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Introduction

In mid-2009, Republic Act No. 9502, also known as the "Universally Accessible Cheaper and Quality Medicines Act" (or colloquially as the "Cheaper Medicines Act"), was signed into law, thereby empowering the Philippine president to impose price controls on medicines. Immediately after, negotiations between government and various multinational drug companies led to the lowering of prices of 38 molecules. Some weeks later, the government imposed mandatory price cuts on five additional drugs. In February 2010, price ceilings were drawn up for an additional 97 drugs and medical devices.

This paper looks back at the rationale for these price cuts and seeks to explore the effects that the cuts have had. The first part presents an overview of the Philippine pharmaceutical industry, outlining the relationships

among the different players in the pharmaceutical sector and the effects that these relationships have on the prices of local medicines. The second part examines some of the reasons for the high prices of medicines in the Philippines, the stated rationale behind the implementation of price controls and the ramifications of the price cuts.

An Overview of the Philippine Pharmaceutical Industry

The modern global pharmaceutical industry is relatively new. Large-scale pharmaceutical development and production emerged only in the postwar period. Prior to this, drug availability was severely limited, and few synthetic compounds were available to patients (Thornber, 1994). In the Philippines, the 20 or so drug companies—most of them Filipino-owned and registered before the Second World War—prepared most of their compounds manually, using a mortar and pestle.

Foreign pharmaceutical companies streamed into the Philippines during the postwar reconstruction period. In the decade after the war, no fewer than 10 foreign-owned pharmaceutical companies set up shop. Some of these remain among the largest global drug manufacturers today: Wyeth Laboratories, Abbott Laboratories, and Pfizer Laboratories (Ibon, 2001).

At the start of the 21st century, foreign-owned corporations dominated the Philippine pharmaceutical market in terms of peso sales. In 2007, nine of the top 10 corporate groups in terms of market share were foreign-owned multinationals (Batangan, Echavez, Santiago, de la Cruz & Santos, 2005, see Table 1). The exception was locally-owned United Laboratories Inc. (Unilab), which has been the leading pharmaceutical company in the Philippines since the 1950s.

Table 1. Top 10 Philippine Pharmaceutical Companies Based on Value, 2007

Rank	Company	% CAGR 4-years
1	United Laboratories	10.24
2	GlaxoSmithKline	2.57
3	Pfizer	10.72
4	Wyeth	11.46
5	Sanofi-Aventis	8.60
6	Abbott	13.88
7	Astra Zeneca	5.61
8	Novartis	5.73
9	Roche	16.41
10	Johnson & Johnson	8.41

Source: IMS 2007

It is estimated that in 2009, pharmaceutical manufacturers sold a total of PhP124.9 billion (US$2.63 billion) worth of pharmaceutical products to wholesalers, hospitals, and retailers. Prior to the implementation of drug price controls in August 2009, this amount had been projected to increase by 9.67% over the next five years, up to 2014 (PPHR, 2010).

Prescription drugs (also known as "ethical drugs") comprised 69% of the market in 2007, thus accounting for the biggest bulk of pharmaceutical expenditures. Over-the-counter drugs comprised 24%. Nutritionals—including infant formula and nutritional supplements (e.g., multivitamins-minerals)—made up the rest of the market (PHAP, 2008; R.L. So, personal communication, June 23, 2010).

The Various Sectors of the Philippine Pharmaceutical Industry

It is a misconception to think of the capsules in your pillbox as the work of one company. The chemical components of drugs actually originate from chemical laboratories. Drug manufacturers process these chemical components into dosage forms, such as tablets, capsules, yrups, and suspensions. Afterward, the medicines are packaged and distributed to hospital pharmacies, retailers, industrial clinics, government and non-government groups, which in turn pass these on to the end-user.

Manufacturing and Trading

The Philippine pharmaceutical industry does not manufacture its own active ingredients, but imports them (Lao, 1997). The 471 registered pharmaceutical companies (PHAP, 2008) are engaged primarily in compounding medicines and processing them into dosage forms, or importing the finished products and repackaging them under their own brand name. Until early last decade, Unilab was a notable exception. Along with its sister company Chemfields, Inc. (which government partially owned), it used to manufacture raw materials for Amoxicillins, Ampicillins, and Cloxacillins. Today, however, it is estimated that 90% of raw materials used to manufacture drugs in the Philippines and at least 20% of fully processed medicines—possibly much more—are imported (Aldaba, 2008; J.M. Echave, personal communication, July 15, 2010; Lao, 1997).

We usually associate the brand name of a drug (e.g., Biogesic) with a pharmaceutical company (e.g., Unilab), and assume that the company produces or imports, packages and markets that drug. This is not always the case, however. Pharmaceutical companies occasionally enter into joint ventures and co-marketing agreements with each other. Under such arrangements, a pharmaceutical company manufactures a product that is then packaged, sold, and marketed under a different brand name by a second company (J.M. Echave, personal communication, July 15, 2010). Some pharmaceutical companies, which are known as toll manufacturers or contract manufacturers, do not own any brands at all. Instead, they are contracted to manufacture drugs by other pharmaceutical companies that sell the products under their own brand names (K. Tantiansu, personal communication, June 22, 2010).

In the pharmaceutical industry, a distinction is often made between research-based manufacturers—that is, those who develop new products—and manufacturers that specialize in producing their own versions ("generic" versions) of off-patent drugs. In the Philippines, the largest foreign drug companies are research-based.

Comparatively, local pharmaceutical companies own few of their own patents, if any, focusing instead on producing (or importing and repackaging) off-patent drugs. The limited scope of local research and development is evident in the figures from the Intellectual Property Office (see Table 2). From 2001 to 2005, only 22 locally published pharmaceutical patent applications were filed, compared to 170 foreign pharmaceutical patent applications. In the same period, only one local pharmaceutical patent was issued, compared to 2,097 foreign pharmaceutical patents (IPO, 2006).

Table 2. Number of Pharmaceutical Patents Issued from 2001 to 2005

Year	Number of Foreign Pharmaceutical Patents Issued	Number of Local Pharmaceutical Patents Issued	Total Number of Pharmaceutical Patents Issued
2001	448	1	449
2002	363	0	353
2003	351	0	351
2004	531	0	531
2005 (as of Dec 2, 2005)	404	0	404

Source: IPO 2006

A brand sold by a patent-owning company is almost always more expensive than a generic equivalent. The effect of this can be seen in market share distribution. Foreign-owned drug manufacturers take about 69% to 75% of the market share in terms of peso sales, but only around half the counting units (Hartigan-Go, 2010; PHAP, 2008). Notably, though, local companies have been growing at a faster rate than have foreign companies, and their market share in terms of counting units has been steadily increasing since 2003 (PHAP, 2008; see Table 3).

Table 3. Comparative Growth Trend: Foreign and Local Companies, 2003-2007

Companies	2003 (in Bn PHP	2004 (in Bn PHP	2005 (in Bn PHP	2006 (in Bn PHP	2007 (in Bn PHP	4-year % CAGR
Foreign	50.38	56.99	60.83	65.86	71.12	9.00
Local	20.15	23.71	24.43	28.40	32.46	12.67

Source: IMS 2007

The divide between foreign research-based pharmaceutical companies and local manufacturers of off-patent drugs is evident in the self-organization of the sector. There are two large trade associations among pharmaceutical companies. Most of the research-based pharmaceutical companies--48 in all--are members of the Pharmaceutical and Healthcare Association of the Philippines (PHAP). On the other hand, 38 local manufacturers and importers comprise the Philippine Chamber of Pharmaceutical Industries. Three of the largest pharmaceutical companies in the country are members of neither group; these are Pfizer, Servier and Merck.

The single most dominant entity among the local manufacturers is Unilab, the leading drug company in the country (based on value) and also the only local manufacturer among the country's top ten. Unilab controls about 20% of the total pharmaceuticals market. In comparison, the combined market share of all the other local pharmaceutial companies is around 5%.

Another player in the Philippine pharmaceutical trading sector is PITC-Pharma, the pharmaceutical subsidiary of the government-owned Philippine International Trading Corporation. PITC-Pharma procures some of the medicines used by or sold in government hospitals, Botika ng Bayan-accredited pharmacies, and Botika ng Barangay community drugstores which are run by community organizations or cooperatives in partnership with local government units (J. Cortez, personal communication, May 18 2010; DOH, 1996).

Distribution and Wholesale

Some 4,889 licensed pharmaceutical distributors/ wholesalers handle the distribution of pharmaceuticals to drug retailers, hospitals, companies, and clinics. In many instances, the parent manufacturing /trading company itself handles distribution (FDA, 2010; see Figure 1).

Zuellig Pharma and its subsidiary, Metro Drug, control 60% of pharmaceutical distribution in the country, mostly of drugs originating from research-based multinational pharmaceutical companies.

Large chain retailers—that is, retailers with several branches around a region or around the country--are frequently able to sell drugs on consignment and can negotiate for better terms of sale or bulk discounts from distributors. Smaller retailers, on the other hand, tend to rely on wholesalers and jobbers who offer less attractive terms, but are able to sell smaller quantities of products. Consignment arrangements with smaller retailers are usually offered only by new distributors or for new products that pharmaceutical companies are seeking to introduce to the market (F. Intal, personal communication, May 25, 2010; Lao, 2006).

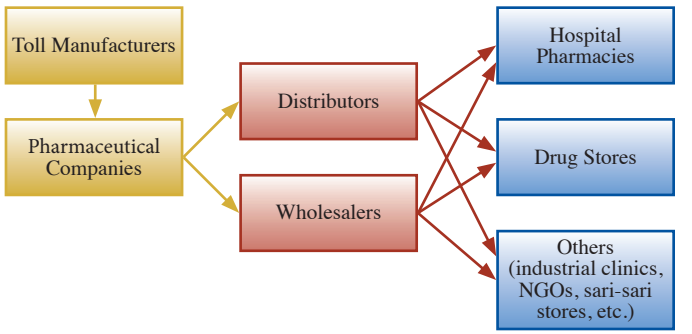

Figure 1. Medicine distribution in the Philippines

Retail and End-Users

Philippine law requires that the dispensing of most medicines be done by pharmacists rather than by doctors. For this reason, the retail outlet is most frequently the end-users' source of medicines.

In contrast to residents of countries with strong public healthcare systems, end-users in the Philippines purchase most of their medicines through private rather than government channels. An estimated 85% to 90% of medicine sales (by value) occur through private retail outlets (DOH, 2005; Kanavos, 2002;); while of the remainder, around 70% are purchased from private hospitals (PHAP, 2008).

The April 2010 figures from the Food and Drug Administration (FDA; formerly known as the Bureau of Food and Drugs) put the number of pharmaceutical retailers at 34,296, exclusive of hospital pharmacies. Seventy-two percent (more than 24,000) of these were private drugstores, while 26% (almost 9,000) were Botika ng Barangay drugstores. The rest were mostly Chinese drugstores and retail outlets for non-prescription drugs. Apart from these, pharmaceutical products also reached end-users via some 1,700 private and public hospital pharmacies, industrial and medical clinics, groceries and supermarkets, trading stores and sari-sari stores, NGOs and socio-civic organizations (Ball & Tisocki, 2009; Lao, 1997).

Chain retailers accounted for 60% of the retail market in 2007. The most dominant player of these was Mercury Drug Corporation, which accounted for 50% of the entire market.

Per 2007 figures, Metro Manila accounted for the largest share of the country's total drug distribution, with 41.7% of all pharmaceutical sales occurring in the metropolis. In contrast, the Visayas accounted for only 14.77%, while Mindanao accounted for only 12.92% of pharmaceutical sales (PHAP, 2008).

Marketing

In the interest of ensuring rational drug use, the FDA prohibits the advertising and promotion of prescription drugs, except through publications and literature intended for medical professionals. This is presumably to prevent the general public from self-medicating (BFAD, 1987; N. Lantin, personal communication, May 16 2010).

For this reason, the marketing of ethical products ("ethical marketing") in the Philippines is targeted primarily at prescribing physicians and dentists, and, secondarily, at pharmacists of drugstores and hospitals (Lao, 2006). Ethical marketing is done by personal representation through medical representatives, sponsorship of events, and advertising in medical publications.

Only over-the-counter drugs and nutritional supplements are actively marketed to patients (N. Lantin, personal communication, May 16 2010; Lao, 2006). Promotion campaigns for OTC medicines are regulated by the Department of Health (DOH), which prohibits the use of sample medical prescriptions, travel awards, and the promise of rewards as part of promotional campaigns for OTC drugs (DOH, 2000).

Regulation

A number of government and private bodies regulate the pharmaceutical industry. The FDA licenses pharmaceutical retailers (except hospital pharmacies), manufacturers, traders and distributors. Medicines must be tested and certified by the FDA before they can be marketed. The FDA is also the body that ensures that pharmaceutical manufacturers, traders, distributors, and retailers comply with various regulations such as labeling requirements, guidelines on advertising and promotions, dispensing guidelines, and regulations on clinical trials and drug analyses. Meanwhile, the DOH Bureau of Health Facilities regulates hospital pharmacies.

Pharmaceutical manufacturers and traders exercise self-regulation through their trade organizations. The Pharmaceutical and Healthcare Association of the Philippines has a code of ethics that restricts the marketing practices of member-companies; it can fine violators amounts ranging from PhP20,000 to PhP300,000 (PHAP, 2006; E. Tantia, personal communication, May 18, 2010). The Philippine Chamber of the Pharmaceutical Industry does not have a self-regulation mechanism, but it audits the operations of applicant-companies before they are admitted to the organization (E. Isaac, email interview, May 29, 2010). The Drugstores Association of the Philippines has a code of ethics that restricts unfair competition and the misrepresentation of pharmaceutical products (F. Intal, personal communication, May 25,2010).

Purchasing Behavior

The most frequently purchased pharmaceutical products in the Philippines are infant formulas, fluid and electrolyte replacement solutions, general nutrient supplements, vitamin supplements, pain relief medicines, and cough medicines. In terms of value, anti-infectives, anti-hypertensives, pain relief medicines, and nutrition supplements accounted for the biggest amounts of sales in 2007 (IMS, 2007).

The Philippine pharmaceutical market is highly segmented, and colloquial distinctions among drugs follow suit. Internationally, distinctions are made among *originator drugs, branded generics* and *non-branded generics*. Originator drugs are those medicines sold and marketed by the patent-owning company. Branded generics are drugs that are no longer covered by patent restrictions; or are manufactured under license from the patent-owning company and are then marketed under a brand name different from that used by the originator drug. Finally, non-branded generics are drugs sold without a brand name; these drugs are usually off-patent drugs.

In the Philippines, Filipinos often use the description “branded” to refer both to originator brands as well as certain branded generics that are perceived as being of higher quality than others. The higher-priced branded generics and originator brands tend to be targeted at wealthier Filipinos.

On the other hand, lower-priced branded generics, “unibranded” generics (meaning, several medicines marketed under a single registered brand name, such as “Ritemed” or “Pharex”), and non-branded generics tend to be targeted

at poorer Filipinos (Ball & Tisocki, 2009; F. Intal, personal communication, May 25, 2010).

In the case of prescription medicines, purchasing behavior is largely shaped by the prescriptions given by physicians. In a survey IMS Health did of patients in key Philippine cities from February to March 2010, around 90% of respondents reported that they purchased the brand of medicine specified by the physician. More than half of the physicians in the same survey reported that they preferred "branded" medicines over generic ones, although they indicated that they also considered the patients' capacity to pay when writing prescriptions, and prescribed the most cost-effective choice for their patients (R.J.E. Reyes, oral presentation, July 6, 2010).

The Pricing Components of Medicines

The price paid by consumers for medicine includes mark-ups made all along the supply chain. A lack of transparency regarding mark-ups, however, makes it difficult to validate information regarding the price components of drugs. Estimates regarding price components vary widely.

Foreign pharmaceutical companies set different price points for the same drugs in different countries, and the first mark-up can be said to occur in the transaction between the company's head office and the local Philippine office (R.L. So, personal communication, June 23, 2010). Beyond this, the Institute of Popular Culture (IPC) estimates that an imported drug accumulates add-on costs of at least 20% from the cost-insurance-freight price, due to import tariffs, finance charges, quality control testing

Table 4. Minimum Add-on Costs and Mark-ups for Imported Drugs

	Add-on cost/Mark-up	Hypothetical case
Price of imported drug: cost-insurance-freight price	N/A	10.00
Import tariffs, finance charges, quality control testing fees, national corporate taxes, transport costs	20%	12.00
Local offices of foreign pharmaceutical companies	4.5% to 12.5%	12.54 to 13.50
Distributors/Wholesalers	5% to 13%	13.17 to 15.26
Retailers (Ball & Tisocki's estimate)	5% to 13%	13.83 to 17.24
Value-Added Tax	12%	15.49 to 19.31

Sources: Ball & Tisocki 2009; Pabico 2008

fees, national corporate taxes, and transport costs (Pabico, 2008; see Table 4;).

The IPC also estimates that apart from these add-on costs, the entire wholesale markup is at the very least 17.5%. Following Ball & Tisocki's estimates (2009), we can deduce that in the case of originator drugs, local offices of foreign pharmaceutical companies have a mark-up of at least 4.5% to 12.5%, with the distributors and wholesalers marking this up further by 5% to 13%.

The retailers' mark-ups for originator drugs are estimated by Ball & Tisocki (2009) to be anywhere between 5% and 13%, a figure confirmed by the DOH (R.L. So, personal communication, June 23, 2010) and the DSAP (F. Intal, personal communication, May 25, 2010). The

IPC's estimates of retailers' mark-ups are much higher, though, at 20%. Finally, an additional 12% value added tax is charged to the consumer.

For locally produced generic drugs, the range of mark-ups is much higher. No estimates could be found regarding the manufacturers' mark-ups, but Ball and Tisocki (2009) estimate the distributors' mark-ups to range from 5% to 355%, and retailers' mark-ups to range from 18% to 117%.

High Medicine Prices and the Cheaper Medicines Act

Prices of Drugs in the Philippines

The high segmentation of the Philippine pharmaceutical market indicates that there are wide disparities in the costs of medicines across social classes.

Among the sources of cheaper medicines in the Philippines are pharmacies and hospitals supported by PITC-Pharma. In 2001, the Philippine government through PITC-Pharma began to import medicines from overseas, especially from India, where weak patent laws, a developed pharmaceutical manufacturing industry, and low manufacturing costs make Indian generics the cheapest in the world (J. Cortez, personal communication, May 18, 2010; J. Flores, May 17, 2010; Ratna, 2004;).[1] The program partially supplies some government hospitals. Since 2004, it has also been supplying government-supported private pharmacies (Botika ng Bayan), community drugstores (Botika ng Barangay) and free medicine programs (e.g., free vaccinations), all of which cater to the poorer Filipinos (J. Cortez, personal communication, May 18, 2010).

The reach of these government efforts is very limited, however. As of 2010, only 2,000 Botika ng Bayan

[1] Indian patent laws place restrictions only on the copying of manufacturing processes, and not on the products themselves. This feature of the Indian law, coupled with local scientific expertise, allows Indian generics manufacturers to reverse-engineer and produce their own versions of some of the best-selling patented drugs (Mc Neil, 2000). Apart from this, the pharmaceutical expertise and the scale of drug manufacturing in the country also allow India to manufacture in the country also allow India to manufacture off-patent generic drugs at a low price.

Table 5. Public Procurement Summary MPRs in Various Countries, 2009

Country	MPR	Country	MPR
Philippines	2.9	Thailand (2006)	1.5
Shanghai, China (2006)	1.5	El Salvador (2006)	1.1
Indonesia (2004)	1.7	Ghana (2004)	1.0
Malaysia (2004)	1.1	Jordan (2004)	0.6

Source: Ball & Tisocki 2009. Data obtained bv Ball & Tisocki from database at http://www.halweb.org/medicineprices March 2009

Note. The median price ratio (MPR) is calculated by dividing the median local unit price of a medicine by the international reference price. Procurement of generic medicines is considered efficient if the MPR is 1 or less.

pharmacies were in operation (J. Cortez, personal communication, May 18, 2010), and fewer than 9,000 Botika ng Barangay outlets had been licensed by the FDA (FDA, 2010). The decentralization of the Philippine health care system also means that local government units must do most of their own medicine procurement for provincial and municipal hospitals. Studies on the public procurement of medicines in the Philippines have found that the system is hampered by budget-release delays, corruption, oligopolies in the market, and other problems. One study conducted at a DOH-retained hospital in 2006 suggested that even without governance issues, public bidding failed to pull down prices: the hospital was found to be paying prices similar to distributors' list prices (Ball & Tisocki 2009). In fact, decentralization itself may also hinder price reductions: Higuchi (2009) suggests that because smaller municipalities purchase medicines in small amounts, the unit cost per drug comes out higher in these areas, and suppliers have less incentive to bid, given the potentially small volumes of sales.

These could be some of the reasons, then, why even medicines in government hospitals are still expensive, on average, compared to drugs available in other countries. Based on the World Health Organization/Health Action International (WHO/HAI) standardized method for measuring medicine prices, the lowest-priced generics in Philippine government hospitals cost 2.9 times (Ball & Tisocki's estimate [2009]) to five times (Batangan's estimate [2005]) more than the international reference prices (IRP). IRP refers to the actual prices offered by non-profit pharmaceutical organizations to developing countries (see Table 5).[2]

Because of the low availability of government-subsidized medicines, most Filipinos purchase drugs from unsubsidized private retail drugstores. According to 2002 figures, almost 90% of medicine sales (by value) are purchased from private retail outlets; while of the remainder, 70% are procured from private hospitals (Ball & Tisocki, 2009). Batangan et al. (2005) found the lowest-priced generics in private pharmacies to be almost six times more expensive than the IRP; while Cameron et al. (2008), who did not distinguish between public and private sources, placed the median price ratio of the lowest-priced generics in the Philippines at almost three times the IRP. Batangan et al. (2005) found that originator brands and the more expensive branded generics purchased by wealthier Filipinos had a median price ratio that was 17 times more expensive than the IRP.

The conclusion that drug prices are exorbitant in the Philippines was also reached by Kanavos et al. (2002)

[2] Ball & Tisocki (2009) emphasize, however, that this does not mean that government procurement is always inefficient. They point out that PITC-Pharma procured generics at the average (median) MPR of 1, and that individual hospital summary MPRs ranged from 0.7 to 9.3.

using different measures: they calculated the relative price of pharmaceuticals to food items in various countries. By this standard, the Philippines (with Indonesia) ranked second only to the United States in terms of high relative prices of drugs. Kanavos' group further calculated drug prices as a percentage of the monthly GDP per capita in purchasing power parity (PPP) dollar prices of 1995, and found that the prices of drugs in the Philippines were the highest among all the countries surveyed, for most of the drugs examined.

Apart from high retail prices, Filipinos experience very little relief by way of reimbursements. Despite the existence of a national health insurance system, public reimbursements for outpatient medicines are almost non-existent. Most private health maintenance organizations give very limited reimbursements for medicines, instituting low caps on reimbursable amounts.

Lowering Drug Prices: Accessibility or Purchasing Power?

Given that drugs in the Philippines are more expensive than drugs in most other parts of the world, it is no surprise that legislators have repeatedly sought ways to bring down these prices. However, this raises the question: to what end should drug prices be lowered? Clarifying the end-goal can help identify how the success of price controls should be measured.

In discussions, three reasons are usually offered for lowering drug prices. First, it is argued that if medicine prices are lowered, more of the population—especially the poor—will have access to health care, will purchase more medicines, and will therefore be healthier. Second, it is

argued that if medicine prices are lowered, patients are more likely to comply with doctor's prescriptions. And third, it is argued that lowering prices benefits all consumers, because it frees up their budgets, thereby allowing them to spend their money elsewhere. A closer look at each of these arguments is in order at this point.

The first rationale frames the issue as one of health access. The argument presumes that the poor do not buy medicines because high prices prevent them from doing so; thus, lowering prices will push more of the poor to purchase medicines.

This framing does not paint the whole picture, however. The penetration of conventional Western medicine across the Philippine population, as a whole, remains limited. Although statistics on the Philippines from the World Health Organization place physician density as of 2002 at a respectable 12 doctors per 10,000 people (compared to Malaysia's 7 per 10,000 [2002] and Singapore's 15 per 10,000 [2003]), the number can be misleading as there is a huge inequity in the distribution of doctors between rural and urban areas (Ball & Tisocki, 2009; WHOSIS, 2010). Moreover, the number of practitioners of Western medicine is dwarfed by the number of practitioners of traditional medicine or CAM (Complementary and Alternative Medicine). The DOH reports that there is about 1 CAM practitioner for every 300 Filipinos (Mendoza, 2010), which translates to 33.3 CAM practitioners for every 10,000 Filipinos. A joint survey commissioned by the DOH and the Philippines Institute for Development Studies in 1993 found that among the poorest quartile of Filipinos, only 25% consulted medical doctors, while 60% consulted traditional healers. A 2001 survey by the Social Weather Station for the World Bank Filipino Report Card on

Pro-poor Services, on the other hand, found that the poorest 30% of Filipinos went to traditional healers slightly more frequently (40%), than they did village health stations (37%) or government hospitals (37%).

In light of these observations, it can be argued, then, that the consumption of medicines among the poor must be looked at in the larger context of their health-seeking practices, as well as the accessibility of prerequisite forms of medical care, such as doctor consultations. Lowering the price of medicines alone may not necessarily translate to increased consumption of medicines among the poorest.

The second argument also frames the issue as one of accessibility. It presumes that among patients who *do* consult doctors, the high prices of medicines hinder prescription compliance. In their research on patients' compliance to prescriptions in the Third World, Homedes & Ugalde (1993) cited external constraints, such as high prices, as one among four possible reasons why patients do not comply with doctors' prescriptions. Interestingly, self-reported data regarding medication provide divergent information as to the extent of this problem.

One set of data that contradicts this framing is found in the IMS Health survey conducted in key cities throughout the Philippines. In that survey, more than 90% of patients with diagnosed conditions reported that they followed both the duration and dosage of doctors' prescriptions. Further, when the data from class DE (patients whose monthly household incomes were lower than PhP15,000) were isolated and studied, 87% of the patients from these classes also said that they followed the prescribed duration of medicine intake. Many patients from all social classes, however, admitted that they did not

purchase the number of counting units specified by the physician in the prescription. Perhaps, these two apparently opposing claims can be reconciled if we allow for the possibility that patients complete their prescription in parts, purchasing a few doses at a time, until the prescription is completely filled (B. Lazaro, oral presentation, July 6, 2010).

On the other hand, in a more specific study on Filipino diabetes patients (2009), Higuchi's nonrandomized interviewees were asked whether they had dropped any form of medical care for their diabetes in the past. Sixty percent of Higuchi's interviewees admitted having dropped diabetes medication at some point—this, despite the fact that Higuichi's respondents also claimed to prioritize medication over other forms of medical care (e.g., laboratory tests, consultations with physicians, hospitalization). Financial constraint was the most frequently cited reason for the irregularity of any kind of medical care.[3]

A third way of framing the issue of high prices is to see the high prices of medicines as an undue burden on patients who might have used the money for other needs. In other words, it might be argued that Filipinos spend too much on medicine, in relation to other expenses.

When looked at in this light, it becomes apparent that the high prices of drugs are only one part of the problem. In their study of non-rational drug use [4] in developing countries, Le Grand, Hogerzeil & Haaijer-Ruskamp (1999) reveal that unnecessary medicine purchases often begin at the point of prescription: physicians may overprescribe drugs and injections, or may simultaneously prescribe many drugs when, in fact, fewer are necessary to treat a condition. Some observers believe that Philippine physicians may fit this description.

Hardon & van der Geest (1987) describe Philippine doctors as having a tendency to overprescribe. In a study involving 45 Malabon-based private physicians who treated adult tuberculosis, Auer (2003) found that overmedication was a common problem: one medicine was frequently overdosed, and another drug that had not been found by studies to be necessary in the treatment of TB was commonly prescribed.

Another component of the problem is irrational drug dispensing. There is evidence, too, that this problem may be rampant in the Philippines. In their 2004 study that involved 271 drugstores, Sia et al. found that 83.4% dispensed Amoxicillin without a prescription and 73.4% recommended antibiotics for flu symptoms. In such cases, patients may be unnecessarily spending on drugs that will not help with the conditions they seek to treat.

Finally, practices that patients themselves engage in also lead to unnecessary expenditures on drugs. Hardon & van der Geest (1987) observe that some Filipinos inappropriately self-medicate, leading to unnecessary expenditures, aside from exposing themselves to the risk of drug contraindications.

This is not to say that the quest to make medicines more accessible and to lessen the financial burden of drugs on the populace cannot be helped by lowering drug

[3] Other respondents replied that they stopped taking medication because they no longer felt ill, or because they wished to avoid perceived side effects from medication.

[4] A the 1985 WHO conference in Nairobi, the World Health Organization delineated that the rational use of drugs "requires that patients receive medications appropriate to their clinical needs, in doses that meet their own individual requirements for an adequate period of time, and [at] the lowest cost to them and their community." Defined from this therapeutic perspective, rational drug use involves a number of factors. First, it requires that patients visit health providers. Second, it requires that these health providers prescribe them appropriate drugs. Third, it requires that the patients receive accurate drugs from drug dispensers. And fourth, it requires that the patient take the drugs properly.

prices. Nonetheless, it is clear that the pursuit of these goals must transcend a narrow focus on the prices of drugs.

Attempts to Lower Prices

Increased Competition and the Strengthening of the Local Generics Manufacturing Industry: Efforts Prior to the Cheaper Medicines Act

One of the suggested reasons for the high prices of medicines in the Philippines is the oligopolic character of the domestic pharmaceutical industry. Many policy attempts to lower the prices of medicines in the Philippines have thus focused on increasing competition in the pharmaceutical industry, strengthening the local generics manufacturing industry, or both. Some of them are discussed below.

In 1982, President Ferdinand Marcos signed Executive Order No. 776 s. 1982, "Allowing the Importation of Semi-synthetic Antibiotics Only on Quantities and Types Not Produced in the Philippines." For the next two decades, all Ampicillins, Amoxicillins and Cloaxicillins sold in the country were manufactured by Chemfields (a sister company of Unilab).

In 1988, Republic Act No. 6675, also known as the "Generics Act of 1998," was signed into law. It promoted the use of generic names for pharmaceutical products. Certain provisions in the said law—such as the requirement that medicine packages be labeled and marketed with the generic name of the product on them—drew full compliance. Other provisions, however, such as the promotion of the exclusive use of generic terminology, did not. Prior to the enactment of the Cheaper Medicines

Act, the requirement that doctors, dentists, and veterinarians write prescriptions using generic names was only partially complied with. Compliance with the law has also had its ups and downs, depending on the focus given to it by the sitting health secretary. Health Secretaries Bengzon, Flavier, and Romualdez all emphasized compliance with the Generics Law, while Secretaries Ramiro, Noriega-Reodica and Estrella did not (Pabico, 2006).

In 2001, the government, through PITC, began to purchase branded medicines from countries with lower drug prices such as India. These parallel-imported drugs were supplied to some government hospitals and government-subsidized drugstores. The legality of this practice was a matter of debate, but the passage of the Cheaper Medicines Act in 2009 removed any legal hindrances to the practice by preventing multinational pharmaceutical companies from asserting that parallel importers could not use local trademarks for drugs.

The private and NGO sectors have also made some notable efforts to lower drug prices, increase drug accessibility, and promote the acceptability of generic equivalents among Filipinos. Since the 1990s, NGOs have helped communities establish cooperative-managed pharmacies and community-based drug insurance programs like Botika Binhi, in order to make essential drugs more accessible to the poor.

"Unibranding"—the marketing of a wide range of medicines under a single brand name—is one effort initiated by the business sector that has pulled down marketing costs. The more widely known unibrands include Ritemed (the unibrand subsidiary of Unilab), established in 2002, and Pharex (the unibrand subsidiary of Pascual Laboratories, Inc.), established in 2003.

In 2002, Unilab began to manufacture generic versions of patented medicines in cases where the patents were either for specific formulations, or where the patents were frivolous and could therefore be challenged. According to Unilab Corporate Vice President Jose Maria Echave (personal communication, July 15, 2010), in so doing, Unilab was able to provide generic alternatives that could be sold at prices as low as 50% of the prices of originator brands, even before the patents of the originator brands had expired.

A third example of private efforts to increase competition has been the attempt to push for the acceptance of unbranded pharmaceuticals, through the promotion of the word "generics" as a brand. This has been the strategy of drug trader and wholesaler Pacific Pharma Generics, Inc. which opened its retail arm called "The Generics Pharmacy" in 2001, and Erikagen Inc., which opened the first Generika Drugstore branch in 2003. Both retailers focus on selling unbranded generics, although their outlets also sell branded products. The Generics Pharmacy and Generika Drugstore are fast-growing franchisors. As of August 2010, The Generics Pharmacy had almost 900 outlets, while Generika Drugstore had over 100.

Provisions for Increased Competition in the Cheaper Medicines Act

The "Cheaper Medicines Act" or Republic Act No. 9502 was signed into law on 6 June 2009. It contains three sets of provisions specifically aimed at lowering drug prices in the Philippines.

The first, already mentioned above, is the legalization of parallel importation. The law amended the Intellectual Property Code of the Philippines by clearly allowing the government or private third parties to purchase branded drugs and medicines from foreign distributors. Multinational pharmaceutical companies often set different prices for their brands in different markets. Under the new law, the government, or a Philippine drug distributor or retailer may source a branded drug from a distributor in another country, where the price points are lower, for so long as the said drugs had been approved for entry by the FDA (Senate, 2008a).

Critics of the legalization of this practice include both foreign multinationals, as well as local manufacturers. Foreign multinationals argue that allowing the importation of their own brands from foreign distributors makes it more difficult for local offices to oversee the safety and genuineness of their products in the Philippines, since they are no longer the sole gateway into the Philippines of their brands. Local manufacturers, on the other hand, complain that the measure weakens the local generics manufacturing industry by opening up the market to an influx of cheaper imported originator drugs and branded generics. Proponents of the measure insist, however, that parallel importation frees the flow of branded drugs into the Philippines and makes branded drugs available to Filipinos at prices closer to the lower prices abroad.

The second category of correctives introduces flexibilities into the country's patent laws. To begin with, the new law expedites the process by which compulsory licenses are granted. Ordinarily, it is the patent owner who licenses another entity to use a patented invention. In cases when a patent owner unreasonably refuses to grant a license, the government, through the Intellectual Property

Office, may opt to grant that license on behalf of the patent owner. This procedure is known as compulsory licensing. Prior to the enactment of the Cheaper Medicines Act, decisions regarding compulsory licenses for pharmaceutical products were often subject to long delays. These decisions were sometimes issued after the patent had expired, rendering the entire process moot. Moreover, patent owners sometimes applied for writs of preliminary injunction to delay the IPO's decisions (Villanueva, 2009).

The Cheaper Medicines Act removes some of the impediments that used to lead to these delays. The IPO is now required to decide on compulsory license applications within strict time frames. Only the Supreme Court may now issue any injunction that will prevent the grant of the special compulsory license (Villanueva, 2009). Because of these amendments, it has become easier for generics manufacturers to apply for compulsory licenses to produce their own versions of patented products, when a national emergency or other circumstances of extreme urgency warrant them.

The law also allows the Philippines to comply with a 2003 World Trade Organization (WTO) decision regarding pharmaceutical patents. In 2001, WTO members issued the DOHA Declaration on TRIPS and Public Health. The Declaration expressed concern over the fact that developing countries may find it difficult to access life-saving medications for diseases that threaten public health, because of existing rules on patent protection. On 23 August 2003, the WTO General Council decided to allow member-countries that could not manufacture these needed drugs for their citizens, to issue a compulsory license and import such drugs from countries that had issued a compulsory license themselves. The Cheaper

Medicines Act grants the IPO director-general the power to issue, upon the recommendation of the Health Secretary, these special compulsory licenses.

Another change effected by the Cheaper Medicines Act is that it allows generics manufacturers to begin the production of a patented drug for scientific, experimental, or educational uses. The Act grants the manufacturer permission to begin the development and testing of the generics version of a drug, even before the originator's patent has expired.

The Cheaper Medicines Act also seeks to end the practice referred to as "evergreening." Evergreening is considered an abuse of patent law, whereby a patent owner issues a new patent on a slightly different formulation of a patented drug, with the intention of extending the patent. The law prohibits this by limiting the parameters whereby a patent filer for a drug can claim that his invention contains an inventive step.

Apart from these changes in the country's patent law, the Cheaper Medicines Act also attempts to increase the availability of more affordable medicines in a third way: by seeking to make generic products more acceptable to patients. Specifically, it clarifies that all pharmaceutical manufacturers in the Philippines are required to produce and distribute unbranded generic counterparts of their branded products. Further, it requires that generic versions of drugs be labeled with a statement declaring that the product has "the same therapeutic efficacy as any other generic product of the same name."

Price Controls and the Cheaper Medicines Act

The final feature of the Cheaper Medicines Act and the one that has attracted the most media coverage is its institution of price control mechanisms on drugs. This part of the law was one of the contentious elements debated upon by the bicameral conference committee tasked to reconcile the draft prepared by the Upper House with that prepared by the Lower House.

The 2007 Senate Committee Report that recommended the approval of Senate Bill No. 1658 ("An Act to Provide for Quality Affordable Medicines") had expressed the committees' strong reservations about allowing price control, and had echoed objections to such measures from various stakeholders and analysts, including DOH Undersecretary Alexander Padilla, and noted economists and business professors (including Drs. Felipe Medalla, Cielito Habito, and Cid Terosa). The Senate Committee Report had also cited WHO's finding that drug price regulation does not affect medicine prices. [5]

One of the main arguments against price control is that it exposes the market to the danger of incorrectly pegged prices. If the price caps are too low, manufacturers may not be able to produce the quantities needed by the market, and this could lead to supply shortages (F. Aldaba, personal communication, July 12, 2010).

In addition, the implementation of price controls signifies that, instead of market forces determining the

[5] The Committee Report noted that the Philippine Nursing Association (PNA) and the Health Alliance for Democracy (HEAD) both expressed their support for price control. It also noted that the Drugstores Association of the Philippines (DSAP) recommended price referencing as a better alternative to imposing price ceilings.

price of a drug, a single regulatory body is in charge of determining the "proper" price of the drug. Having such a regulatory body in place opens up opportunities for corruption and undue influence from industry (F. Aldaba, personal communication, July 12, 2010).

There are those who believe that price controls work best when accompanied by a strong reimbursement system or when there is a large third-party purchaser of medicines (e.g., the government or HMOs) in the country. In such an environment, the government or the third-party purchaser behaves as the pharmaceutical companies' largest client, using its buying power as leverage to demand lower prices. In the Philippines, however, neither of these two conditions is in place (J. Echave, personal communication, July 15, 2010; C. Dauphin, personal communication, July 13, 2010).

The final version of the Senate Bill that was passed allowed the Philippine president to impose price ceilings upon the joint recommendation of the Secretaries of the Department of Health and Trade and Industry, during specific emergency situations, as follows: before, during or right after a calamity, a public health emergency, or an event that causes an "artificial and unreasonable" increase in the prices of a drug; during a prevalence of acts of illegal price manipulations of a medicine; and "whenever the prevailing price of any drug or medicine has risen to unreasonable levels." The inclusion of these parameters for price control followed the recommendation in the Senate Committee Report that price control be a measure of last resort.

On the other hand, price controls on drugs were a key feature of the House version of the Bill, namely, HB No. 2844 of the Fourteenth Congress, entitled "An Act

Providing for Cheaper Medicines, Amending for the Purpose Republic Act No. 8293 or the Intellectual Property Code, Republic Act No. 6675 or the Generics Act, and Republic Act No. 5921 or the Pharmacy Law, and for Other Purposes." The bill provided for the creation of a seven-member Drug Price Regulation Board attached to the DOH that would have the power to determine the maximum retail price of certain drugs "when the public interest so requires."

Iloilo Representative Ferjenel Biron, principal author of the House bill, argued that free market competition, even when strengthened by parallel importation, was insufficient to lower the costs of medicines given the oligopolic character of the industry (Pabico, 2008; Senate, 2008a). The view that tighter government intervention is necessary to lower prices is echoed by PITC-Pharma's Vice President for Marketing and Sales, Jose Cortez (personal communication, May 18, 2010), who points to the pattern of mergers among multinational pharmaceutical companies as a sign that the industry is becoming less, rather than more, competitive.

The compromise reached at the bicameral conference was to grant the power of drug price regulation not to a board, but to the Philippine president, upon recommendation of the Health Secretary, "as the situation may warrant" (Senate, 2008a; Congress, 2008; Republic Act No. 9502). The Technical Working Group tasked with deciding on the wording of the act set a deadline of 120 days after the enactment of the law, for the Health Secretary to establish and initiate a system of price regulation (Senate, 2008b).

Voluntary and Mandatory Price Reductions Following the Signing of the Cheaper Medicines Act

Following the signing into law of the Cheaper Medicines Act, the DOH drew up a list of 21 drugs and medicines on which would be imposed maximum drug retail prices (MDRP), and corresponding proposed rates for the price ceilings. The 21 drugs that were chosen for inclusion in the list fell under at least one (but not necessarily all) of four criteria: (1) the drug addressed a condition that was a public health concern; (2) the drug was priced at least four or five times more in the Philippines than it was in other ASEAN countries; (3) the originator drug had fewer than three or four generic equivalents being produced at the same scale; and (4) for that particular molecule, the originator drug was the most expensive and the most sought after. According to Robert Louie So (personal communication, 23 June 2010), program director for the National Center for Pharmaceutical Access and Management (NCPAM) of the DOH, the list was drawn up after internal and external studies had been done on the pharmaceutical industry, based on both local and international data. The new price point—50% of the originator drug's retail price—was chosen based on the fact that generic counterparts of originator drugs were usually priced at that rate when introduced in the market, following the expiry of the drug patent.

On 8 July 2009, President Gloria Macapagal-Arroyo met with representatives of various multinational drug companies and directed them to voluntarily lower the prices of certain drugs. As a result of this meeting, eight foreign multinational pharmaceutical companies and one local distributor lowered the prices of 16 molecules (41 drug preparations) by 50% (Advisory Council, 2009). In addition, the pharmaceutical companies also drew up price

caps for 22 other molecules, pegging the ceilings at around 10% to 15% lower than the originator brands' previous price points. Under this voluntary Government-Mediated Access Price (GMAP) scheme, pharmaceutical companies may make representations before the DOH, recommending that the ceilings be raised, if they could show justification for such (E. Tantia, personal communication, May 18, 2010).

On 27 July 2009 President Arroyo signed Executive Order No. 821 imposing MDRP on the five remaining drugs, the prices of which had not been voluntarily lowered by the pharmaceutical companies. Unlike the prices of medicines under the GMAP scheme, the price ceilings of drugs under the MDRP list could only be changed by a new executive order (E. Tantia, personal communication, May 18, 2010).

All price ceilings set during this first round of price cuts went into effect on 15 August 2009, with a one-month extension allowed for small retailers that could not comply with the price cuts immediately.

After government meetings with 11 pharmaceutical companies, price ceilings were again drawn up in February 2010 for an additional 97 drugs and medical devices under the GMAP scheme. The new round of price ceilings went into effect on 31 March 2010 (Crisostomo, 2010).

In response to both rounds of price cuts, some manufacturers of generic versions of the affected drugs. whose prices had already been lower than the ceiling, also decreased their prices to better compete with the originator drugs' new price points.

Effects of the 2009 Price Controls

Effects of Price Controls on Medicine Sales

In succeeding discussions regarding the effect of the price controls on medicines, one of the questions repeatedly raised has been whether or not the price controls led to increased volume-sales of the medicines affected by the price ceilings. Following the accessibility frame discussed above (see Part II, Section II), an increase in volume-sales of the medicines from retailers to end-users ("sell-out") would mean that more people are now able to buy the medicines because of their lower prices.

Unfortunately, no scientifically-collected sell-out data on the above items are available. But in the months after the price controls were implemented, IMS Health did collect the sell-in data (i.e., the sales from the manufacturers to the distributors) of some of these drugs and their generic equivalents, based on information received from some of the country's largest pharmaceutical companies. The preliminary findings they reported during the 10th meeting of the Advisory Council on Price Regulation painted a mixed picture.

For a number of medicines, there was an increase in the unit sales both of the originator brands, as well as their generic counterparts. This finding appears to coincide with the findings of a nationwide survey of 360 physicians, who prescribe the molecules affected by the price cuts. Although 32% to 44% of the doctors surveyed claimed that they did not change their prescribing habits after the price cuts, some 22% to 26% claimed that they had increased their prescriptions of originator brands, without changing the number of prescriptions they wrote for generic equivalents (R.J. E. Reyes, oral presentation,

July 6, 2010). This data could be interpreted to mean that around one-fourth of doctors are now writing more prescriptions for the originator brands of these molecules, as a result of their having become cheaper.

Interestingly, the IMS Health data showed that the expected increase in sales had not materialized for all molecules: for some molecules, there was no increase in unit sales. Moreover, when the unit sales of ethical drugs as a whole were examined, the growth was found to be flat (B. Lazaro, oral presentation, July 6, 2010).

Both the absence of an increase in sales for certain affected drugs, as well as the flat growth of ethical drugs, as a whole, seem counterintuitive. There are a number of possible explanations for this. As mentioned, data from the physicians' survey show that 32% to 44% of doctors did not change their prescriptions despite the change in prices (R.J. E. Reyes, oral presentation, July 6, 2010). It is possible that insofar as these medicines were concerned, patients followed their physicians' prescriptions to the letter, and without a change in their prescriptions, the patients did not alter their buying habits either. Bien Lazaro, Sales and Marketing Manager of IMS Health Philippines, (oral presentation, July 6, 2010) suggested two other possible explanations for the first phenomenon: either the price cuts of those particular drugs did not push more people to buy the drug, or drugstores and hospitals were stocking lower inventories of those drugs, in response to the price cuts. Lazaro (oral presentation, July 6, 2010) also suggested that an unwillingness to stock up on drugs may explain the flat growth of ethical drugs. The uncertainty caused by the price controls may have made retailers and hospitals hesitant to stock up, even on drugs that were not under price control because of the fear that another wave of price cuts may be in the offing. Gary Lee,

Managing Director of wholesaler Dyna Drug (personal communication, June 15, 2010) offered the same explanation for his company's own tepid sales, but added that other events such as typhoons Ketsana and Parma may also have affected sales during the period. Jose Maria Echave, Corporate Vice President of Unilab (personal communication, July 15, 2010) also confirmed that certain drugstores were no longer stocking particular brands if the margins of such were too low probably because of both the price cuts as well as the Expanded Senior Citizens Act of 2010, which grants senior citizens a 20% discount on medicines.

The IMS Health data leave us with conflicting information about the effects of the price control mechanisms: increased inventory stocking of affected drugs gives us reason to believe that the sales of some medicines with reduced prices might have improved because of the price controls. That is, for certain medicines, the lower prices may have indeed improved accessibility. However, decreased stocking of ethical drugs, as a whole, may mean that the uncertainty triggered by the price controls could also adversely affect medicine supply, at least in the short-term.

Anecdotal data from other sources paint a slightly different picture. In contrast to IMS Health reports that the sales of some of the affected medicines have increased, some retailers have claimed they have not seen an increase in sales of the affected medicines (F. Intal, personal communication, May 25, 2010). The retailers' claim was confirmed by So (personal communication, June 23, 2010) who said that the retailers' contention appeared to mirror the general trend in most drugstores, but for a few exceptions.

Some retailers and distributors have also reported that the price controls have had the unintended effect of increasing the volume-sales of originator drugs relative to their generic equivalents. They claim that originator drug sales have been increasing, while the sales of the generic equivalents of these drugs have been decreasing, presumably because patients are switching (either of their own accord, or upon their doctors' advice) from generics to the originator drugs made more affordable because of the price controls (F. Intal, personal communication, May 25, 2010; G. Lee, personal communication, June 15, 2010). The physicians' survey indeed found that only a small number of them (6% to 9% of those surveyed) reported shifting their prescriptions from generic drugs to originator drugs (R.J.E. Reyes, 2010).

The physicians' survey did not, however, reveal how rampant the brand-switching has been at the point of purchase itself. If data on this can be collected, it can reveal the extent to which price control measures have been successful in terms of increasing the patients' purchasing power. As Catherine Dauphin, WHO-Philippines' Program Officer for Pharmaceuticals (personal communication, July 13, 2010) points out, if a patient who used to buy a cheaper generic medicine is now opting to buy a branded drug because it is now only slightly more expensive, then this means that the price control mechanisms did not increase that patient's purchasing power for other needs. Instead, the patient is merely maintaining roughly the same budget for the medicines he was taking prior to the institution of price controls. So (personal communication, June 23, 2010) adds that according to surveys commissioned by the DOH, as many as half of the Filipinos who buy medicine are not concerned about drug prices. This finding might well

signify the fact that Filipinos have a budget for medicines that they are content with.

All this being said, So (personal communication, June 23, 2010) argues that the very fact that pharmaceutical companies have voluntarily lowered their prices and are consulting with the DOH regarding pricing are already major victories for consumers.

Effects of Price Controls on the Pharmaceutical Industry

While it is still too early to assess the long-term effects of price controls on the industry, Lazaro (oral presentation, July 6, 2010) reported that as of March 2010, the rate of growth of the pharmaceutical industry, based on sell-out data, had decreased from between 8% and 10% over the last three to four years, to just 2.8%. According to PHAP Associate Vice President Eufe Tantia, the total industry shrank by about PhP12 billion in 2009 (personal communication, May 18, 2010).

It is clear that the loss of peso-sales has affected all sectors of the industry: the pharmaceutical companies, distributors, and retailers. Tantia (personal communication, May 18, 2010) reports that PHAP members, as a whole, retrenched approximately 600 employees in the months following the price reductions and have adopted cost-cutting measures to cope with the dramatic change in revenue.

There are divided views on the effects that the price controls have had on generics manufacturers, however. Katheryn Tantiansu, Vice President for Operations of the local pharmaceutical company, Integrated Pharmaceuticals (personal communication,

June 22, 2010) laments that the price ceilings have made it more difficult for generic drugs to compete with originator brands, because they have diminished the price advantage of generics. She believes that many smaller drug manufacturers are struggling in the wake of the price cuts, though she also notes that if the smallest drug manufacturers were to close, this might, in fact, help improve the quality of generic drugs, because the smallest drug manufacturers were the ones typically unable to comply with quality assurance standards of the industry.

On the other hand, Jose Maria Echave of Unilab (personal communication, July 15, 2010) says that the price control issue shone the spotlight on the lack of accessible drugs among the poorest Filipinos, and actually stimulated the generics manufacturing sector. He adds that some drugstores now prefer to stock the generic versions of drugs affected by the price controls, because the margins for some generics are higher than are the diminished margins from the branded drugs.

Supporters of the price cuts argue, however, that the costs to the manufacturing industry can only force the industry players to become more efficient (J. Cortez, personal communication, May 18, 2010; So, June 23, 2010). Many believe that foreign and local pharmaceutical companies operate with many frivolous costs such as the amounts spent on marketing to physicians. In the case of foreign pharmaceutical companies, So (personal communication, June 23, 2010) and Blas Viterbo, member of the Technical Working Group for the disagreeing provisions of Senate Bill No. 1658 and House Bill No. 2844 (personal communication, June 18, 2010) point to the cheaper price points in other Asian and ASEAN countries, as evidence that these multinationals are capable of selling the drugs in the Philippines at lower prices.

On the part of distributors, Gary Lee of Dyna Drug (personal communication, June 15, 2010) reports that the hesitation of their customers to stock up on inventory due to the uncertainty of the market, have stunted the wholesalers' growth as well.

Representatives of drug outlets and hospitals complain that they are particularly affected by the price cuts, especially when coupled with the discounts required by the Expanded Senior Citizens' Act. This is so because their markups are lower than those of the pharmaceutical companies. Drugstores Association of the Philippines (DSAP) President Florencita Intal (personal communication, May 25, 2010) laments that government representatives met only with the top pharmaceutical companies when drawing up the GMAP ceilings, but did not consult the retailers who, in a free market, usually set their own retail prices. Rustico Jimenez, President of the Private Hospitals Association (personal communication, May 25, 2010) adds that nine months after the first wave of price reductions was implemented, many hospitals and retailers had still not received the full rebates for the drugs that they had purchased from the manufacturers at the old prices (and which they were now selling at the new prices), pushing some hospitals to put staff on forced vacation leaves in order to cut on costs.

Projected Long-Term Consequences of Price Controls

As of this writing, it is still unclear if and when price controls will be lifted. As the different players in the pharmaceutical industry devise strategies for coping with the new state of the market, a number of possible positive long-term effects might be on the horizon.

One possible positive long-term effect of the drug price controls is that it may force pharmaceutical companies to increase distribution in order to compensate for the lack of revenue brought about by lower prices (J. Cortez, personal communication, May 18, 2010). At his presentation at the 10th meeting of the Advisory Council on Price Regulation, Lazaro (oral presentation, July 6, 2010) demonstrated that between 20% and 40% of the growth of the top pharmaceutical companies in the past had resulted from price increases. He pointed out that given the price caps, the future growth of these pharmaceutical companies would have to come from finding new markets, as well as launching new products and expanding product lines.

So (personal communication, June 23, 2010) believes that government's power to regulate drug prices also pushes pharmaceutical companies to keep their drug prices at justifiable rates. On the part of drug outlets, Intal (personal communication, May 25, 2010) says that the Drugstores Association of the Philippines is looking into strengthening pharmaceutical services offered in drugstores in order to compete better.

On the other hand, while Echave (personal communication, July 15, 2010) believes that price controls had stimulated the generics manufacturing sector over the short term, he also expressed fears that the lower prices might force generics manufacturers to scrimp on quality in the long term.

One final long-term effect of the law was the creation of the Advisory Council for Price Regulation, composed of various stakeholders representing the pharmaceutical industry, patient advocacy groups, the

DOH and the DTI. While the advisory council was originally intended as a consultation group for the DOH on the issue of price regulation, the group has since been transformed into one that discusses the broader issues of medicine accessibility.

Concluding Remarks

Thus far, there is no clear verdict from stakeholders as to whether the price control mechanisms were successful in increasing either the accessibility of medicines or the purchasing power of patients. Industry players, analysts, and government officials are divided as to whether the beneficial consequences of the measures outweigh the costs.

There is a consensus, however, that government-initiated price controls alone are not sufficient to improve the accessibility and availability of drugs to consumers. Stakeholders and industry insiders have offered various suggestions on how else the government can make medicines cheaper for consumers.

One suggestion for lowering drug prices has been to increase the acceptability of generic drugs to both physicians and patients. In the IMS Health survey, more than half the doctors surveyed said they preferred "branded" drugs over generics (although it is unclear how they understood the term "branded"); while a third of the physicians said they preferred generics over originator drugs (R.J.E. Reyes, 2010). Dauphin (personal communication, July 13, 2010) believes that physicians may be helped by being educated on how marketing by

pharmaceutical companies affects their prescription-writing decisions.[6] Jennifer Flores, former Chairman of the Regulatory Ethics and Legislation Section of the Federation of Asian Pharmaceutical Association (personal communication, May 17, 2010) argues, however, that the acceptance of generics among health professionals is hinged on ensuring the generics' quality, something which health professionals do not feel confident about, given the weak state of drug regulation in the country. [7]

Patients appear to be more open to buying generic drugs, with 32% to 70% (depending on the disease) of those surveyed saying that they believed branded and generic drugs were equally effective. Their beliefs notwithstanding, 0% up to 20% of patients said that they bought the generic counterpart of a medicine prescribed by their doctor; while only 8% to 20% of patients said that they asked their doctor to prescribe more affordable drugs. Between 1% and 13% of the respondents asked drugstore clerks for more affordable versions of the medicines they were purchasing. Most patients chose instead to purchase the brand suggested by their physicians.

Finally, many pharmaceutical industry insiders as well as analysts complain that the price control measures placed the financial burden of increasing drug accessibility and health, in general, on the shoulders of the private sector, rather than on the government. Indeed, the government in the Philippines spends only $88 per person per year on health, [8] compared to Singapore's $413,

[6] According to Dauphin, the World Health Organization is currently working on such an educational campaign for Philippine physicians.

[7] The Cheaper Medicines Act includes a section seeking to strengthen the Bureau of Food and Drugs (now called the Food and Drug Administration) by allowing its director to retain all fees collected and to add such to its budget.

[8] Figures are expressed in international dollars, calculated using purchasing power parities. (PPP).

Malaysia's $226 and Thailand's $223 (Ball & Tisocki, 2009). Critics specifically hit inadequate Philhealth reimbursibles and the legislature's refusal to waive import duties and value-added taxes on drugs. Some stakeholders recommend, then, that Philhealth increase its allowable reimbursable for drugs, and broaden Philhealth coverage among Filipinos.

The push for universal health-care coverage was brought to the public's attention during the 2010 presidential campaign. If achieved, universal health-care coverage would be another major reform in the country's ongoing struggle to improve health-care access for its citizens.

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