic market for milk products competitive or characterized by monopoly and price fixing? If it is competitive, why do people feel that milk prices are too high?

Third, will the government's price registration and control policy lower milk prices? If not, what are some alternative policies that the government could consider to help achieve the goal of lower and more stable milk product prices for consumers?

This case study specifically addresses the question of milk product prices. While some of the conclusions apply to other commodities on the government's controlled price list, it should also be recognized that the markets for these various commodities differ in important ways, and that therefore price policies would likely differ from commodity to commodity. For example, rice is a

⁴ Nguyễn Nga (2009) "Giá sữa tại Việt Nam cao nhất thế giới," *Vietnamnet*, April 24, http://vietnamnet.vn/kinhte/2009/04/843894/; see also Hà Nhân (2009) "Giá sữa Việt Nam cao nhất thế giới!" *Tiến phong*, April 28, http://www.tienphong.vn/Kinh-Te/159366/Gia-sua-Viet-Nam-cao-nhat-the-gioi-.html.

⁵ "Những 'mánh khoé' giữ giá sữa cao ngất ngường" (2010) *Vietnamnet,* May 26, http://vietnamnet.vn/psks/201005/Nhung-manh-khoe-giu-gia-sua-cao-ngat-nguong-912382/.

^{6 &}quot;Sữa ngoại lại tăng giá chạy trước Thông tư" (2010) Vietnamnet, September 3, http://www.vietnamnet.vn/kinhte/201009/Suangoai-lai-tang-gia-chay-truoc-Thong-tu-933424/.

domestically produced good that enjoys a large export market. Policies to reduce domestic rice prices would therefore differ from those needed to reduce the price of a commodity like milk that is mostly imported. Reducing the market price of sugar, which is produced domestically under trade protection, would require yet another set of policy reforms.

Are Milk Prices High in Vietnam?

April 2009 saw a spate of articles in the Vietnamese press asserting that domestic milk prices were "the highest in the world." What was the evidence provided in support of this claim? Internationally comparable data on retail prices of generic goods like UHT milk, let alone branded products like infant milk powder, are not readily available. Government statistical agencies publish price indices and generally do not release raw price data on individual commodities. Market survey companies collect these data for their clients but not for public dissemination.

Box 1. Highest Milk Prices in the World?

Giá sữa tại Việt Nam cao nhất thế giới

Cập nhật lúc 13:58, Thứ Sáu, 24/04/2009 (GMT+7)

Việc người tiêu dùng tin rằng sữa đắt nhất thì mới tốt nhất, cùng xu hướng chọn mua loại đắt nhất, là những yếu tố khiến giá sữa tại Việt Nam (VN) cao ngất ngưởng.



When we read these articles closely we find that headline-grabbing claims like these do not stand up to close scrutiny. The source for the Vietnamnet story shown in Box 1 above was Mr. Raf Somers, Chief Technical Advisor of the Vietnam-Belgium Dairy Project. According to Vietnamnet, Somers stated at a conference in Hanoi that while milk prices in Europe and South America averaged from USD0.50-0.90 per liter, prices in Vietnam were on the order of USD1.10.7 Nowhere in the article does Mr. Somers state that Vietnam's milk prices are the world's highest.

Similarly, the *Saigon Times* newspaper quotes a claim by Ms. Vu Thi Bach Nga, Head of the Consumer Protection Division of the Ministry of Industry and Trade's Competition Department, that domestic milk prices are twenty to sixty percent higher than in neighboring countries and may be the highest in the world.⁸ No evidence was provided for this claim.

Claims such as these, if repeated often enough, tend to take on a life of their own. But they are not a solid basis on which to make policy.

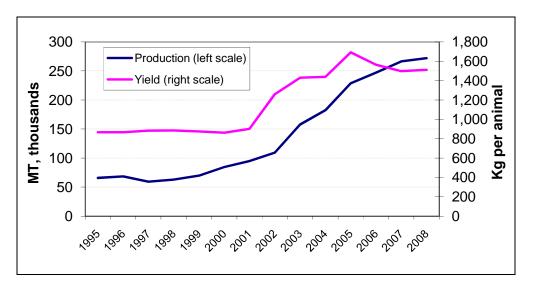
Vietnam's domestic milk prices need to be viewed in the appropriate context. Domestic milk prices vary considerably from country to country. Some exporting regions, such as Europe and South America, record relatively low domestic prices. Governments in some of these countries (but certainly not all) try to raise farmers' incomes by providing them with producer subsidies. Prices are typically higher in importing regions like East and Southeast Asia, particularly in cases in which governments protect domestic producers with tariffs and quotas, as in Thailand.

Thus, to claim that Vietnam's milk prices are among the highest in the world is not to say much at all. Vietnam falls in the group of importing countries with moderate trade protection, and domestic prices are broadly consistent with other countries in this group. Domestic production of milk has risen sharply since 1998, although from a low base (see Figure 1). Most Vietnamese dairy farmers are smallholders who post yields per cow of less than half of what large-scale facilities achieve in the US and Australia. The scope for raising output under the current structure of production is limited. Yet consumption of dairy products is increasing rapidly. According to statistics from the Food and Agriculture Organization (FAO), per capita milk consumption more than tripled between the years 1995 and 2006 (Figure 2).

^{7 &}quot;Giá sữa tại Việt Nam cao nhất thế giới" (2009) Vietnamnet, April 24, http://vietnamnet.vn/kinhte/2009/04/843894/.

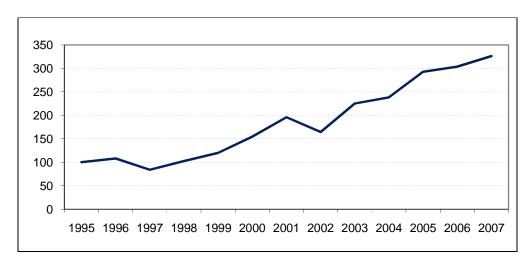
⁸ Thoa Nguyen (2009) "Vietnam's Milk Prices Stunningly High," Saigon Times Daily, July 9, http://english.thesaigontimes.vn/Home/business/other/5371/.

Figure 1. Milk production and yields



Source: Food and Agriculture Organization

Figure 2. Domestic milk consumption per capita, (1995=100)



Source: Food and Agriculture Organization, authors' calculations

The result is that Vietnam remains heavily dependent on milk imports. According to the Ministry of Agriculture and Rural Development (MARD), Vietnam imported 72 percent of its total dairy product consumption in 2009, including 50 percent of milk material and 22 percent of finished milk products. The Ministry of Agriculture and Rural Development has set a domestic production target of one million tons by 2020, which it says would meet 35 to 38 percent of domestic

⁹ Kim Thai (2009) "Milked to the Limit," Vneconomy News, August 12, http://news.vneconomy.vn/20091009124823974P0C6/milked-to-the-limit.htm.

requirements.¹⁰ Even this ambitious target would not greatly reduce Vietnam's dependence on imports.

Despite the country's dependence on imports, tariff protection is moderate, averaging less than ten percent of import value. The government has in fact reduced tariffs on milk ingredients and products faster than required under the terms of its World Trade Organization accession agreement. The government must balance the interests of domestic producers against the public health objective of making affordable milk available to more Vietnamese households.

Heavy reliance on imported inputs means that fluctuations in international prices are passed directly to Vietnamese consumers. This was not a major issue during the first half of this decade when international milk prices were stable and relatively low. However, from late 2006 global prices began to rise sharply, reaching their peak in October 2007. At that time the international whole milk powder price exceeded \$5,000 per ton. Although prices subsequently fell during the world financial crisis of 2008/09, prices have since recovered in US dollar terms (Figure 3).

Figure 3 also illustrates the role of exchange rate movements in the determination of domestic milk prices. Successive rounds of currency depreciation have weakened the dong against the USD. Thus in VND terms, imported milk powder is now nearly as expensive as it was when international prices reached their peak in October 2007. It is likely that most of the "excessive price rises" cited in the press can be traced to this combination of raw material prices and currency movements.

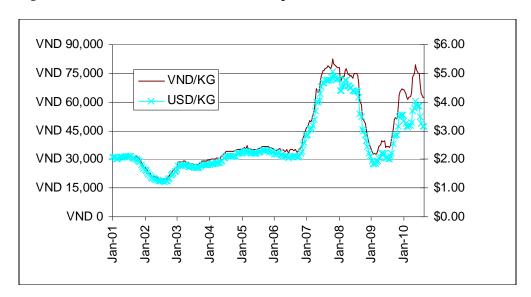


Figure 3. Oceania Whole Milk Powder 26% Export Prices, 2001-2010

Source: University of Wisconsin Dairy Marketing and Risk Management Program, http://future.aae.wisc.edu/ and authors' calculations.

We conducted a simple test of the proposition that domestic milk prices in Vietnam fall with the expected range for Southeast and East Asian countries. Because of limitations on time and

¹⁰ "Milk Production to Hit One Million Tons by 2020" (2010) Vietnam Business News, June 24, http://vietnambusiness.asia/milk-production-to-hit-1-million-tonnes-by-2020/.

resources, we were unable to compile detailed time series and cross section data on market prices in these countries. The infant and child milk market is characterized by high levels of product differentiation, with tens and even hundreds of products competing for shelf space in supermarkets. Manufacturers offer different products in different locations depending on customer preferences, income levels and cultural norms. Packaging also varies within and between countries, in part due to government regulations but also responding to consumer preferences. The result is that finding identical products in different countries is a challenge.

Nevertheless, it was felt that given the extreme character of some of the claims in the Vietnamese press (for example, "highest milk prices in the world"), a worthwhile exercise would be to simply compile a simple list of prices for identical products in regional markets and compare these prices to those on offer in Vietnam. To simplify matters, we selected one major city in each country and recorded manufacturers suggested retail prices for popular products. We used only one major retailer in each city, and we did not include special promotions and other discounts. We then converted these prices into US dollars using market exchange rates. Price information was taken from published advertisements, store websites and direct observation (in Jakarta, Ho Chi Minh City and Singapore).

Table 1. Retail Prices of Popular Milk Products, Various Countries, May 2010

	Shang- hai	Hong Kong	Jakarta	Kuala Lumpur	Singa- pore	Bang- kok	Ho Chi Minh City
Local brand, fresh milk	2.46	1.93	1.33	1.73	1.88	1.35	1.38
Local brand, UHT milk	2.31	1.66	1.18	1.32	1.41	1.23	1.24
Abbott Gain Plus 3 can	-	26.72	22.70	17.23	-	-	19.63
Abbott Gain Kid 4 can	-	22.12	20.43	15.44	-	-	20.70
Fonterra Anlene can	18.10	-	11.09	10.40	-	-	15.27
Frisian Flag (Dutch Lady) 123 box	-	-	6.97	5.86	-	-	6.00
Frisian Flag (Dutch Lady) 456 box	-	-	6.97	5.86	-	-	6.00
Friesland Friso 3 gold can	-	-	-	-	20.49	-	18.11
Friesland Friso 4 gold can	-	-	-	-	18.48	-	17.45
MJ Enfagrow A+3 can	-	26.82	23.31	17.31	23.98	-	18.58
MJ Enfakid A+ 4 can	19.99	21.98	20.86	15.71	21.57	-	15.99

Nestle Bear Brand 1+ box	-	-	-	-	-	9.20	7.11
Nestle Nan 2 can	25.84	27.31	24.39	-	24.06	-	18.91

Retail outlets:

Shanghai: Carrefour Singapore: Fair Price

Hong Kong: Parknshop Bangkok: Carrefour

Jakarta: Carrefour Ho Chi Minh City: Lottemart

Kuala Lumpur: Carrefour

The results are shown in Table 1. Prices in Ho Chi Minh City do in fact fall within the range of those in other major cities in the region (Jakarta, Bangkok, Singapore, Shanghai and Hong Kong). It does appear to be the case that prices in Kuala Lumpur are consistently lower than the other locations, but it is impossible to know from our small survey whether this reflects a national trend or simply a marketing strategy of our chosen retailer (Carrefour). On the whole, our hypothesis was confirmed: prices in Vietnam were higher for some products and lower for others, although not markedly different from regional norms.

Again, we should emphasize that an informal survey of this sort cannot substitute for rigorous market research. Nevertheless, we feel that the burden of proof is on these people and institutions who claim that milk prices in Vietnam are extreme even for Asia. We do not find evidence that this is the case.

Are Milk Product Markets in Vietnam Competitive?

The previous section has shown that milk prices in Vietnam are not out of line with prices in other countries in the region. Yet press complaints about the high price of milk reflect genuine consumer dissatisfaction with the cost of products like infant and child milk powder. Moreover, the government claims to have uncovered evidence of monopoly pricing. For example, the Industry and Trade Information Center of the Ministry of Industry and Trade reported in early 2010 that the retail prices of some imported dairy products were four times higher than import costs. ¹¹ Based on a separate survey conducted in December 2009, the Ministry of Finance concluded that the market price of some foreign products was 100 to 200 percent higher than the import price. ¹² The government interprets these survey results as evidence of non-competitive behavior on the part of firms.

The price registration and control policy is based on the premise that the market for milk products is not competitive, and therefore producers can raise prices without fear of losing market

¹¹ Phạm Tuyên (2010) Nhiều mặt hàng sữa nhập khẩu đội bốn lần giá vốn, Tiền Phong, May 15, http://www.tienphong.vn/Thoi-Su/500092/Nhieu-mat-hang-sua-nhap-khau-doi bón-lan-gia-von.html.

¹² Cẩm Quyên and Trần Thủy (2010) "Người tiêu dùng Việt Nam đang 'đốt' tiền mua sữa," Vietnamnet, May 24, http://vietnamnet.vn/psks/201005/Nguoi-tieu-dung-Viet-Nam-dang-dot-tien-mua-sua-911967/

share. Other assumptions underlying the policy—for example, that manufacturers spend too much on advertising—are themselves based on the non-competitive market assumption. The reason is simple: if the market is competitive, then producers cannot simply pass on advertising costs to consumers in the form of higher prices. Statements made by public officials confirm that in the government's view manufacturers of milk products are monopolists who spend excessively on advertising and can raise prices without reducing demand for their products.¹³ Price registration and regulation are viewed as legitimate government intervention to control the anti-competitive behavior of monopolists.

Are domestic milk product markets competitive? From the producers' perspective the answer is clearly yes. Domestic and foreign dairy companies alike point to the large number of players in the market. One international company counts 286 separate brands in the milk powder segment of the market alone. According to another estimate, the infant powdered milk market consists of 83 brands produced by 50 dairy companies. Although different methodologies will yield different estimates, it is difficult to avoid the conclusion that milk consumers do not face a shortage of options.

Product differentiation is important because it enables consumers to choose from a wide range of price points. One company demonstrated the point with market information from one powdered milk segment. The company reported that there are 77 brands in this segment, with an average price of VND 244 per gram of powdered milk. The lowest priced product cost VND 83 per gram and the most expensive was marketed at VND 2,669 per gram. However, most consumers did not opt for these extremes. The largest market share (modal price) was captured by a product costing VND 137 per gram, accounting for about 21 percent of the market. The next most popular product cost VND 405 per gram. Given such a wide range of choices it is difficult to see how the powdered milk market could be considered non-competitive.

Moreover, unlike some Southeast Asian countries, foreign players do not dominate the Vietnamese dairy business. The strongest company in the market is Vinamilk, a joint-stock company in which the government holds a minority stake. Vinamilk controls 35% of the entire domestic dairy market and 55 percent of the liquid milk market. The company's share of powdered milk markets varies by segment, but in most segments it has a market share of between 20 and 30 percent. Vinamilk has set a 2012 target of 35 percent market share across all powdered milk products. If there is a dominant market player in Vietnam, it is Vinamilk. However, even Vinamilk's large market share does not give it sufficient market power to control prices.

Vietnam's milk market is competitive. There are numerous players in each segment offering a wide range of products at various price points. But this does not necessarily mean that the market is "perfect" in the textbook sense that competition has equalized profits across all producers and that no company earns "rents" (or profits above the opportunity cost of capital).

¹³ Cẩm Quyên and Trần Thủy (2010) "Lợi nhuận kếch xù từ kinh doanh sữa vào tay ai?" Vietnamnet, May 25, http://vietnamnet.vn/psks/201005/Loi-nhuan-kech-xu-tu-kinh-doanh-sua-vao-tay-ai-912104/.

¹⁴ Interviews were conducted with foreign and domestic dairy companies as background to the preparation of this note. We cannot reveal the identity of our sources or their companies since discussions touched on commercially sensitive information.

¹⁵ "Dairy Firms Reject High Promotion Costs Claim" (2009) Saigonmoney.com, December 27 http://www.saigonmoney.com/2009/12/27/dairy-firms-reject-high-promotion-costs-claim/

^{16 &}quot;Giá sữa tại Việt Nam cao nhất thế giới" (2009) Vietnamnet, April 24, http://vietnamnet.vn/kinhte/2009/04/843894/.

Vinamilk Annual Report 2009, available online at http://www.vinamilk.com.vn/uploads/Download E/VNM Annual Report Final ENG.pdf.

One of the conditions for a perfect market is that information is costless and all producers and consumers have equal access to information. This is clearly a very stringent condition few (if any) real-world markets can meet. Information is rarely if ever free, and normally it is very expensive. Crucially, some people have more information than others. When this happens markets do not function perfectly. Economists call this an "asymmetric information" problem.

Sellers usually have more information about product quality than buyers. This is true in many kinds of markets. For example, in the labor market, employers (buyers of labor) do not know the actual skill levels of job applicants (sellers of labor) and how hard they will work once they are hired. If employers assume that job applicants always lie about how skilled and diligent they are, then companies will be afraid to pay a high wage. So the market wage will be too low to attract good employees. Job applicants can get around this problem by "signaling" their actual skill level and capacity for hard work to recruiting officers. A degree from a good university in a challenging subject is one way to signal that the applicant has relevant skills and is ready to work hard. Employers can also set up "screening" devices to get applicants to reveal information about themselves. Screening can take the form of a test (for example, a civil service examination) or asking for references from

Box 2. Spillover from China's Melamine Milk Scandal Reaches Vietnam

On July 16, 2008, six infants in Gansu province, China, were diagnosed with kidney stones after drinking milk produced by the Sanlu Group, a major domestric producer of infant formula. Investigations revealed that the company had adulterated infant milk powder with melamine, an industrial chemical widely used as a flame retardant. Melamine had been mixed with milk to artificially increase protein levels prior to government inspections. By the end of the year, melamine contamination had claimed the lives of six children and had affected 300,000 others. Twenty-one companies were implicated in the scandal.

Vietnamese companies were not directly involved in the scandal. However, in September 2008 melamine was detected in milk marketed by Hanoimilk, a state-owned dairy company. The company was apparently mixing local fresh milk with imported milk from China.

The government responded effectively to the crisis, mounting an inspection campaign consisting of 15 teams and 22 laboratories. Melamine was discovered in in some dairy products imported from Singapore, Australia and China. These were quickly recalled and the country was spared a major health crisis.

Nevertheless, public trust in domestic milk products did not return immediately. Consumers quickly shifted from smaller local brands to well-known foreign brands or to the country's largest producer, Vinamilk.

Unfortunately, the crisis is not over in China. In August of this year the Chinese government seized 100 tons of melamine-contaminated milk powder in its northern provinces.

Sources: Matt Steinglass (2009) "Crying over Spilled Milk in Vietnam," Global Post, January 29, http://www.globalpost.com/dispatch/vietnam/090129/crying-over-spilled-milk-vietnam; "China Seized 100 tons of Melamine-Laced Milk Powder (2010) Reuters.com, August 21, http://www.reuters.com/article/idUSTRE67K0NO20100821.

previous employers.

Asymetric information affects markets for most goods and services, and milk is no exception. Buyers do not know as much about the quality of milk products as sellers. Scandals like the discovery of melamine-tainted milk in China heighten public fears that some producers are willing to market unsafe or unhealthy products (see Box 2). Screening is not an option for consumers acting on their own since it is neither feasible nor cost effective for them to subject all of the milk products that they consume to laboratory tests. As discussed below, the government has a clear role in providing screening services as a public good, but this assumes that consumers trust government inspectors to act in their interests. For the moment, we simply note that screening is not a viable option for individual consumers who want to assess the quality of dairy products on the market.

Sellers, for their part, can signal higher quality in several ways. The most common form of signaling is to invest in building the company's brands. In the so-called fast moving consumer goods sector—which includes dairy products—a strong brand is more valuable than any other form of capital that the company possesses. Although Vietnamese government officials often appear to view advertising as an irrelevant waste of resources, companies producing these goods—including Vietnamese companies—know better. Advertising and promotion activities are essential to the development of the brand and hence the company. This is particularly true in emerging markets like Vietnam, where domestic and foreign producers alike are eager to build up the capital that their brands represent. In Vietnam's dairy markets, advertising and brand development are most important to domestic firms and other low-price producers, which need to reassure consumers that their quality standards are as high as well-known and expensive foreign brands.

The government's current policy is to discourage spending on advertising and promotional activities. Under the Law on Corporate Income Tax, corporations can only receive a tax deduction on advertising expenditures up to ten percent of gross revenue.¹⁹ Beyond this limit, spending on advertising comes directly from profits. Opinions differ as to the government's rationale for discriminating against advertising. Some see the aversion to advertising as a legacy of central planning. Dairy companies are convinced that the main objective is to increase effective tax rates. Others argue that the ten percent cap is a subtle form of protection for domestic firms that are attempting to compete with multinationals that possess attractive global brands, greater experience in marketing and larger advertising budgets.²⁰

Whatever the motivation, the impact of the ten percent cap is to increase tax revenues and reduce corporate profits. A simple simulation can help illustrate the effects of the cap. Imagine a firm facing fixed costs and earning a 30 percent rate of return on investment from its existing market share. In the initial position, the company spends only ten percent of revenue on advertising and promotion and therefore is not penalized by the ten percent cap. At this level of spending the effective rate of corporate income tax is 28 percent. Now imagine that in order to protect its market share, the company must now spend 18 percent of revenue on advertising and promotion. This raises

¹⁸ Fast moving consumer goods, also known as repeat purchase packaged goods, include packaged, canned and frozen foods, proprietary drugs, cosmetics and toiletries, detergents, candy, beer, wine and soft drinks. Brand loyalty is essential to the success in marketing these goods because consumers buy them repeatedly.

¹⁹ The cap was raised from seven to ten percent in 2004. Separate provisions set the cap at 15 percent for start-up companies for a period of three years.

²⁰ Matthew Arnould, Grant C. Young, Tyler Ulrich Nims, Mathew Palmer-Ball and Andrew So (2008) "A Set of Dynamic Compromises: Advertising Regulations and Their Impact in Vietnam," Northwestern University School of Law, mimeo, available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1126003.

advertising and promotion spending above the ten percent cap, and as a result increases the company's effective corporate income tax rate to 40 percent (Figure 4). As shown in the figure, if advertising and promotion spending reaches 32 percent of revenue the effective rate of taxation in 100 percent.

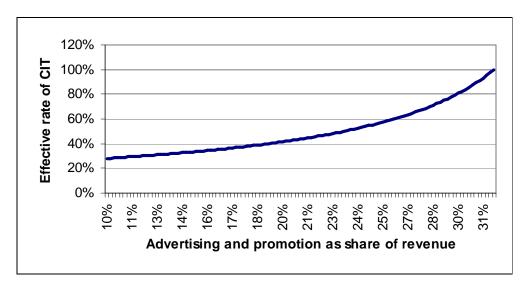


Figure 4. Effective Rate of Corporate and Advertising Expenditure

Source: Authors' calculations

The government argues that taxing advertising spending as profits reduces production costs and therefore the price of milk to consumers.²¹ The Ministry of Finance, for example, believes that reducing ad expenditures would result in a fall in milk prices of 30 percent.²² This assumes that demand for consumer products spontaneously appears as soon as the goods hit the shelves. Alas, it does not. Without brands and the advertising and promotion that are needed to build them, consumers will not have sufficient information about product characteristics and quality. They will not trust the goods, and they will be left on the shelf. Manufacturers are aware of this. The alternative to investing in the brand is not to reduce prices—it is to get out of the fast moving consumer goods business. If the government succeeded in suppressing advertising spending the end result would be fewer products on the market, less competition, and most likely higher prices.

In addition to brands and advertising, producers use pricing as a means of signaling. A well-established literature in economics has shown that consumers interpret higher prices as a signal of superior quality and lower prices as sign of inferior quality.²³ Faced with limited information about outwardly identical products, consumers often choose the more expensive brand under the assumption that higher price implies the use of higher quality inputs (and that lower price implies

²¹ Câm Văn Kinh (2009) "Thanh tra Bộ Tài chính: yêu cầu giảm chi phí quảng cáo để giảm giá sũa," *Tuổi Tre, December 12*, http://tuoitre.vn/Kinh-te/354716/Thanh-tra-Bo-Tai-chinh-yeu-cau-giam-chi-phi-quang-cao de-giam-gia-sua.html; Nhu Minh (2009) "Ho Chi Minh City Inspections Shed Light on Baby Formula Markups," *Vietnamnet Bridge*, June 26, http://english.vietnamnet.vn/biz/2009/06/855043/.

²² Câm Văn Kình (2010) "Sữa ngoại: chi phí quảng cáo quá cao," *Tuổi Tre*, April 2, http://tuoitre.vn/Kinh-te/371408/Sua-ngoai-chi-phi-quang-cao-qua-cao.html.

²³ For a survey see Kyle Bagwell and Michael H. Riordan (1991) "High and Declining Prices Signal Product Quality," *American Economic Review*, 81:1, 224-239.

less commitment to quality). What is more, behavioral studies have established that consumers express greater satisfaction when they pay more for a good or service. In other words, in addition to interpreting higher price as a signal of superior quality, consumers are also more satisfied with products that they have paid more to obtain.²⁴ We tend to derive more enjoyment from an expensive glass of wine than a cheap one regardless of the actual taste of the wine. Part of the joy of owning a designer handbag is knowing how much it cost.

This may sound like irrational behavior, and perhaps it is. Yet Vietnamese press reports confirm that consumers interpret price as signal of quality. In one report, a woman in Ho Chi Minh City remarked that she had switched from cheaper to more expensive milk for her one year old son because she worried less about the quality of more expensive products. Another mother had read newspaper stories about high milk prices, but continued to buy expensive products. She summed up her decision as follows: "You get what you pay for." ²⁵ In a recent article, Mr. Cao Xuan Hien, Deputy Director of the Anti-Trust Investigation Division of the Ministry of Industry and Trade, expressed astonishment at the behavior of consumers. "In carrying out our investigations in the dairy sector," he said, "we find that when it comes to baby milk powder products, an increase in price does not lead to falling sales. In fact, an increase in the price of milk is beneficial to sales." ²⁶

Signaling through price is one of the main reasons that dairy companies do not lower the prices of infant and child milk products when the cost of raw materials falls. They are afraid that lowering prices will hurt the brand, since consumers will interpret discounting as an admission of inferior quality.

In addition to information about the quality of dairy products, consumers in Vietnam also lack adequate information about relative prices. This is not an unusual situation in an emerging retail market. In mature markets, consumers know where to buy the cheapest milk, televisions and automobiles, and in the absence of intervening factors (for example convenience, time constraints or cost of travel) they will buy from the cheapest source. Although large supermarkets are capturing a growing share of the retail market, most Vietnamese shoppers buy milk products from smaller outlets that offer a limited selection of products.

Table 2. Retail Prices of Popular Powdered Milk Products, HCMC

Item per kilogram or liter	Average (VND)	N	Coefficient of variation	Minimum (VND)	Maximum (VND)
Local brand, fresh milk	28,241	3	0.05	27,500	29,722
Vinamilk, UHT milk	22,208	6	0.16	18,636	29,111

²⁴ Baba Shiv, Ziv Carmon and Dan Ariely (2005) "Placebo Effects of Marketing Actions: Consumers May Get What They Pay For," *Journal of Marketing Research*, XLII, November, 383-393.

²⁵ "Foreign Baby Milk Producer Cries Foul over Profit Claims" (2009) Vietnamnet Bridge, July 3, http://english.vietnamnet.vn/biz/2009/07/856263/.

²⁶ Cẩm Quyên and Trần Thủy (2010) "Những 'mánh khoé' giữ giá sữa cao ngất ngường," Vietnamnet, May 26, http://vietnamnet.vn/psks/201005/Nhung-manh-khoe-giu-gia-sua-cao-ngat-nguong-912382/.

Abbot Gain plus advance 3 can	359,015	11	0.12	244,444	412,500
Abbott Gain Plus 3 can	342,819	12	0.18	238,889	407,500
Abbott Gain Kid 4 can	347,571	13	0.09	258,889	398,750
Danone dugro 1+ can	349,236	4	0.08	316,667	386,250
Danone dugro 3 can gold	311,991	6	0.11	266,667	350,000
Fonterra Anlene can	252,844	8	0.08	225,000	285,500
Frisian Flag 123 box	153,244	9	0.06	134,444	165,000
Frisian Flag 456 box	138,042	4	0.07	125,556	148,000
Frisian Flag 123 can	198,018	13	0.54	136,667	494,118
Frisian Flag 456 can	168,726	13	0.31	133,333	300,000
Friesland Friso 3 gold can	363,984	14	0.07	308,333	425,000
Friesland Friso 4 gold can	318,744	13	0.19	231,444	475,000
MJ Enfagrow A+3 box	338,303	4	0.03	330,769	347,231
MJ Enfakid A+ 4 box	277,166	5	0.02	272,222	287,538
MJ Enfagrow A+3 can	334,822	15	0.06	300,000	358,889
MJ Enfakid A+ 4 can	288,921	14	0.12	238,889	350,000
Nestle Bear Brand 1+ box	114,352	6	0.06	104,444	121,667
Nestle Nan 2 can	357,056	10	0.03	343,333	380,889
Other: Dielac 123 can	160,313	11	0.11	145,556	207,778
Other: Dielac 456 can	148,283	11	0.07	127,778	170,000
Other: Step 1 can	163,206	7	0.07	153,333	184,444
Other: Step 2 can	160,370	9	0.06	150,000	180,000
Other: Dielac 123 box	153,900	5	0.07	145,000	170,000
Other: Dielac 456 box	147,000	5	0.06	140,000	162,500
Other: Step 2 box	159,700	5	0.07	150,000	177,500

As a result, prices vary considerably even within one region or city. Consumers may be overpaying for milk products simply because they do not know where to buy most cheaply, or because the cost of traveling to the supermarket and carrying the goods home is higher than the difference in prices offered by the supermarket and small retail outlets.

To test the hypothesis that prices vary significantly across retail outlets, we organized a small survey of infant and child powdered milk prices in Ho Chi Minh City. We visited twenty-five shops in twelve districts of the city and recorded the prices of popular infant and child powdered milk products. The results of the survey confirmed our expectations (Table 2). Prices varied widely for identical products depending on where they were purchased. For some products prices differed by as much as 250 percent. Some of the smaller shops that we visited were competitive, offering to match or beat prices offered elsewhere. For the most part, supermarkets offered lower prices and more choice than small, local shops.

This section has reached several important conclusions. First, dairy product markets in Vietnam are competitive. Consumers have a wide selection of brands and products to choose from across the entire spectrum of price points. No single company dominates any market segment. The largest player is a domestic company that is partly owned by the government. Second, although the market is competitive, it is not a perfect market in the textbook sense. Consumers lack information about product quality and are unable to screen effectively on their own. Producers use price signals to communicate product quality, with the result that they are reluctant to lower prices when costs fall for fear of signaling inferior quality.

Finally, consumers also lack complete information on prices because of imperfections in the local retail market. Prices vary considerably from shop to shop, which creates confusion and leads to overpricing in some cases. Many consumers rely on small shops that are not price competitive and do not offer a wide selection of products. The next section considers the implications of these findings for the effectiveness of the government price registration and regulation policy.

Will Price Registration and Regulation Lower Prices?

The objective of the government's price registration and regulation policy is to lower prices. The government accuses producers of reaping windfall profits and spending excessively on advertising and promotion. To counter these trends the government will require producers, distributors and retailers to register production costs and prices. Prices deemed to be "unreasonable" will not be accepted. Companies seeking to raise prices must re-register them with the authorities. The government will provide the public with information on registered prices to prevent retailers from overcharging them.

Will it work? Unfortunately, no. Having misdiagnosed the problem, the government has written out the wrong prescription. If the problem was monopoly, or price collusion among a few dominant players in the market, then price registration might be an effective solution. However, as we have seen, the market for dairy products is competitive, with numerous players and diverse product offerings. The problem is not a shortage of producers, but rather a shortage of information. Requiring companies to register costs and prices may increase the amount of information in the hands of government, but it will not improve consumers' access to information.

The government's analysis assumes that prices are set in a market economy using the same cost-plus formulae that were used under central planning. If there is only one state-owned widget factory, then everyone who needs a widget must buy it from the government. In the absence of competition, prices are set by adding up costs of production. But in a market economy, prices are not set by administrative fiat—they are set by competition. Firms survey the market and charge what they think consumers are willing to pay, and then adjust prices based on consumer demand and the pricing behavior of competitors. This includes brand building and using prices as signals. If the firm cannot sell at a price that covers its costs, it goes out of business. If the company makes a profit, other companies will notice and will be encouraged to enter the market.

Far from reducing prices, the immediate impact of the new regulations will be to increase them. First, as we have seen, dairy companies are raising prices ahead of the October 1 deadline when price registration comes into effect.²⁷ This is an excellent example of an unintended consequence of government policy. The stated goal is to lower prices, but in announcing the new policy the government has given companies an incentive to raise them, at least in the short term.

The new regulation will also impose a large administrative burden on companies. One company representative estimated that registering input, output, wholesale and retail prices for the firm's entire product line would require 400,000 registrations. Assuming that one registration requires the company to expend VND 100,000 in labor costs (a conservative estimate by most accounts), the total cost to the firm of registering its prices would be VND 40 billion. To imagine that this additional expenditure will not be passed on to consumers in the form of higher prices is to misunderstand how prices are set in a market economy.

The government hopes that publicizing registered milk powder prices would ensure that producers, wholesalers and retailers do not overcharge for their products. Yet it is difficult to imagine how government agencies could efficiently and effectively distribute price information for hundreds of products to thousands of locations. This price information would have to be updated daily and would need to take into account changes in product characteristics and promotional offers. This is in fact one of the great strengths of the market economy: the dissemination of price information is decentralized and occurs spontaneously in response to local market conditions. To suppose that administrators can do a better job informing the public of price changes than the market is the misread the lessons of the country's transition from central planning to a market economy.

The short term impact of the new policy will be to raise prices. What about the medium to long term? Can companies be forced or shamed into reducing, or at least not raising, the prices of dairy products? This is unlikely. Dairy companies (including domestic firms) are not engaged in public service. They are in the market to make money. If they are not able to achieve what they consider to be an adequate rate of return to justify participation in the market they will leave. If they cannot build their brands in Vietnam they will either restrict their business to generic products or pull out entirely. The most likely long term impact of price regulation is that high-end producers will exit the market, reducing choice for consumers and competition within the market. Less competition will in the end lead to higher prices.

^{27 &}quot;Sữa ngoại lại tăng giá chạy trước Thông tư" (2010) Vietnamnet, September 3, http://www.vietnamnet.vn/kinhte/201009/Suangoai-lai-tang-gia-chay-truoc-Thong-tu-933424/.

The key to moderating the price of milk products in Vietnam is to reduce the severity of the asymmetric information problem. This means providing consumers with more information about product characteristics, quality and safety, and eliminating rigidities in the retail sector. How could the government achieve this objective? This is the subject of the final section.

Policies to increase price competition in the dairy sector

Dairy markets in Vietnam are competitive but suffer from serious information problems. The main message of this case study is that changes to government policy could substantially reduce information problems in the sector. These policies would ensure that domestic markets for dairy products are competitive and function smoothly. More competitive markets may or may not lead to lower prices depending on a range of other factors, most importantly the cost of imported milk powder. Whatever the outcome in terms of prices, competitive milk markets will deliver a wide choice of high quality products to Vietnamese consumers.

The government can reduce information problems in dairy markets in three ways: establishing clear and rigorous safety standards and improving the coverage and reliability of screening and inspection; removing tax discrimination against advertising and promotion; and removing obstacles to the modernization of the retail sector. We will now take these recommendations in turn.

Improving government screening and inspection

Consumers worry about the quality of the goods and services that they buy. These concerns are only intensified when they buy food and other products for their children. They know that producers are not always honest with them about the characteristics and quality of their products. Consumers' best defense against this kind of asymmetric information problem is to obtain more detailed information about the goods and services that they buy—in other words to "screen" them. Screening can take many forms, for example reading product reviews on the internet or talking to friends who have used the product. Effective screening of food products like milk for quality and safety requires sophisticated laboratory testing. Individual consumers do not have sufficient expertise, money and time to engage in this kind of screening.

In most countries consumers rely on government to establish health and safety standards and to screen food products to ensure that these standards are met. Safety and health inspectors are assigned responsibility for collecting statistically representative samples of food products on the market and to test them for quality and safety. Products that do not meet minimum safety standards or which are not labeled accurately are removed from the market. Inspectors routinely examine manufacturing facilities to ensure that minimum standards of hygiene are maintained. If these procedures are credible and earn public confidence, they provide consumers with the information they need to make informed choices. Consumers are therefore better able to protect themselves from harm and can also rely less on unreliable signals like pricing.

These systems do not always work well, even in industrialized countries. Food scares like the BSE crisis in Europe demonstrate the scale of the scientific and political challenges that food safety agencies must overcome in their efforts to protect the public.²⁸ Well governed food safety regimes must encourage scientific excellence and innovation, while at the same time achieve maximum transparency and public accountability. Assessment of risks to the public must be rigorous and independent from both political and commercial interests.

In Vietnam this crucial task is assigned to the Department of Food Hygiene and Safety of the Ministry of Health. Like many government agencies, the department makes a valiant effort to fulfill its mission despite chronic and serious underfunding and understaffing. The department is most effective during emergencies, for example the melamine scare of 2008 (see Box 2). However, it is unable to undertake routine and comprehensive assessment of products on the market and manufacturing facilities. For example, the first ever assessment of micronutrients in infant formula was undertaken in 2010.²⁹ When inspections are carried out and the result publicized, the high incidence of violations only serves to add fuel to the fire of public skepticism regarding the reliability of the food safety regime.³⁰ For example, during the Tet holidays in 2010, the department sent out two thousand teams to inspect 47 thousand businesses and found 13,000 violations.³¹ Deeply concerned about the health of their children and faced with uncertainty about the the safety of milk products, many parents opt for the most expensive products on the market hoping that the additional cost means more rigorous quality standards.

Reform of the national food safety regime is needed to increase public confidence in the quality and safety of dairy products marketed in Vietnam. The public needs more information about how safety standards are set. Creating public trust in the food testing and inspection system is most important to domestic and other low cost producers who must compete with expensive, foreign brands. A more rigorous food safety regime would reassure consumers that domestic products are just as safe as those produced overseas, and that all products contain exactly what is stated on the label.

Every country must develop a food safety regime that is appropriate to local conditions, and it is well beyond the scope of the present study to make recommendations for reform of the system in Vietnam. This is an area in which Vietnam's bilateral development partners could make a useful contribution. For example, the UK undertook a major reform of its food safety regime following the BSE crisis in the 1990s. The new Food Standards Agency established in 2000 is a government agency that has been designed to achieve high standards of scientific excellence, accountability to consumers

²⁸ Bovine Spongiform Encephalopathy (BSE) is a disease detected in cattle that was subsequently linked to Creutzfeld Jakobs disease (CID) in humans.

²⁹ Lan Anh (2010) "6/84 mẫu sữa thiếu vi chất so với hàm lượng công bố," *Tuổi Tre*, August 10, http://tuoitre.vn/Chinh-tri-xa-hoi/Song-khoe/394567/684-mau-sua-thieu-vi-chat-so-voi-ham-luong-cong-bo.html. In this study, the department took 84 samples of milk powder and liquid milk in eight provinces in the first seven months of 2010. Six of the 84 samples did not contain the stated quantities of DHA and or calcium. A decision was taken to expand the testing regime following publication of these results.

³⁰ See, for example, "Dairy Firms Caught Cheating Again" (2009) *Vietnamnet Bridge*, July 18, http://english.vietnamnet.vn/Health/2009/07/858808/. In this case, inspectors found that one quarter of infant milk products tested in fourteen provinces and cities did not have stated levels of protein content.

³¹ Marco Breu, Brian S. Salsberg, and Ha Thanh Tu (2010) "Growing Up Fast: Vietnam Discovers the Consumer Society," McKinsey Quarterly, August, https://www.mckinseyquarterly.com/ Marketing/Sales Distribution/Growing up fast Vietnam discovers the consumer society 2655?gp=1.

and transparency. Governance of the agency includes an independent board that includes experts and members of the public. With the support of bilateral partners, Vietnam could incorporate these principles into a reformed and revitalized food safety regime.

Remove the cap on advertising and promotion

While consumers rely on screening, producers use signaling to overcome asymmetric information problems. The most effective form of signaling is investment in brands. Brand loyalty is most important to fast moving consumer goods like packaged foods. People are reassured by brands that deliver consistent characteristics and quality. Consumers recognize that companies invest heavily in their brands, and therefore expect that the producers will ensure the safety of their products in an effort to protect their investment in the brand.

In Vietnam the government actively discourages investment in brands through its corporate tax policy, which caps advertising and promotion expenses at ten percent of revenue. The government still views advertising as an unnecessary expense that increases the cost of production and therefore prices. This is the dominant theme in the many newspapers articles published on the subject of milk prices over the past several years. Ministry of Finance officials routinely express shock and horror at the amount of money that both foreign and domestic firms commit to advertising campaigns.³² Having identified advertising as the culprit, the ministry admonishes companies for not staying within the ten percent cap on advertising and promotion expenses recognized under the corporate income tax law.³³

Punitive taxation of advertising expenses most likely *increases* the market price of milk products rather than decreasing them. The problem is simple. Companies cannot enter the dairy product market without a large investment in their brands. Generic products do not sell because people do not have sufficient trust in them, especially in emerging markets like Vietnam where the food safety regime is underdeveloped. Producers face a choice of entering the market and bearing the costs of advertising and taxation, or not entering the market. They cannot enter the market and underinvest in their brand. This is not a viable commercial option.

Having decided to enter the market and build their brand, producers pass along the cost of advertising and taxation to consumers through the purchase price. Since all producers face the same tax regime, they can all pass along these price increases to consumers without fear that other firms will undercut them on price. Some firms may claim that they spend less on advertising, but closer inspection of their activities will generally reveal that they all spend roughly the same amounts on building their brands.³⁴

³² Ministry of Finance Says Advertising Expenses Increase Dairy Prices" (2009) Vietnamnet Bridge, December 23, http://english.vietnamnet.vn/biz/200912/Ministry-of-Finance-says-advertising-expenses-increase-dairy-prices-885808/; also Cam Quyên and Trần Thủy (2010) "Lọi nhuận kếch xù từ kinh doanh sữa vào tay ai?" Vietnamnet, May 25, http://vietnamnet.vn/psks/201005/Loi-nhuan-kech-xu-tu-kinh-doanh-sua-vao-tay-ai-912104/.

³³ "New rule seeks tighter grip on milk product prices" (2010)Vietnam Business News, March 20, http://vietnambusiness.asia/new-rule-seeks-tighter-grip-on-milk-product-prices/.

³⁴ Several dairy product company representatives expressed skepticism about claims by some firms that they spend little on brand development. They suggested some firms conceal advertising and promotion costs as distribution or personnel expenses.

Remove obstacles to the modernization of the retail sector

Vietnamese consumers do not have sufficient information about prices. The retail sector has changed dramatically over the past decade, particularly in Hanoi and Ho Chi Minh City. But even in these large cities many consumers still rely on local shops for repeat purchase goods. The country now has about four hundred supermarkets that account for about ten percent of retail trade.³⁵ The share of modern supermarkets will no doubt increase as Vietnam urbanizes and consumers become more sophisticated. At the moment, however, shoppers still rely predominantly on smaller outlets.

Domestic and foreign retails have ambitious expansion plans for the country. Saigon Co-op plans to open one hundred new stores by 2015. Korea's Lotte Group has committed five billion dollars to expand its retail presence over the next ten years. Metro Cash & Carry (Germany) has opened in twelve locations and Big C (France) has ten stores. Vietnam has opened the domestic retail sector to foreign investment under the country's WTO commitments. Foreign companies can open a single location without a domestic partner once they have obtained a business license and planning permission. However, applications for a second outlet are subject to an economic needs test.³⁶ Although the government has described the principles underlying the economic needs test, it has not specified precise standards or a consistent and transparent process through which individual applications are to be assessed. As a result, the authorities retain considerable discretion in their assessment of applications for additional stores. This discretion has been used to protect local retailers from international competition, which has had discouraged new investment. Reflecting the uncertainty surrounding the economic needs test, Vietnam fell from first in 2008 to fourteenth in 2010 in A.T. Kearney's Global Retail Development Index.³⁷

One consequence of the relatively slow penetration of supermarkets is that domestic prices vary considerably from place to place, even within major cities. We saw in an earlier section that the variance in powdered milk prices in Ho Chi Minh City—even for the same brand and in the same packaging—is very large. Some of the public frustration with high milk prices is no doubt attributable to these price variations. Vietnam could achieve considerable progress in reducing prices and expanding choice for consumers by removing remaining obstacles to the development of the modern retail sector.

Conclusion

Vietnam issued a new regulation on price registration and control in August 2010. One of the objectives of the policy is to reduce or stabilize prices of dairy products, particularly infant and child powdered milk. The government believes that dairy companies raise powdered milk prices because they spend too much money on advertising and promotion.

³⁵ Marco Breu, Brian S. Salsberg, and Ha Thanh Tu (2010) "Growing Up Fast: Vietnam Discovers the Consumer Society," McKinsey Quarterly, August, https://www.mckinseyquarterly.com/ Marketing/Sales Distribution/Growing up fast Vietnam discovers the consumer society 2655?gp=1.

³⁶ The economic needs test is required under Government Decree 23 issued in 2007. Criteria for the economic needs test are set out in Circular 09/2007/QD-BTM and Decision 10/2007/QD-BTM.

³⁷ A.T. Kearney, Expanding Opportunities for Global Retailers: The 2010 Global Retail Development Index, http://www.atkearney.com/index.php/Publications/at-kearneys-global-retail-development-index.html.

This case study has addressed three dimensions of the government's milk price policy. First, we critically examined media claims that Vietnam's milk prices are "the highest in the world." We found that there was no evidence to support this assertion, and concluded that prices in Vietnam were within the range of other Southeast Asian countries, all of which are net milk powder importers.

Next, we asked whether milk markets in Vietnam are competitive or monopolistic in nature. Given the range of choice available to consumers and the number of market participants, we concluded that the market is competitive. But they are not "perfect" markets as described in economics textbooks. Most importantly, consumers do not have access to complete information about the products that they buy. "Screening" of product quality and safety by government agencies is deficient. Consumers therefore rely on "signaling" from producers. Signaling takes the form of investment in brands and relative pricing.

Can price registration and control succeed in lowering or stabilizing dairy prices in a competitive, imperfect market? Our conclusion is that it will not. The immediate impact of the new policy will be to increase prices. There is already evidence that dairy companies have raised prices ahead of the implementation date of the new circular to avoid the need to re-register prices after the policy comes into effect. Moreover, the administrative costs of registering input, output, wholesale and retail prices will be substantial. It is unrealistic to expect that dairy companies will not pass these additional costs on to consumers.

Over the longer term, price registration and control are likely to reduce the number of firms and brands active in domestic markets. If the companies cannot achieve what they consider to be a reasonable rate of return on their investment they will abandon the market. They will not maintain a presence in markets that yield a sub-standard rate of return on their capital.

Does this mean that the government is powerless to stabilize or lower milk prices? No. We recommend three policy initiatives that we believe will improve market conditions and therefore deliver greater choice and value to consumers. First, the government must reform and revitalize the food safety regime to enable consumers to "screen" products for quality and safety. Improvements to the coverage and reliability of the safety regime are especially important for domestic and other low-price producers, who need to persuade consumers that their products are as safe as expensive, foreign brands.

Second, the government should revise its corporate tax policy to end punitive taxation of advertising and promotion. In a market economy, investment in brands is as important as investment in machinery, technology and human resources. The brand is the firm's main signaling device to consumers. Domestic and foreign companies alike cannot survive in the fast moving consumer goods business without building their brands. Government tax policy makes these investments costly, which has a knock on effect on the prices that dairy companies charge their consumers.

Finally, one of the main problems in dairy markets is variation in prices. Modernization of the retail sector would go a long way towards reducing price variation, giving consumers more information about prices and increasing the range of choices available to them in the marketplace.