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A Profile of the Philippine Pharmaceutical Sector

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A Profile of the Philippine Pharmaceutical Sector

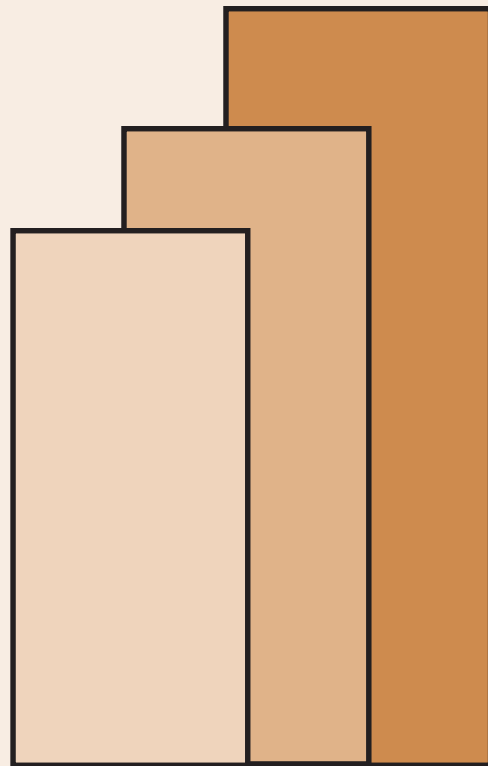
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A Profile of the Philippine Pharmaceutical Sector

Celia M. Reyes, Rouselle Lavado, Aubrey D. Tabuga,
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Abstract

The Philippines is one of the biggest pharmaceutical markets in the ASEAN region, next only to Indonesia and Thailand.¹ It is a lifeline to thousands of Filipino workers and a significant contributor in terms of value of output. This industry is one of the fastest growing industries in the country. Meanwhile, its output, drugs and medicines, account for 46 percent of the total medical out-of-pocket expenses of Philippine households. For poorer people, this percentage goes up to 55 percent.² Making essential drugs and medicines more affordable especially to the poor and underserved is one of the Millennium Development Goals (MDGs). It is therefore essential to examine the profile of the pharmaceutical industry in the country to better understand the supply chain of drugs and medicines for policy formulation purposes. Using administrative data from agencies that have regulative powers over the industry, a profile of the Philippine pharmaceutical industry was developed. As of December 2009, the Food and Drug Administration's records show that there are 284 drug manufacturers, 438 drug traders, 634 drug importers, 4,719 drug distributors of which 3,956 are wholesalers, and 32,538 retail outlets. Manufacturing is dominated by multi-national brand originator giants and numerous local generics/branded generics producers. Meanwhile, trading is done by few large companies and thousands of small retail outlets. The industry players are diverse and formulating policies therefore must take into consideration how each player may be affected by policy issuances.

¹ 2008 PHAP report

² 2006 Family Income and Expenditure Survey (FIES)

A Profile of the Philippine Pharmaceutical Sector

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A. Introduction

The Philippines is one of the biggest pharmaceutical markets in the ASEAN region, next only to Indonesia and Thailand.³ It is a lifeline to thousands of Filipino workers and a significant contributor in terms of value of output. This industry is one of the fastest growing industries in the country. Meanwhile, drugs and medicines account for 46 percent of the total medical out-of-pocket expenses of Philippine households. For poorer people, this percentage goes up to 55 percent.⁴ Making essential drugs and medicines more affordable especially to the poor and underserved is one of the Millennium Development Goals (MDGs). It is therefore essential to examine the profile of the pharmaceutical industry in the country to better understand the supply chain of drugs and medicines for policy formulation purposes.

The Philippine pharmaceutical industry was valued at PhP121 billion based on the IMS 2009 estimates. The sector includes both drug and non-drug products. Drug products, as defined in the PHAP 2008 report, refer to medicine or other substance (either ethical/prescribed or over-the-counter drugs) intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in man and/or intended to affect the structure or any function of the human body, but which does not include devices or their components, parts, and accessories. Non-drug products meanwhile include nutritionals and infant milk preparations, baby care, cosmetics, diagnostic, and other medical devices. The pharmaceutical industry is dominated by the ethical products (69%), followed by the OTC products (24%), and the rest are nutritionals (7%).

The value of the Philippine pharmaceutical industry has been on the rise in the past years. In fact, from 2005 to 2009, the market has been increasing at an annual average rate of 8 percent. Both the local and foreign pharmaceutical companies contribute to this fast growth rate. Although foreign companies dominate the market in terms of peso value sales, the average rate of annual growth of peso sales by the local ones in 2005 to 2009 surpasses those of foreign companies (14 compared to 5 percent). Interestingly, the local and foreign companies split almost equally the

³ 2008 PHAP report

⁴ 2006 Family Income and Expenditure Survey (FIES)

market share when it comes to actual unit sales.⁵ This illustrates the robustness of the Philippine pharmaceutical industry and the vast opportunities that it offers.

As earlier mentioned the pharmaceutical industry is a lifeline to thousands of workers in the country and is among the top-paying industries. The 2006 Census of Philippine Business Establishments shows that manufacturing establishments of pharmaceuticals, medicinal, chemical, and botanical products pay its workers on the average an annual salary of around P460,000, almost three-folds the average annual salaries of workers in the manufacturing sector. Manufacturers of these products are also among the top grosser in terms of value of output.⁶

Indeed, the pharmaceutical sector is a vibrant industry. Unfortunately, there is a limited body of literature devoted to understanding the magnitude and depth of its contribution to the Philippine economy in terms of output, employment, investment and trade among others. This report therefore examines the pharmaceutical industry, particularly the drugs and medicine sector, in terms of structure, size, key players and governing institutions. To provide a depth in the analysis, the profiles were developed by also describing the local and foreign companies. This report was developed based on administrative data from the Food and Drug Administration (FDA) formerly Bureau of Food and Drugs (BFAD); survey data from the National Statistics Office; firm-level records from Securities and Exchange Commission (SEC); and others such as the Top 10,000 Corporations, corporate information from various official websites of pharmaceutical establishments.

This paper is divided into several sections. First, the demand for drugs and medicines is discussed in Section B. This sets the stage or rationale in discussing the profile of the pharmaceutical industry. It includes the discussion on out-of pocket expenditures on drugs and medicines by the households, government expenditures, and some projections only to show how the market of the industry potentially grows over time. This section is followed by the main focus of this report, Section C, which is the profile of the industry engaged in the supply of drugs and medicines. The discussion starts with the structure shown by a simplified framework that aims to explain how the players interact with one another, followed by a description of the industry players, and the profiles of manufacturers and traders of drugs and medicines. Section D then discusses the contribution of the industry in terms of investments, employment, external trade, taxes, supply of essential drugs, and linkages with the domestic economy. The final section summarizes the results.

B. Demand for Drugs and Medicines

According to the Philippine National Health Accounts, per capita spending on health was P1,978 in 2004 and P2,120 in 2005, or a 7.2 percent growth. In 2005, government spent P609 per person

⁵ PHAP 2008 Report

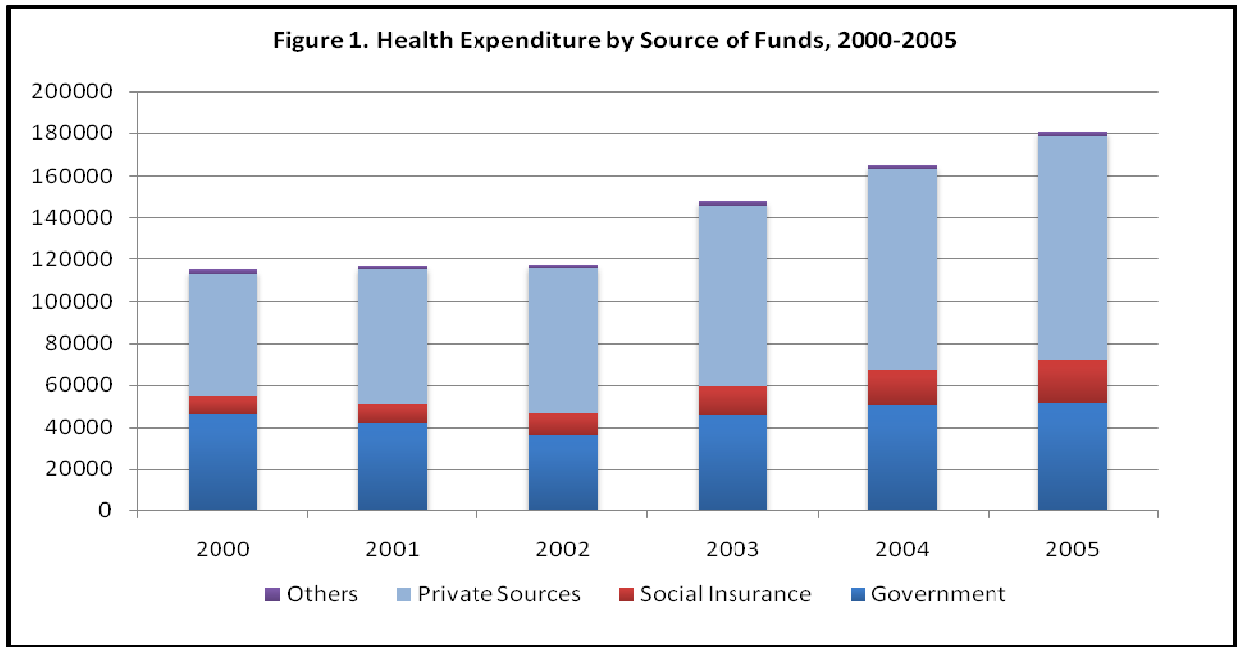
⁶ Only among establishments with average total employment of 20 and over

while social insurance (Philhealth and Employees' Compensation) spent P233 per capita. Private sources, which include out-of-pocket, private insurance, HMOs, employer-based plans and private schools, provided for P1,253, accounting for 59 percent of total private sources.

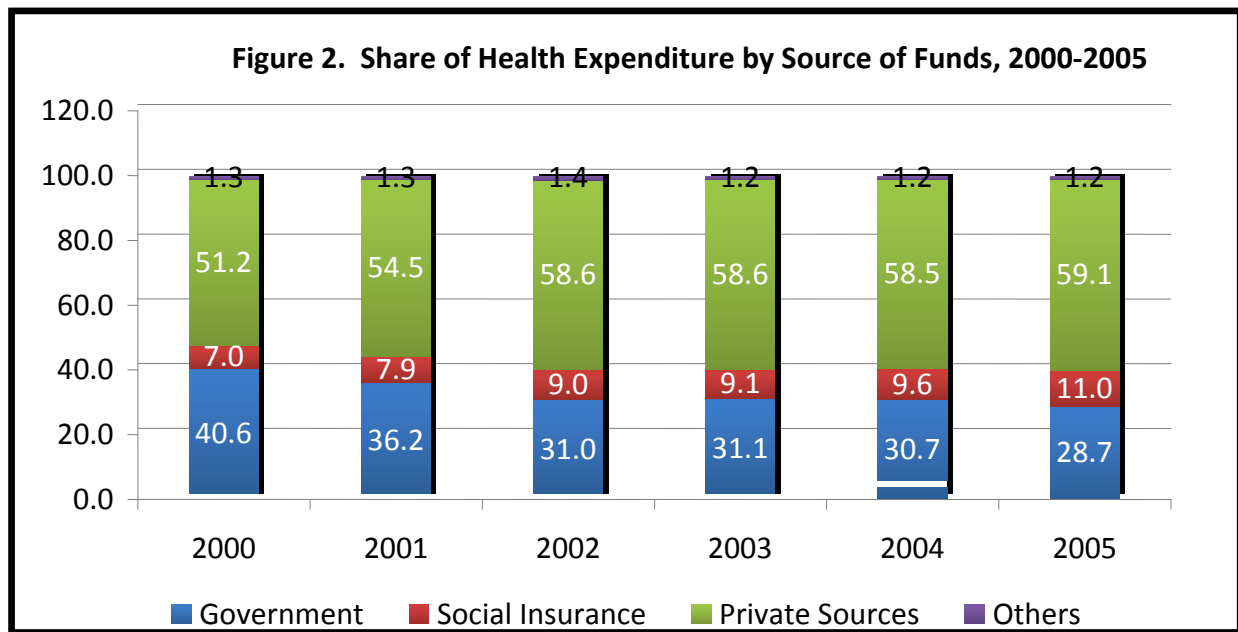
Source of funds	2004	2005
Private sources	1156	1253
Out-of-pocket	927	1026
Private insurance	49	51
HMOs	85	83
Employer-based plans	71	67
Private schools	24	25
Government	608	609
Social Insurance	191	233
Others	31	34
All sources	1978	2120

Source: Philippine National Health Accounts, 2005, NSCB.

From 2000 to 2005, the main source of funds for health expenditure has been private sources which have shown a gradual increase. Government funding continues to be the second main source of funds. However, it has shown a steady decline in its share in the total health expenditure of the country. Social insurance, which covers only a small share in the expenditure, however, has shown an increase in its coverage over the six year period.



Source: Philippine National Health Accounts, NSCB



Source: Philippine National Health Accounts, NSCB

1. Out-of pocket spending on medical care

The Family Income and Expenditure Surveys⁷ provide details on out-of pocket expenses by families. Based on the latest FIES survey of 2006, the per capita expenditure on medical care is Php 1,136, about 3.2 percent of the per capita total expenditures. Drugs and medicines constitute almost half (46.6 percent) of total medical expenditure. Medical charges or professional fees come in second, accounting for 24.8 percent of total medical expenditure. Hospital room charges take up 20.1 percent. Other medical goods and supplies represented 3.2 percent and food supplements came in fifth at 2.1 percent.

Type of medical expenditure	Amount (Philippine pesos)	Share (in percent)
Drugs and medicine	529	46.6
Medical charges	282	24.8
Hospital room charges	228	20.1
Other medical goods and supplies	36	3.2
Food supplements	24	2.1
Dental charges	19	1.7
Contraceptives	14	1.2
Other medical health services	4	0.4
Total	1136	100

Source of basic data: 2006 Family Income and Expenditure Survey

Type of medical expenditure	Definitions
Drugs and medicine	Includes: Antibiotic, Antacid, Analgesic, Expectorant, Vitamins, and Others
Hospital room charges	Room charges: Public or Private
Medical charges	Service fees of Doctors, nurses, midwives, etc.
Dental charges	Service fees for dentist, etc.
Other medical goods and supplies	Includes: Alcohol, Bandage, plaster, adhesive, cold rub, eyeglasses, and others
Other medical health services	Service fees for herbolarios, faith healers, hilots, etc
Contraceptives	Pills, condoms, etc.
Food supplements	Ex. VCO, DXN, INTRA, Etc.

Source: 2006 FIES Questionnaire, NSO

⁷ The FIES is conducted triennially by the National Statistics Office and is the source of the official estimates of poverty data for the country. The sample size for the 2006 survey is 38,000 families.

Expenditure on medical care varies depending on income of the families. To show the variation across income groups, the population is sorted by per capita annual income and divided into 10 equal groups, or deciles. The first decile is the lowest income group while the tenth decile is the highest income group. Thus, the first decile represents the poorest 10 percent of the population while the tenth decile represents the richest 10 percent of the population. The income ranges for the different deciles are shown in Table 4. The figures under the per capita income column show the range of per capita income for that decile. On the other hand, the figures under the family income column show the range for the family income for that corresponding decile. This assumes an average family size of 5.

Decile	Per capita income	Family income
First	less than 9,638	less than 48,190
Second	9,638 – 12,993	48,190 – 64,965
Third	12,994 – 16,316	64,966 – 81,580
Fourth	16,316.1 – 20,403	81,581 – 102,015
Fifth	20,404 – 25,493	102,016 – 127,465
Sixth	25,494 – 32,095	127,466 – 160,475
Seventh	32,096 – 41,684	160,475 – 208,420
Eight	41,684.1 – 56,408	208,421 – 282,040
Ninth	56,409 – 86,947	282,041 – 434,735
Tenth	Greater than 86,947	Greater than 434,735

Source of basic data: 2006 Family Income and Expenditure Survey, NSO

In 2006, an individual spent on the average P1136 for medical care. Individuals belonging to the poorest 10 percent of the population, or the first decile, spent on the average P100 for their total medical care while those in the richest 10 percent of the population, or tenth decile, spent P5118. The individuals in the tenth decile also spent on the average P 2262 on drugs and medicines that year. This is about 43 times the average spending of those in the first decile and almost 3 times those in the ninth decile.

Type of medical expenditure	Per capita income decile									
	1	2	3	4	5	6	7	8	9	10
Total medical care	100	155	201	307	441	533	834	1153	1789	5118
Drugs and medicine	53	83	110	165	209	265	415	536	861	2262
Hospital room charges	18	23	26	48	72	99	150	239	326	1123

Medical charges	15	29	40	63	114	121	203	283	449	1320
Dental charges	1	1	2	2	5	5	8	12	29	112
Other medical goods and supplies	5	8	10	14	19	19	28	41	57	136
Other medical health services	1	2	2	2	3	5	4	3	5	8
Contraceptives	6	9	8	9	9	11	10	17	17	41
Food supplements	1	2	2	3	10	9	14	21	45	116

Source of basic data: 2006 Family Income and Expenditure Survey, NSO

Type of medical expenditure	Per capita income decile									
	1	2	3	4	5	6	7	8	9	10
Drugs and medicine	53	53.5	54.7	53.7	47.4	49.7	49.8	46.5	48.1	44.2
Hospital room charges	18	14.8	12.9	15.6	16.3	18.6	18	20.7	18.2	21.9
Medical charges	15	18.7	19.9	20.5	25.9	22.7	24.3	24.5	25.1	25.8
Dental charges	1	0.6	1	0.7	1.1	0.9	1	1	1.6	2.2
Other medical goods and supplies	5	5.2	5	4.6	4.3	3.6	3.4	3.6	3.2	2.7
Other medical health services	1	1.3	1	0.7	0.7	0.9	0.5	0.3	0.3	0.2
Contraceptives	6	5.8	4	2.9	2	2.1	1.2	1.5	1	0.8
Food supplements	1	1.3	1	1	2.3	1.7	1.7	1.8	2.5	2.3

Source of basic data: 2006 Family Income and Expenditure Survey, NSO

Comparison of the per capita expenditures in the Philippines between 2003 and 2006 reveals an increase in both total medical care expenditure with a 63 percent growth, and drugs and medicine having a 59 percent growth over the three year period. This represents an average annual growth rate of 16.7 percent for drugs and medicines. This increase was most evident in the individuals belonging to the seventh to tenth deciles.

Decile	Drugs and medicine		Total medical care	
	2003	2006	2003	2006
First	36	53	69	100
Second	58	83	111	155
Third	92	110	168	201
Fourth	118	165	224	307

Fifth	139	209	262	441
Sixth	182	265	356	533
Seventh	233	415	498	834
Eighth	355	536	731	1153
Ninth	529	861	1126	1789
Tenth	1320	2262	2856	5118
Philippines	333	529	698	1136

Source: Family Expenditure and Income Survey 2003 and 2006, NSO

2. Projected Out-of-Pocket expenses for drugs and medicines

Using the per capita spending figures from NSO and the projected population, out-of-pocket expenses by the total population can be estimated for the period up to 2015. The figures presented below assume that per capita spending on drugs and medicines will increase by 16.7 percent annually, the rate posted between 2003 and 2006. Population is projected to grow by 2.04 percent annually. The projections indicate that out-of-pocket demand for drugs and medicines will reach around PhP 92 billion in 2010 and around PhP 220 billion in 2015.

Year	Per capita spending (Philippine pesos)	Population	Total spending
			(billion Philippine pesos)
2006	529	86,352,905	45.68
2007	617	88,114,504	54.40
2008	720	89,912,040	64.78
2009	841	91,746,246	77.14
2010	981	93,617,869	91.85
2011	1145	95,527,674	109.38
2012	1336	97,476,438	130.25
2013	1559	99,464,958	155.1
2014	1820	101,494,043	184.7
2015	2124	103,564,521	219.94

a/Based on assumption that per capita spending will increase by 16.7% annually, the rate posted between 2003 and 2006; and population grows annually at an average rate of 2.04%.

3. Government Expenditures on drugs and medicines

In addition to out-of-pocket expenses by households, the government also spends on medicines and drugs. The expenditures of all provinces are obtained from the Statement of Income and

Expenditures (SIE) forms collated by the Bureau of Local Government Financing of the Department of Finance. Since the SIEs contain aggregate information on Health, Nutrition and Population (HNP), an estimate based on other studies was used to obtain the percentage spent on drugs, medicines and supplies. A factor of 18% was used for drugs and medicines expenditure while 30% was used for drugs, medicines and supplies. There is no data available at the national level that disaggregates expenditures by LGUs at this level. The percentages are based on the disaggregated expenditures of one province, using data from an earlier study. Average growth rate for 2003-2007 is calculated (4.31%) which is used to project the expenditures for 2008-2010.

To generate projections for the period until 2015, it is assumed that all expenditures by provinces are given to patients as subsidies. Field work in four provinces conducted in previous project support this assumption. Most provinces rarely charge medicines from patients. The hospitals/health centers normally procure from medical representatives and give the medicines to patients for free. When drugs and supplies run-out, they ask patients to buy these outside.

Central government spending on drugs is not included due to possible double counting expenditure by households (which is captured by FIES) and hospitals. Since DOH retained hospitals were allowed by DBM to retain their income in 2003, they rarely give drugs for free anymore. It would be very difficult to disaggregate what actually was spent as subsidies on drugs using government funds and what was paid for by households. Thus, it is safer to assume that most of drugs expenditure by DOH retained hospitals were sold to patients.

It is estimated that local government units (LGUs) spent Php 1.6 billion on drugs and medicines in 2009. The figure is expected to increase to Php 2.1 billion in 2015. Expenditures on drugs and medicines by LGUs are comprised of pharmaceutical purchases of provincial hospitals, drugs given for free during medical missions, and bulk purchases of provincial health center for distribution to health centers. The figure goes up by about PhP 1.4 billion in 2015 when expenditures for medical supplies are added. Medical supplies normally consist of oxygen tanks, syringes, gauze, and others.

Table 9. Projected LGU expenditures on drugs, medicines, and medical supplies, 2008- 2015 (billion Philippine pesos)		
Year	Projected expenditure on drugs and medicines	Projected expenditure on drugs, medicines and medical supplies
2008	1.56	2.62
2009	1.63	2.74
2010	1.70	2.86
2011	1.77	2.98
2012	1.85	3.11
2013	1.93	3.24
2014	2.01	3.38
2015	2.10	3.53

Source of basic data: Bureau of Local Government Financing of the Department of Finance

4. Total projected demand for drugs and medicines

Table 10 shows the combined projected demand for drugs and medicines from both out-of-pocket expenses and government spending. Assuming that there is no substantial change in the annual population growth rate of the country, it is forecasted that total demand will rise up to around 222 billion pesos in 2015, more than triple that of 2008's. This shows an average annual growth rate of total demand of around 17 percent.

Table 10. Total projected demand for drugs and medicines, 2008-2015 (billion Philippine pesos)			
Year	Out-of pocket expenses	Government	Total spending
2008	64.78	1.56	66.33
2009	77.14	1.63	78.76
2010	91.85	1.7	93.55
2011	109.38	1.77	111.15
2012	130.25	1.85	132.1
2013	155.1	1.93	157.03
2014	184.7	2.01	186.71
2015	219.94	2.1	222.04

C. Supply of Drugs and Medicines

1. Structure of the Supply Chain

Based on drug registration data from the Food and Drug Administration, the structure of the pharmaceutical sector was described in a simplified framework. It aims to describe in general the

flow of goods from importation/production down to distribution. The simplified framework does not provide a total picture of the industry but can be used to understand how the players interact with one another up to some levels of the supply chain.

The Philippine pharmaceutical industry, is characterized by a local leader, United Laboratories, giant MNCs like GSK and Pfizer, and many small local players. In terms of sales, the industry is dominated by MNCs. In fact, based on IMS sales data for 2009, 16 out of the top 20 pharmaceutical companies are MNCs. These are GlaxoSmithkline, Pfizer, Wyeth, Abbott Laboratories, Novartis, Astrazeneca, Sanofi-Aventis, Johnson & Johnson, Boehringer Ingelheim, Roche, Bristol Myers Squibb, Bayer, Schering Plough, MSD, Servier Philippines, and Merck Inc. These 16 companies make up 65 percent of the total sales of the top 20 companies.

The pharmaceutical MNCs are primarily drug traders. All the top 16 except for GSK, and Bristol Myers Squibb, are categorized as drug traders. Even GSK and Bristol Myers Squibb which are partly manufacturers are themselves huge drug traders. Also, MNCs typically imports a large proportion of their merchandise from abroad.

Multinational pharmaceutical companies share several common characteristics. First, a lot of the giant MNCs hire the manufacturing services of Interphil, a giant toll manufacturer, which according to SEC documents is a locally-owned subsidiary of the foreign company Manchester Holdings. For instance, based on raw data from FDA, it was found that Pfizer subcontracts all its local production (in terms of drugs) to Interphil. Interphil also manufactures 91 percent of Wyeth's drug products that are locally manufactured. Interphil produces drug products for not less than 30 MNCs. Second, MNCs subcontract very little proportion of their drugs to local toll manufacturers. Among the few local toll manufacturers which MNCs use are Hizon Laboratories, Swiss Pharma and Euro-Med Laboratories. Another common denominator among MNCs is Zuellig which does most of the distribution of MNCs' drug products. The typical structure of the supply chain of MNC drug traders is simplified and shown in the diagram below.

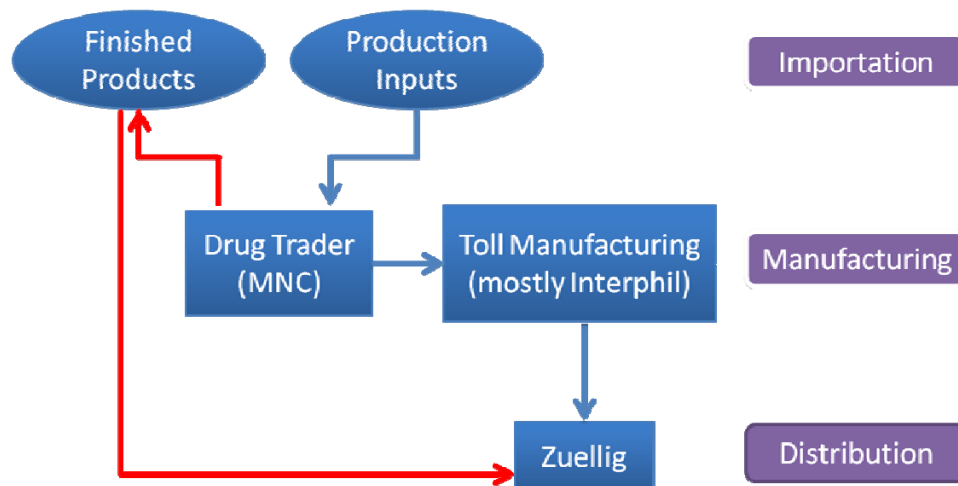


Figure 3. Typical Supply Chain of a MNC Drug Trader⁸

The MNC trader purchases both finished drug products and raw and intermediate materials. The finished products go directly to its distribution unit or affiliates, in many cases, Zuellig, while the materials for production go to its toll manufacturer, Interphil. After production which include repacking and labelling, Interphil then dispatches the products to Zuellig or other affiliates for distribution.

There are also MNCs which can be considered purely importer. Servier Philippines Inc., for instance, is a pure importer as far as drugs is concerned. The diagram below illustrates the product supply chain of an importer.

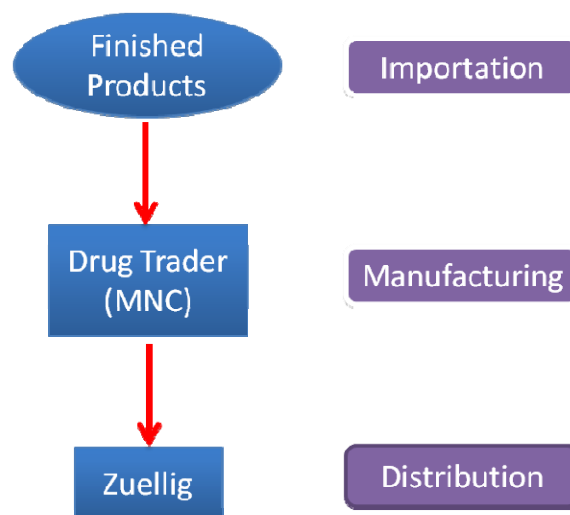


Figure 4. Typical Supply Chain of a MNC Drug Importer

⁸ Based on drug-related business

The local pharmaceutical sector, on the other hand, is a mix of manufacturers, traders, and something in between. Although there are only four local companies which are included in the top 20 pharma companies, the top spot is occupied by a local giant – United Laboratories. Unilab, as it is called, owns 28 percent of the total sales of the Top 20 pharma companies. The other locals included on top are Pascual Laboratories, Natrapharm, and GX International. Unilab and Pascual are manufacturers-traders while Natrapharm and GX are considered traders.

The local pharmaceutical companies can be categorized into two broad groups – the drug traders and the drug manufacturers. The drug traders are Natrapharm, Medhaus Pharma, GX International, Prohealth Pharma, Cathay Drug, among others. This group subcontracts production of their drugs to toll manufacturers, usually local toll manufacturers. At the same time, they also import finished products and distribute them to the local market either through their own distribution units or affiliates. The diagram below illustrates the supply chain of a typical local drug trader.

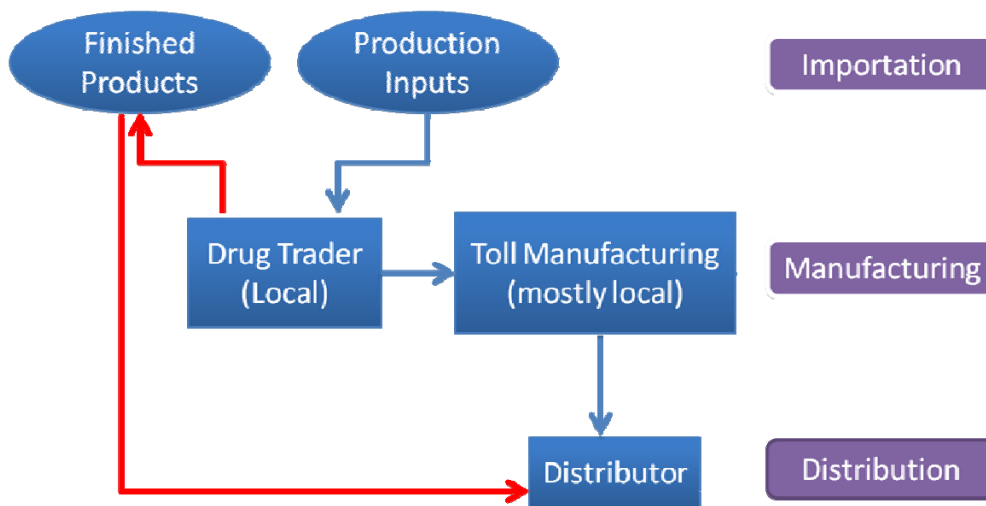


Figure 5. Typical Supply Chain of a Local Drug Trader

The second group consists of local manufacturers which are manufacturing either for themselves and/or for other companies. The local manufacturers included United Laboratories (along with its subsidiaries namely Asian Antibiotics, Amherst, and Westmont), Pascual Laboratories, AM-Europharma, AD Drugstel, Euro-med, among others. The other manufacturers are so-called toll manufacturers because they are primarily contracted by drug traders to manufacture, process, package, or repackage the latter’s drug products. These companies include Lloyd laboratories, Hizon Laboratories, Swiss Pharma, Ace Pharmaceuticals, and Allied. The two groups are not mutually exclusive such that there are companies which exhibit the characteristics of both groups. Pascual and United Laboratories, for instance, manufacture their own brands and distribute these through their own subsidiaries. However, they also act as toll manufacturers for

several companies. The diagram below shows the typical basic structure of the supply chain of a local drug manufacturer.

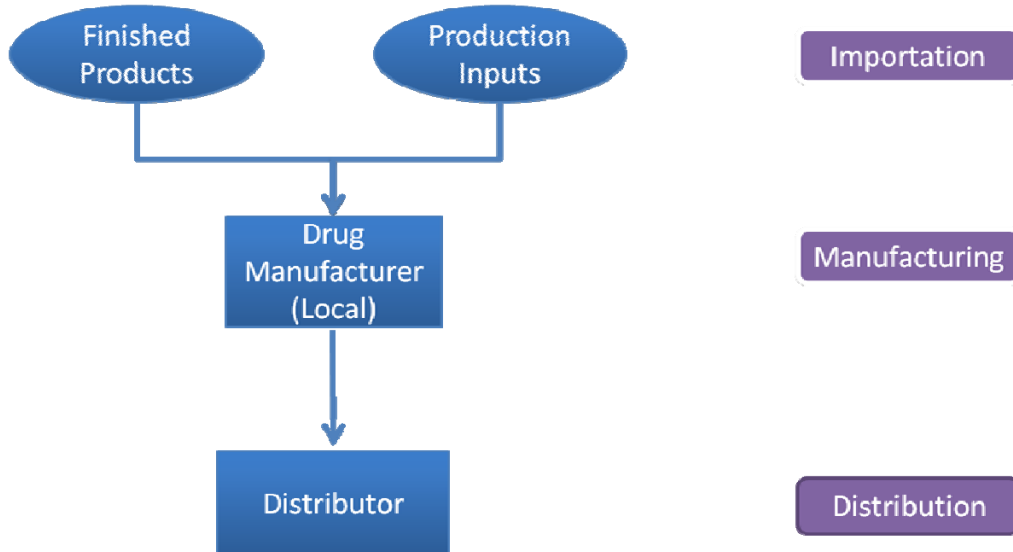


Figure 6. Typical Supply Chain of a Local Drug Manufacturer

From the discussion above, several insights can be presented. MNCs are more into drug trading, marketing, and distribution rather than manufacturing. The division of labour is more pronounced among MNCs than among locals. Manufacturing activities are highly concentrated to one giant foreign toll manufacturer – Interphil and most of the distribution is done by Zuellig. The local ones in contrast are more diverse. Some are doing mainly manufacturing while several others do manufacturing, trading and distribution at the same time, still some do not engage in manufacturing at all. Local toll manufacturers serve mostly small local drug traders while Interphi caters mainly to large foreign companies/MNCs.

Also, the locals are linked more closely with one another just as the foreign ones are within the foreign/MNC circles. A few local toll manufacturers like Hizon and Swiss Pharma have served several MNCs but only for a very negligible proportion. One probable basis for the links, albeit weak, between these local toll manufacturers and the MNCs is their membership in the industry organization in which the MNCs are a part of (e.g. PHAP). A PHAP official explained that the reason why MNCs, particularly its members, have not really shifted into hiring the services of local tolls is because they still have a lot to improve in terms of their manufacturing practices and facilities. These companies, the official mentioned, should seriously think of upgrading to gain certifications that guarantee high quality standards. This is the main reason why MNCs still give most of the toll manufacturing works to Interphil. Interphil has maintained a good reputation in

terms of its manufacturing practices and technology.⁹ The MNCs' long relationship with Interphil is an established fact partly because the process in which it has been selected by MNCs is a long and tedious one thereby switching from one toll manufacturer to another is not easy.

Tables 11 and 12 below show the proportion of drugs supplied by top foreign and local companies which are imported as finished products. The data was extracted from the list of registered drugs of the FDA which contains not only the manufacturer, brands and generic names of each drug registered in the FDA but also the names of corresponding drug traders, importers, distributors, and country of origin. From the list, one can examine the operation of each pharmaceutical company with respect to the drugs that it imports and/or produces locally. It was convenient to show all drugs traded by a company, Pfizer for example, that were manufactured abroad because the data contains the country of origin and manufacturer. All drugs that originated in other countries were then counted and the sum was divided by the total number of drugs that Pfizer traded. The results are what were encoded in the last column of the tables below. The drugs that Pfizer traded were counted in terms of their registration numbers and each unique registration number pertains to a unique drug product. Drugs with the same generic name and brand but which have varying strengths were registered differently and hence counted separately in the calculations.

Only very few of the top MNCs are manufacturers. Except for Bristol Myers Squibb and GlaxoSmithkline which have manufacturing facilities in the Philippines, all top foreign companies/MNCs are primarily drug traders or importers, and they do several distribution activities. Aside from this, MNCs do not rely much to the local pharmaceutical industry. Depending on their levels of sales, the top MNCs import roughly 23 to 100 percent of their drug products. On the average, three-fourths of their drug products are imported as finished products.

One can see almost the exact opposite looking at the top local companies. Although only four (4) of the top local pharmaceutical establishments are manufacturers, they do not rely much on importation. In fact, the highest share of imports is only 52 percent (that is in the case of Transfarma Philippines, Inc.). On the average, only 23 percent of their drug products were imported as finished products.

⁹ Source: interview with a PHAP official

Table 11. Share of imported finished products in top 20 foreign pharmaceutical companies in the Philippines, 2009

Rank	Company	Category	Share of imported drugs ^{1/}
1	Glaxosmithkline Phils., Inc.	Manufacturer/Trader/Importer	72.02
2	Pfizer, Inc.	Trader/Importer/Distributor	87.98
3	Wyeth Phils. Inc.	Trader/Importer/Distributor	51.11
4	Abbott Laboratories Phils.	Trader/Importer	61.22
5	Novartis Healthcare Phils., Inc.	Trader/Importer/Distributor	88.42
6	AstraZeneca Pharmaceuticals, Phils. Inc.	Trader/Importer	82.24
7	Sanofi-Aventis Philippines Inc.	Trader/Importer/Distributor	95.97
8	Johnson & Johnson Phils. Inc.	Trader/Importer/Distributor	73.61
9	Boehringer Ingelheim Phils., Inc.	Trader/Importer	50
10	Roche Phils., Inc.	Trader/Importer	93.4
11	Bristol Myers Squibb (Phils.) Inc. (Mead Johnson)	Manufacturer/Trader/Importer	23.08
12	Bayer Phils. Inc.	Trader/Importer	83.33
13	Schering Plough Corp.	Trader/Importer/Distributor	80.56
14	Merck Sharpe & Dohme (IA) Corp	Trader/Importer	100
15	Servier Phils. Inc.	Importer	100
16	Merck Inc.	Trader/Importer	89.36
17	Solvay Pharma, Inc. Phils.	Trader/Importer/Distributor	60.87
18	PL Asia Pacific Inc.	Trader/Importer/Distributor	86
19	Eli Lilly Phils., Inc.	Trader/Importer	96.3
20	Getz Pharma phils. Inc.	Trader/Importer	100
	Weighted average ^{2/}		76.15

Sources of basic data: IMS 2009 Rankings and Sales figures and Food and Drug Administration (FDA); 1/ Share of imported drug products to total drug products only; based on FDA's registered drugs list - drugs with different strengths were counted separately; does not include home remedies, vaccines, herbal medicines, medical devices and veterinary medicines. 2/ Weights were based on 2009 sales data from IMS.

Table 12. Share of imported finished products in top 20 local pharmaceutical companies in the Philippines, 2009

Rank	Company	Category	Share of imported finished products ^{1/}
1	United Laboratories Inc.	Manufacturer/Trader/Importer/Distributor	29.1
2	Pascual Laboratories	Manufacturer/Trader/Importer	2.16
3	Natrapharm Inc.	Trader/Importer/Distributor	6
4	GX International Inc.	Trader/Importer/Distributor	16.22
5	Intermed Mrktng. Phils. Inc.	Trader/Distributor	0
6	Euro-med Laboratories Phil., Inc.	Manufacturer	0
7	Cathay Drug Co., Inc.	Trader/Importer/Distributor	35.29
8	AM Europharma Corp.	Manufacturer	0
9	Multicare Pharmaceuticals Phils., Inc.	Trader/Importer/Distributor	33.96
10	Herbs & Nature Corp.		.
11	Terramedic	Trader/Importer/Distributor	3.08
12	Int'l. Pharmaceuticals, Inc.	Trader/Importer	8.33
13	Rhea Pharmaceuticals Corp.		.
14	Elin Pharmaceuticals	Trader	13.56
15	Prohealth Pharma Phils., Inc.	Trader	0
16	Prosel Pharmaceuticals & Distributors, Inc.	Trader/Importer/Distributor	11.11
17	Transfarma Philippines, Inc.		52.17
18	Medhaus Pharma, Inc.	Trader/Importer/Distributor	10.74
19	Marcopharm		.
20	Inter Unimedix		.
	Weighted average ^{2/}		22.84

Sources of basic data: IMS 2009 Rankings and Sales figures and Food and Drug Administration (FDA); 1/ Share of imported drug products to total drug products only; based on FDA's registered drugs list - drugs with different strengths were counted separately; does not include home remedies, vaccines, herbal medicines, medical devices and veterinary medicines. 2/ Weights were based on 2009 sales data from IMS.

2. Industry Players

As of December 2009, the Food and Drug Administration's records show that there are 284 drug manufacturers, 438 drug traders, 634 drug importers, 4,719 drug distributors of which 3,956 are wholesalers, and 32,538 retail outlets. The number of village retail outlets is likewise rapidly growing. The number of BNBs grew by 55 percent from 2006 to May 2010. The Botika ng Barangay is also becoming increasingly visible in the regions. Meanwhile, the Food and Drug Administration and the Department of Health have been recently given stronger regulatory powers.

Over 80 percent of the market is captured by the top 20 pharmaceutical companies (HAI, nd). The multi-billion pesos pharmaceutical industry is led by a retailer chain – Mercury Drug which made around P71 billion in net sales in 2008. This was followed by a giant distributor – Zuellig Pharma with a net sales amounting to P57 billion. United Laboratories, a local manufacturer, came in third with around 23 billion. Several multinationals continue to dominate the rest of the top spots. These are Wyeth Philippines, Bristol Myers Squibb, GlaxoSmithkline, Abbott Laboratories, Pfizer, Roche, Boehringer Ingelheim, Bayer, and Novartis.

The pharmaceutical industry is a rapidly growing industry with the number of companies growing at 26 percent from 2003 to 2007. The industry's market grows with the contribution of both the local and foreign companies (MNCs). The foreign companies dominate the market in terms of peso sales but both local and foreign ones split in the share in terms of counting units suggesting a robust and progressive development of the sector.¹⁰

In the supply of essential drugs, foreign companies dominate all therapeutic classes except for ear, nose and throat preparations. Local companies supply very few, if any, essential drugs in the therapeutic classes - immunologicals, antineoplastic and immunosuppressant, diagnostics agents, antidotes, and hormones and hormone antagonists among others.¹¹

The manufacture and trade of drugs and medicines in the country are carried out by diverse players. Manufacturing is dominated by MNC brand originator giants and numerous local generics/branded generics producers. Notably, as of May 2010, there are 59 pharmaceutical manufacturers which were listed by the FDA as having good manufacturing practices (GMP). Meanwhile, trading is also done by few large companies and thousands of small retail outlets.

The majority of the manufacturers and traders are based in Metro Manila (see Table 13). Meanwhile, a third of the retailers are concentrated in NCR and Region 4, now split into

¹⁰ PHAP 2008

¹¹ Analysis based on the FDA list of registered drugs and the Philippine National Drug Formulary (PNDF).

CALABARZON and MIMAROPA. ARMM, a very poor region, does not have any drug distributor/trader and has only 123 retail outlets to cater to its 4.1 million inhabitants.

Region	Drug manufacturers	Drug traders	Drug distributors	Retail outlets
NCR	112	353	1,861	5,197
Region 1	6	2	185	2,260
Region 2	4	2	175	1,064
Region 3	32	15	309	4,255
Region 4	51	38	554	5,239
Region 5	2	1	168	1,233
Region 6	16	2	247	2,510
Region 7	27	11	359	2,272
Region 8	2	2	138	1,236
Region 9	3	2	84	1,171
Region 10	7	2	151	1,095
Region 11	17	4	305	2,191
Region 12	4	0	76	1,098
CAR	0	2	52	1,082
CARAGA	2	2	55	512
ARMM	0	0	0	123
Total	285	438	4,719	32,538

Source: Regulation Division I - Licensing Section –FDA; A manufacturer, defined in RA 9711, refers to an establishment engaged in any and all operations involved in the production of health products including preparation, processing, compounding, formulating, filling, packing, repacking, altering, ornamenting, finishing and labeling. It does not include however those engaged in compounding and filling of prescriptions in drugstores and hospital pharmacies. A trader is also categorized as manufacturer. Meanwhile, a distributor-importer/exporter is one that imports or exports raw materials, active ingredients and/or finished products for its own use or for wholesale distribution to other establishments or outlets. If the establishment sells to the general public, it should be considered a retailer. Also, a distributor-wholesaler procures raw materials, active ingredients and/or finished products from local establishments for local distribution on wholesale basis.

The distribution of drug distributors across regions is also shown below. Majority of distributors are wholesalers. They are concentrated in NCR, Region 4, and Region 7. There are 634 registered importers of drugs and medicines.

Region	Total Distributors	Importer	Wholesaler	Others
NCR	1,861	535	1207	119
Region 1	185	2	183	0
Region 2	175	0	175	0
Region 3	309	16	292	1
Region 4	554	33	517	4
Region 5	168	5	162	1
Region 6	247	5	241	1
Region 7	359	27	331	1
Region 8	138	2	136	0
Region 9	84	4	80	0
Region 10	151	3	147	1
Region 11	305	1	304	0
Region 12	76	0	76	0
CAR	52	1	50	1
CARAGA	55	0	55	0
ARMM	0	0	0	0
Total	4,719	634	3956	129

Source: Regulation Division I - Licensing Section –FDA

There are several types of drug retailers. These are drugstores, Botika ng Barangay, Botika ng Bayan, Chinese retailers, and retailers of non-prescription drugs. The most common type is the drugstore (73%), followed by the Botika ng Barangay (24%).

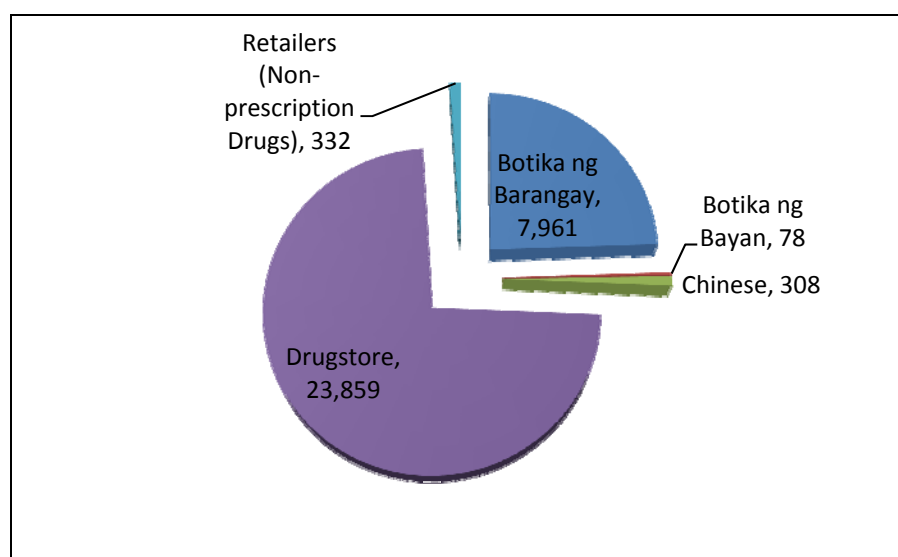


Figure 7. Number of drug retailers by type, as of December 2009, Source: FDA

The value of the industry is roughly estimated at P318 billion in 2008. This is based on sales data of 296 pharmaceutical establishments included in the Top 10,000 Companies of the country. The top list included 48 manufacturers of drugs and medicine including biological products, 131 wholesalers, and 117 retailers. All these translate into P179 billion worth of assets, and P85 billion of equity. Table 15 shows the average sales, profits, assets, liabilities, and equity of the three groups of players in the pharmaceutical industry.

Table 15. Financial data of top players in the pharmaceutical industry, 2008 (‘000 Philippine pesos)		
Data	Total	Average
Manufacturers drugs & medicines including biological products		
Sales	89,334,731	1,861,140
Profits	7,657,650	159,534
Assets	80,457,241	1,676,193
Liabilities	27,195,763	566,578
Equity	53,261,477	1,109,614
No. of establishments		48
Wholesalers of medicinal and pharmaceutical products		
Sales	116,364,929	888,282
Profits	3,650,269	27,865
Assets	55,678,914	425,030
Liabilities	37,092,336	283,148
Equity	18,586,579	141,882
No. of establishments		131
Retailers of drugs and pharmaceutical goods		
Sales	112,770,309	963,849
Profits	2,152,594	18,398
Assets	42,666,063	364,667
Liabilities	29,481,272	251,977
Equity	13,184,791	112,691
No. of establishments		117

Source of basic data: Top 10,000 Corporations

The institutions that governed the drugs and medicines sector are the Food and Drug Administration (FDA) formerly Bureau of Food and Drugs (BFAD), Department of Health (DOH), and Intellectual Property Office.

The FDA is the government body that has the jurisdiction over all matters that concern safety, quality, and efficacy of drugs and medicines. Its mandates include issuance of license to import any drug and medicine and product registration. The FDA has continued to evolve from its predecessors, the Food and Drug Administration established in the late 1960s created under RA 3720, and the Bureau of Food and Drugs in 1982. In 2009, the then BFAD was renamed back into FDA and was further strengthened by virtue of Republic Act 9711. This law is an act that:

“Strengthens and rationalizes the regulatory capacity of the agency by establishing adequate testing laboratories and field offices, upgrading its equipment, augmenting its human resource complement, giving authority to retail its income...amending certain sections of the RA No. 3720, and appropriating funds.”

The FDA has eight divisions namely: Office of the Director, Administrative Division, Policy, Planning and Advocacy Division, Regulation Division I, Regulation Division II, Product Services Division, Laboratory Services Division, and Legal, Information and Compliance Division.

The Office of the Director provides overall management, direction, supervision, and control over the Bureau while the administrative division provides general administrative and logistic support services. The functions of Policy, Planning and Advocacy Division are to develop plans, policies, and programs with respect to regulation of drugs, processed foods, and the like. It also provides technical information and assistance in terms of food and drug policies and services. It is the unit that is tasked to develop and maintain the management information system of the agency.

The Regulation Division I meanwhile has the functions of inspection and licensing for importation, exportation, distribution, and retailing. It also monitors and ensures the quality of processed drugs and foods, among others. This division assists in monitoring adverse reactions. On the other hand, the Regulation Division II performs inspection and licensing for the manufacture and re-packing of processed drugs, foods, medical devices, and others (in vitro diagnostic reagents, cosmetics, and household hazardous substances). It monitors and ensures compliance of manufacturers with requirements of current Good Manufacturing Practices (cGMP) and Hazard Analysis Critical Control Points (HACCP). Both regulation divisions I and II enforce orders of confiscation, seizure, and condemnation in case of violation of the food and drugs laws. These divisions are also assigned to develop capability of regulation officers at the field.

The Project Services Division on the other hand formulates standards and guidelines for registration, evaluates and processes applications for registration, issues product registration certificates, and assists in monitoring violations. This unit does the auditing and accreditation of Bioavailability Testing Centers.

The Laboratory Services Division meanwhile conducts laboratory tests on finished products to determine compliance with standards of safety, efficacy, purity and quality. It also conducts tests on packaging materials used for the products. It is tasked to establish scientific databases for use in the development of product standards. In addition, it produces properly bred laboratory

animals used for toxicological examinations, bioassay and biological research and development. It also conducts inspection and audit for analytical laboratories to be recognized by BFAD-LSD. Lastly, it provides and conducts training to Regional FDRO's in Centers for Health Development mini-laboratory.

Lastly, the Legal, Information, and Compliance Division of the FDA provides the legal advice in the enforcement of laws and regulations. It conducts administrative proceedings and quasi-judicial hearings on related cases. It is the unit that prepares recommendations, resolutions and other administrative issuance pertaining to regulation of processed food, drugs and other related products. This division likewise handles consumer complaints on products regulated by the FDA. It also monitors advertisements and promotion to assure compliance with guidelines on the medical and nutritional claims.

In the Food and Drug Administration Act of 2009 (RA 9711), new subsections of the FDA shall be established. These new subsections are called Centers and shall be established per major product category. These are Center for Drug Regulation and Research which will include veterinary medicines, vaccines, and biological; Center for Food Regulation and Research; Center for Cosmetics Regulation and Research which includes household hazardous/urban substances; and Center for Device Regulation, Radiation Health, and Research. In the new law, each center will have at least – 1) Licensing and Registration Division; 2) Product Research and Standards Development Division; and 3) Laboratory Support Division.

The FDA is under the Department of Health (DOH), the principal health agency in the country. The DOH is responsible for ensuring access to basic public health services to all Filipinos through the provision of quality health care and regulation of providers of health goods and services. The Secretary of Health, by virtue of RA 9502, has the power to recommend the maximum retail price of drugs and medicines subject to price regulation; include other drugs and medicines in the list subject to price regulation; implement cost-containment and other measures; impose administrative fines and penalties; deputize government entities for any assistance needed; and others necessary to implement the provisions on the law.

The Intellectual Office (IPO) is another government institution involved in the pharmaceutical sector. The IPO was given the authority over all issues concerning the requirements for patentability of drugs and medicines, infringement and/or violations of intellectual property rights, use of invention by government. In addition, IPO may also conduct compulsory licensing, that is granting a license to exploit a patented invention even without the agreement of the patent owner, in events of national emergency and such other cases of urgency and public interest (Section 93 of RA 9502).

3. Profile of Manufacturers

One of the key players in the industry is the manufacturing sector. To develop a profile of pharmaceutical manufacturers, particularly drug manufacturers, this study utilized the results of the 2006 Census of Philippine Business and Industry (CPBI) conducted by the NSO. The profile refers to 55 drug manufacturing establishments that have average total employment of 20 and over.¹² To add depth into the analysis, a comparison between the local and foreign/predominantly foreign companies were included where data are available. Out of the 55 establishments included in this profile, 47 were local ones while 8 were considered foreign companies. This aims to provide details into the extent of operation and economic contributions of both groups.

In 2006, drug manufacturers employed a total of 14, 916 individuals; an average of 271 people per establishment. The local manufacturing establishments employed 91 percent of this work force, or 13,555, while the foreign ones employ the rest. On the average, a local firm employed 288 while a foreign manufacturer employed 170. Also, there are more male, 63 percent of the total, than female in local firms' roster whereas there are more female (54% of the total) employees in foreign manufacturers than male.

Among all the workers, there were more male (62 percent of total) than female (see Figure 8). This was particularly true for the paid employees. Paid employees refer to all persons working in the establishment that receive pay and those working away from the establishment paid by and under the control of the establishment. These included those who were on sick leave, paid vacation or holiday. These did not include consultants, home workers, workers receiving pure commissions only, and those on indefinite leave.¹³

Interestingly, while majority of the paid workers were male, most of the unpaid were female. In fact, 82 percent of the total unpaid workers of the manufacturing firms were female. Unpaid workers refer to the working owners who do not receive regular pay. These also include apprentices and learners without regular pay and persons working for at least 1/3 of the working time normal to the establishment without regular pay. Notably, all unpaid workers were employed by local establishments.

¹² This group refers to PSIC Code 24241 in the 2006 CPBI or those that are engaged in the manufacture of drugs and medicines including biological products such as bacterial and virus vaccines, sera and plasma. The establishments included were only those which had an average total employment (ATE) of 20 and over. Employment refers to the number of persons who worked in or for the establishment as of November 15, 2006. Average total employment (ATE) is the sum of the number of persons who worked in or for this establishment for all months of the year divided by 12, regardless of the number of months the establishment is in operation.¹² Hence, establishments that operated with ATE less than 20 were not included.

¹³ www.census.gov.ph. Concepts and definitions - 2006 Census of Philippine Business and Industry

In the sector, 41 percent of all workers were production workers. There were also more male production workers than female. On the average, about 111 workers worked on the actual production of drugs and medicines on each of the establishments. The local firms employ 85 percent of the total production workforce.

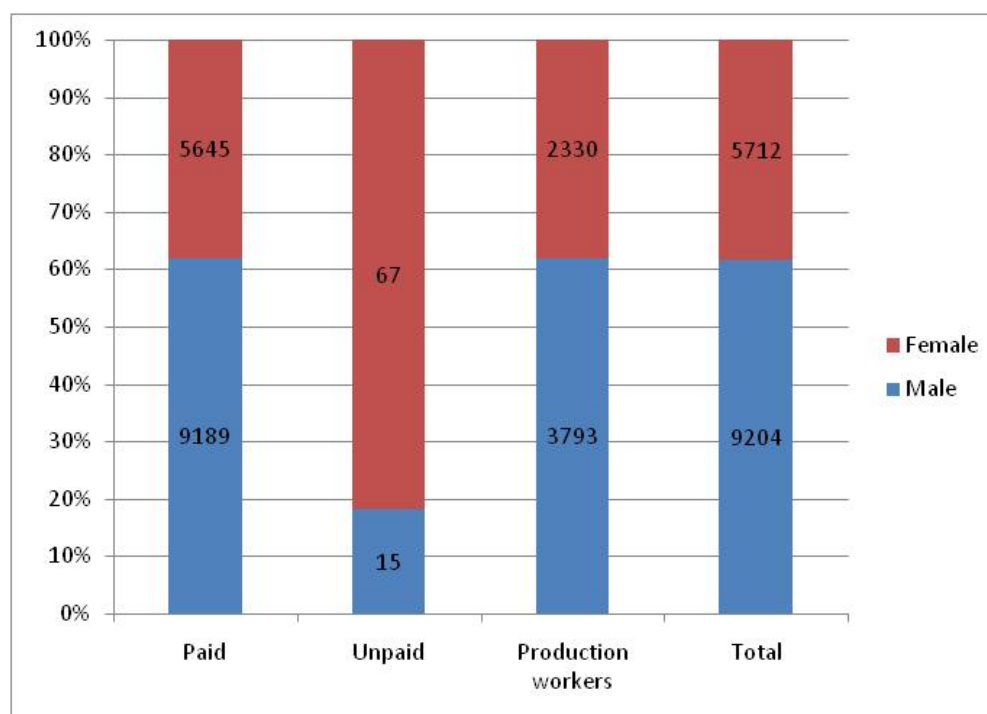


Figure 8. Employment in manufacturing establishments by type and sex, 2006
Source: 2006 CPBI, NSO

Employment by Type	Total			Average		
	All	Foreign	Local	All	Foreign	Local
Paid employees						
Male	9,189	626	8,563	167	78	182
Female	5,645	735	4,910	103	92	104
All	14,834	1,361	13,473	270	170	287
Unpaid Workers						
Male	15	-	15	0	.	0
Female	67	-	67	1	.	1
All	82	-	82	1	.	2

Total Employment						
Male	9,204	626	8,578	167	78	183
Female	5,712	735	4,977	104	92	106
All	14,916	1,361	13,555	271	170	288

Source: 2006 CPBI, NSO

In terms of compensation, the pharmaceutical manufacturing sector pays one of the highest rates in the manufacturing industry. In 2006, manufacturers paid P6.9 billion in salaries and wages. Each employee received an estimated average amount of P462, 700 or about US\$9,000, almost three-folds the average annual salaries of workers in the overall manufacturing industry for that year.

Foreign establishments paid higher wages and salaries than their local counterparts. In fact, they compensated their employees about twice the amount (about P794,000 per employee) that local establishments paid to their personnel (P429,000 per person). However in terms of the total, because local firms employed more, the aggregate amount of salaries and wages they paid was five times than the amount that the foreign ones have paid.

Type	Number of workers	Gross salaries and wages	Average annual salaries and wages (per worker)
		'000 Philippine pesos	
All	14,916	6,901,169	462.7
Foreign	1,361	1,081,629	794.7
Local	13,555	5,819,540	429.3

Source: 2006 Census of Philippine Business and Industry, NSO

Manufacturers of pharmaceutical products also contributed about P422 million to the employees' SSS/GSIS payment, averaging about P28,000 per employee. Local firms collectively contributed much higher to SSS/GSIS of employees than did the foreign ones. In fact, 94 percent of the total amount of contributions of the entire sector came from local firms. In terms of the averages, local manufacturers paid more for each employee compared to the foreign firms (Table 18).

Type	Total	Average per employee
All	422,263	28.00
Foreign	35,407	19.27
Local	386,856	29.22

Source: 2006 Census of Philippine Business and Industry, NSO

In terms of output, the total revenues of manufacturers amounted to around P62 billion in 2006, averaging 1.1 billion per establishment. This total amount ranked 7th highest among all the sub-sectors in the manufacturing sector.¹⁴ Much (82%) of the revenues were generated by local pharmaceutical companies. The large volume (92 percent) of revenues as expected was generated from the sale/resale of their products.

Type of revenue/subsidies	Total	Average per establishment
Value of products/by-products sold	47,479,716	863,268
Value of industrial services done for others	3,279,001	59,618
Value of non-industrial services done for others	373,968	6,799
Value of goods for resale	9,236,297	167,933
Interest Income	761,953	13,854
Dividend Income	70,581	1,283
Commissions and fees earned	10	-
Other income	634,378	11,534
Total revenue	61,835,904	1,124,289

Source: 2006 Census of Philippine Business and Industry, NSO

Notably, 90 percent of the revenues generated by foreign companies came from the sale of products or by-products. The rest came from reselling of goods. Meanwhile, those of the local companies came not only from selling of products or by-products (74%), but also from reselling of goods (16.8%) and from industrial services done for others (6%).

¹⁴ Next only to semi-conductor devices, refined petroleum, computers and computer peripherals and accessories, precious metals, motor vehicles, and cigarettes.

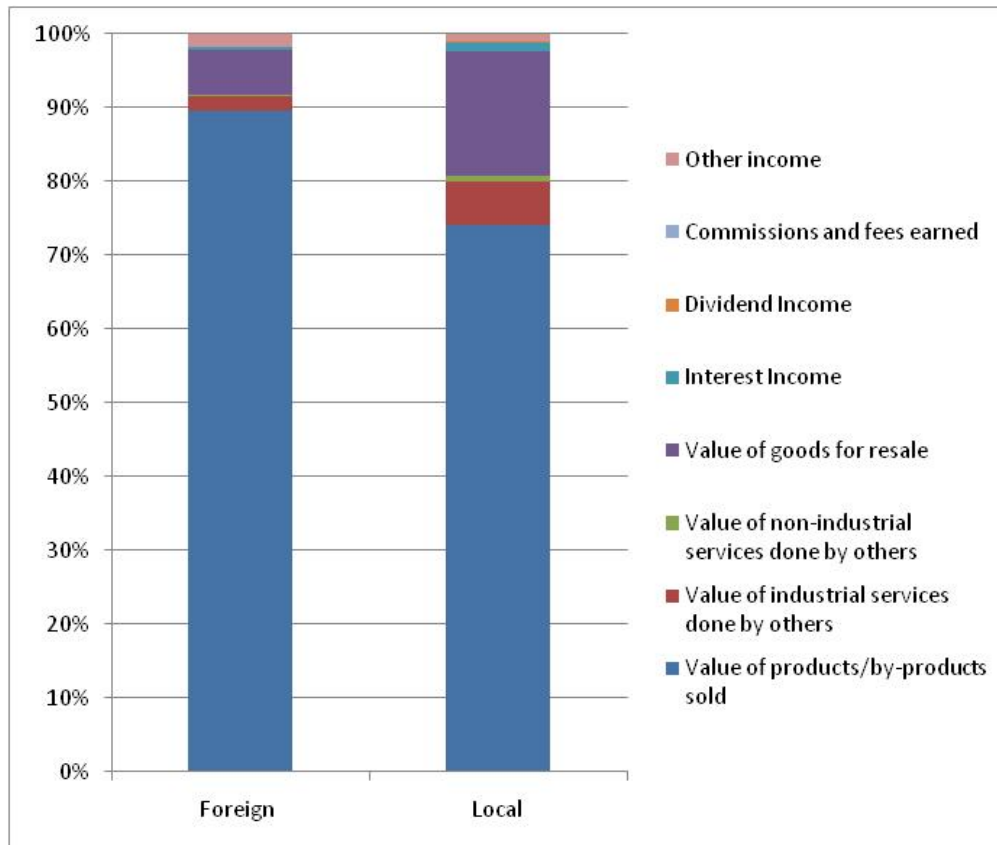


Figure 9. Composition of total revenues by type of pharmaceutical companies, 2006

Meanwhile, the total cost that manufacturers incurred in 2006 amounted to P47 billion. R&D expenditure was a very tiny part of the total cost at only 0.7 percent, or P345 million. Each establishment spent on the average around P6.3 million for R&D. The biggest chunk of the costs, 43 percent, paid by manufacturers went to the purchase of raw materials. The second largest percentage (27 percent) went to payment of non-industrial services done by others. Another relatively large chunk of the cost went to purchase of goods for resale. This shows that aside from producing their products in their own manufacturing plants, these establishments are also importing products by volume to resell them into the domestic market.

It is interesting to note that local firms collectively spent much more on R&D than the foreign ones did. In fact, 82 percent of the total R&D amount spent by all manufacturers came from local manufacturers. In terms of the average amounts however, the foreign ones have slightly higher expenditures than the local ones, 7.6 million compared to locals' 6 million pesos per establishment.

Table 20. Cost by type for pharmaceutical establishments with total employment of 20 and over by type of capital participation, Philippines, 2006 ('000 Philippine pesos)

Type of cost	Total			Average per establishment		
	All	Foreign	Local	All	Foreign	Local
Raw materials, other materials and supplies purchased	20,123,889	6,116,052	14,007,836	365,889	764,507	298,039
Fuels, lubricants, oils and greases purchased	349,364	84,948	264,417	6,352	10,618	5,626
Electricity and water purchased	730,513	39,059	691,455	13,282	4,882	14,712
Cost of industrial services done by others	1,546,926	357,955	1,188,970	28,126	44,744	25,297
Cost of non-industrial services done by others	12,726,320	1,013,100	11,713,220	231,388	126,637	249,217
Goods purchased for resale	8,164,233	264,857	7,899,375	148,441	33,107	168,072
Interest expense	471,248	51,543	419,705	8,568	6,443	8,930
Indirect taxes	360,669	117,092	243,577	6,558	14,637	5,182
Computer software expense	8,700	2,998	5,702	158	375	121
Research and experimental development	345,038	60,870	284,168	6,273	7,609	6,046
Bad and doubtful debts	34,296	29,934	4,362	624	3,742	93
Depreciation of fixed assets in 2006	1,214,203	132,691	1,081,511	22,076	16,586	23,011
Other cost	837,119	127,791	709,328	15,220	15,974	15,092
Total cost	46,912,517	8,398,890	38,513,627	852,955	1,049,861	819,439

Source: 2006 Census of Philippine Business and Industry, NSO

Local manufacturers have spent higher amount in terms of depreciation of their fixed assets, about 23 million per establishment compared to 16.6 million per foreign establishment.

In terms of bad and doubtful debts, 87 percent of the total amount was incurred by the foreign establishments. On the average, the foreign ones also have significantly higher amount of bad and doubtful debts. Each foreign manufacturer has incurred on the average 3.7 million in bad and doubtful debts in 2006 while a local manufacturer had only 0.093 million.

Meanwhile, manufacturers have poured in a sum of P351 million worth of capital expenditures in 2006, an average of P6.4 million for every establishment which was almost the same as the expenditure on R&D. The largest amount of capital expenditures was spent for machinery and equipment (P207 million). This was followed by transport equipment (P98 million) and buildings (P30 million).

The foreign companies have spent on the average significantly higher amount (at 20 million pesos) than the local manufacturers (at 4 million pesos) in capital expenditures. Transport

equipment (28%) and other machinery and equipment (55%) have the largest share in the capital expenditures of pharmaceutical manufacturers in 2006. Foreign companies have poured 50 percent of capital expenditures on transport equipment. Other machinery and equipment however constituted the biggest chunk in the local establishments' capital investment at around 70 percent.

Table 21. Capital expenditures by type of fixed assets for pharmaceutical establishments with total employment of 20 and over by type of capital participation, Philippines, 2006 ('000 Philippine pesos)

Type of fixed assets	Total			Average per establishment		
	All	Foreign	Local	All	Foreign	Local
Land	-	-	-	-	-	-
Buildings, other structures and land improvements	29,784	4,134	25,650	542	517	546
Transport equipment	98,543	79,551	18,992	1792	9,944	404
ICT machinery and equipment	13,242	6,570	6,672	241	821	142
Other machinery and equipment	193,806	59,890	133,916	3524	7,486	2849
Other fixed assets	15,626	8,608	7018.593	284	1,076	149
Total	351,001	158,752	192,249	6382	19,844	4090

Source: 2006 Census of Philippine Business and Industry, NSO

The total book value of fixed assets that manufacturers have put in amounted to P16 billion. The bulk (P7 billion) was on land, followed by machinery and equipment (P5.4 billion) and buildings (P2.4 billion). The value of intangible assets was P9 million.

On the average, local manufacturers have higher book value of fixed assets, about 325 million pesos per establishment, compared to foreign ones which had about 86 million each. Land and other machinery and equipment composed the largest share in terms of book value for local manufacturers at 46 percent. In contrast, transport equipment (36%) and buildings and other structures (34%) have the biggest share in the fixed assets of foreign establishments. Meanwhile, only the local manufacturers held intangible assets in 2006 at a value of 9 million pesos.

Table 22. Book value of fixed assets by type and value of intangible assets for pharmaceutical establishments with total employment of 20 and over by type of capital participation, Philippines, 2006 ('000 Philippine pesos)

Type of fixed assets	Total			Average per establishment		
	All	Foreign	Local	All	Foreign	Local
Land	6,976,090	16,069	6,960,022	126,838	2,009	148,086
Buildings, other structures and land improvements	2,438,057	231,139	2,206,917	44,328	28,892	46,956
Transport equipment	940,602	243,858	696,744	17,102	30,482	14,824
ICT machinery and equipment	991,421	13,659	977,762	18,026	1,707	20,803
Other machinery and equipment	4,451,427	169,571	4,281,856	80,935	21,196	91,103
Other fixed assets	164,493	12,469	152,024	2,991	1,559	3,235
Total	15,962,090	686,765	15,275,325	290,220	85,846	325,007
Total value of intangible assets	9,051	-	9051.365	165	-	193

Source: 2006 Census of Philippine Business and Industry, NSO

In terms of capacity utilization, the industry can accommodate further growth as there is considerable underutilization of capacity. There were only 7 out of the 55 establishments which had capacity utilization rates of 90 percent and above. Thirty-eight (38) of them had operated only from 60 to 89 percent capacity utilization rates while ten out of the 55 manufacturers had rates below 60 percent.

All 8 foreign establishments had capacity utilization above 60 percent. Meanwhile, 10 out of the 47 local ones had a utilization rate of below 60 percent.

Table 23. Distribution of establishments by capacity utilization rates, 2006	
Capacity utilization rate/inventories	Frequency
Below 50%	2
50% - 59%	8
60% - 69%	16
70% - 89%	22
90% - 100%	7
Total inventories as of January 1, 2006	9,339,330
Total inventories as of December 31, 2006	10,526,722

Source: 2006 Census of Philippine Business and Industry, NSO

4. Profile of Selected Toll Manufacturers

The toll manufacturing industry for drugs and medicines is a diverse sector. This industry is led by several key players such as the Interphil Laboratories, the United Laboratories subsidiaries, Hizon and Lloyd Laboratories. There are also a number of relatively smaller actors. This section briefly describes several toll manufacturers and their linkages with one another. Because collecting data is difficult (interviewing each of them is not feasible), this profile summary relied on the information posted at each of the company’s website, if any, and data from the Food and Drug Administration (FDA).

4.1. Interphil Laboratories, Inc.

Interphil Laboratories is one of the industries’ biggest toll manufacturers. In fact, it is the leader when it comes to manufacturing for the giant MNCs. Composed of over 500 employees, Interphil manufactures or processes around 500 registered drug products in various forms and descriptions, for about 40 companies. Interphil is a Filipino-owned subsidiary of Manchester Holdings, a foreign holdings corporation (based on SEC records). Interphil is the main toll manufacturer in the country used by multinational drug traders. In fact, at least 75% of drugs manufactured by Interphil are estimated to be owned by foreign companies. Among Interphil’s clients are the giant pharmaceutical companies Johnson & Johnson, Pfizer, Abbott, Wyeth, Boehringer Ingelheim, Schering Plough, Glaxosmithkline, Novartis, and AstraZeneca. The table below lists Interphil’s clients and the number of drugs which they manufacture for each of their clients. Drugs were counted across varying strengths and forms. If Interphil produced say, Clarithromycin tablet and granules for suspension, these were counted as two (2) drugs/medicines.

Interphil is also engaged in drug trading. In the FDA drug list, 13 percent of the drugs and medicines it manufactures do not have entries under trader. The FDA noted that in cases where no traders were specified in the drug database, the manufacturer performs as the trader.

Table 24. Traders of drugs that Interphil manufacture for, by proportion of total drug products manufactured, as of February 2010	
Drug trader	Share to total
Interphil	13.24
Johnson & Johnson (Phils.) Inc	9.29
Wyeth	8.70
Pfizer, Inc.	6.92
Sandoz Phils. Inc.	6.72
Abbott Lab	6.52
Boehringer Ingelheim	6.13

Glaxo SmithKline	4.35
Schering Plough Corp.	4.15
Novartis Healthcare Phils., Inc.	3.75
AstraZeneca Pharm'ls. Phils. Inc.	3.56
PITC Pharma Inc	2.37
Bayer Philippines, Inc.	2.17
Duncan Pharm'ls. Phils. Inc.	2.17
Stiefel Philippines, Inc.	2.17
Merck, Inc.	1.98
Essex	1.78
Sanofi-Aventis Phils Inc	1.78
Chemway Pharma Inc	1.38
PL Asia Pacific	1.38
Roche	1.19
20 Others	8.30

Source of basic data: FDA list of registered drug (as of February 2010)

4.2. Hizon Laboratories, Inc. (HLI)

The Hizon Laboratories Inc. is one of the most popular local toll manufacturers and was the very first pharmaceutical manufacturer in the country. Founded more than a century ago, it now has more than 50 clients most of which are local drug traders. With around 400 regular and 200 contractual employees, it provides manufacturing as well as packaging services for its clients. Its manufacturing services cover prescription medicines, over-the-counter drugs, food supplements and cosmetic products. Hizon's manufacturing strengths are in liquids, tablets, hard gelatine capsule products, soft gelatine capsule products, dry granules or powder for suspension, creams, ointments, lotions/shampoos, and parenteral products in ampoules, capsules and vials. The most dominant products that HLI manufactures are generic off-patent drugs and multivitamins.

Meanwhile, HLI's packaging services involve both primary and secondary packaging. Primary packaging covers liquid filling with pilfer proof caps, child resistant packaging, blister packaging, packaging with in-line bar-coding check, sachet filling, tea bagging, and capsule/tablet filing in bottles. Secondary packaging involves labeling of blister strips, boxes or bottles; and promotional materials assembly and packaging.¹⁵ In terms of R&D, HLI does not undertake R&D.

HLI is one of the few local toll manufacturers used by MNCs drug traders. Its MNC clients are Abbott Lab., Galderma, GlaxoSmithkline, Multicare Pharma, and Wyeth among others. However, the share of MNCs/foreign clients in HLI's manufacturing activities comprises only 30

¹⁵ Source: Hizon Laboratories official website at www.hizonlab.com

percent.¹⁶ The other 70 percent is done for local drug traders. These figures were validated using the list of registered drugs of the FDA. From this list, it was found that 60 to 70 percent of the total drugs HLI manufactures or processes are indeed being done for local drug traders. Table 25 shows the list of HLI clients by the proportion of drugs it manufactures for them.

Trader	% to total	Trader	% to total
Hizon	19.79	Lifelink Pharma Corp	0.79
Jralph Pharm'ls., Inc.	14.64	Medisphere Corporation	0.79
GX Int'l. Inc.	4.62	PL Asia Pacific Phils Inc.	0.79
Pharma Nutria N.A. Inc	4.09	Sigma Medical Solution Trading CO., Inc	0.79
One Pharma Company, Inc.	3.83	Blooming Fields Phils., Inc.	0.66
S.V. More Pharma Corporation	3.69	Transfarma Phils Inc	0.66
Genesis Pharma, Inc	3.56	Wyeth Phils (Inc. Wyeth Consumer)	0.66
Willore Pharma Corp	3.43	Essenpharma	0.53
Multicare Pharm'ls. Phils., Inc.	3.03	Euro-Therapeutics, Inc.	0.53
Al-mine Int'l. Corp.	2.77	Kazan Pharma, Inc.	0.53
Pharmspec N.A. Inc	2.77	Novartis Healthcare Phils. Inc.	0.53
YSS Laboratories Company, Inc.	2.77	Pediacare Pharma Phils Inc	0.53
QX Pharm'ls. Inc.	1.98	Trevenodd Corp	0.53
Charmwood Pharmaceuticals	1.72	Galderma Philippines Inc.	0.40
Boie Inc	1.45	Glaxo SmithKline	0.40
Hizon Labs. Inc.	1.45	Mead Johnson Nutrition Phil Inc	0.40
Pharmatrix Corp	1.45	Pharmahex, Inc, Phils	0.40
Natrapharm, Inc.	1.32	The Cathay Drug Co., Inc	0.40
Metropharma Phils. Inc.	1.19	Zuellig	0.40
OEP Philippines, Inc.	1.19	Edmond Pharma S.R.L	0.26
Patriot Pharm'ls. Corp.	1.19	Heallen Pharma Inc.	0.26
Carel's Pharma'l Inc	1.19	PNSV Asia Corp	0.26
Pharma Dynamic, Inc.	1.06	The Cathay YSS Distributors Co., Inc.	0.26
Chira Pharmaceuticals Inc	0.92	Abbott Lab	0.13
Icon Pharma Corp	0.92	Bristol Myers Squibb Inc.	0.13
Winthrop Pharma'l Phils Inc	0.92	8 Others	1.06

Source of basic data: FDA list of registered drug (as of February 2010)

Hizon imports 95 percent of the raw materials it uses for manufacturing drugs and medicines.¹⁷ The other 5 percent that it obtains locally are for sugar and ethyl alcohol. It was also found that it does not import finished products for reselling. Although it can also be classified as a trader

¹⁶ Source: Data were obtained from Hizon Laboratories, Plant Operations, via E-mail.

¹⁷ Source: Data were obtained from Hizon Laboratories, Plant Operations via E-mail.

because it manufacturers also for its own trading activities as shown in the table above), HLI does not do distribution. It has also started exporting drugs in Nigeria.

4.3. Lloyd Laboratories, Inc.

Lloyd Laboratories, Inc. is one of the country's leading toll manufacturers of pharmaceutical and other related products and services in the Philippines and elsewhere in the world. Its manufacturing complex is located in a 4-hectare lot at the First Bulacan Industrial City in Malolos, Bulacan north of Manila. Lloyd Laboratories' facility holds the space for manufacturing and packaging of Penicillin, Cefalexin, Steroid, non-penicillin pharmaceutical, veterinary, cosmetics, household and food products. The Lloyd team is composed of over 200 personnel that work in industrial pharmacy, pharmaceutical manufacturing, finance, marketing, human resource and other areas of business management.¹⁸

Lloyd Laboratories started out solely as repacker for medicines in blister form in 1989. It then upgraded into a total contract toll manufacturer when it complied with BFAD requirements that every repacker should have complete quality control facilities. At present it serves around 90 drug traders and manufactures/repackages more than 1,900 drugs in different forms and descriptions.¹⁹

Unlike Hizon and Interphil, Lloyd does produce mainly for locals and predominantly small drug traders. Lloyd is also more predominantly a toll manufacturer because it does very little trading by itself. It only trades 2 percent of the total drugs it manufactures.

¹⁸ Source: Official website of Lloyd Laboratories at <http://www.lloydlab.com>

¹⁹ The estimated number of drugs is based on FDA's list of registered drugs. Drugs have been counted based on their Drug Registration numbers (DR No.). Those drugs with the same generic names, brand names and even forms, but have different strengths have different DR numbers.

Table 26. Traders of drugs that Lloyd Laboratories manufacture for by proportion of drug products manufactured, as of December 2009

Trader	Share to total	Trader	Share to total
Eurohealthcare Exponents Inc.	8.53	Corbridge Group Phils., Inc.	0.52
Foramen Products Inc	6.86	Medgen Laboratories Inc.	0.47
Gamot Phils., Inc.	5.81	Innoderm, Inc.	0.42
Medhaus Pharma, Inc.	5.34	Generics Pharmacal Phils.	0.37
Interhealthcare Pharm'ls. Inc.	5.18	Kramer Pharm'l. Corp.	0.37
Eadriex Pharm'l. Phil. Inc.	4.24	Remed Pharm'l. Inc.	0.37
Aldril Pharm'ls. Inc.	3.93	Brel Pharm'l., Inc.	0.31
Vamsler Phils., Inc.	3.72	Folares Pharmaceuticals Inc.	0.31
Solvang Pharm'ls. Inc.	3.40	Germed	0.31
DB Manix Int'l. Inc.	3.35	Pharmaspec N.A. Inc.	0.31
Vitalink Health Products, Inc.	3.35	Ace	0.26
Westfield Pharm'ls., Inc.	3.35	Altomed Pharmaceuticals Inc	0.26
Metz Pharm'ls., Inc.	3.25	Healthprime Pharma Phils Inc	0.26
Randril Int'l. Co., Inc.	2.51	Innogen Pharma group Inc	0.26
Basic Pharm'l. Corp.	2.30	Pacific Pharm'l. Generics Inc.	0.26
Goldcoast Pharm'l. Inc.	2.30	Patriot Pharmaceuticals Corp	0.26
Lloyd Labs. Inc.	2.15	Pharmacare Products Co	0.26
Rhiza Pharm'ls. Int'l. Phils. Inc.	1.73	IAE Pharma'l Corp	0.21
Buenar Labs., Inc	1.68	888 Pharma Distributors	0.16
Jesriel Pharm'ls., Inc.	1.62	First Fil-Bio Import Export Corp.	0.16
Natrapharm, Inc.	1.57	JM Tolmann Lab	0.16
Philippine Home Pharmaceuticals	1.57	Kamire, Inc.	0.16
Prosel Pharm'ls. And Dist. Inc.	1.57	La Croesus Pharma Inc.	0.16
Totalcare Pharma Inc	1.52	CX	0.10
Ultramed Pharma'l Inc	1.36	Euro-Therapeutics Inc.	0.10
GX Int'l. Inc.	1.20	Kaufmann Pharma Inc	0.10
Pharma Nutria NA Inc.	1.20	Le Jumont Pharm'l. Inc.	0.10
Su-Heung Int'l. Corp.	1.20	Littman Drug Corp	0.10
Dr.Zen's Research Inc.	1.05	Mediprime Pharmaceuticals Inc.	0.10
Primera Pharma	0.89	Medlink Pharma Phils.	0.10
Prohealth Pharma Phils., Inc.	0.89	Nutramedica ,Inc.	0.10
B Phar	0.63	Therape Pharma'l Inc	0.10
Wescrib Company	0.63	Wellness AG Inc.	0.10
S.V More Pharma Corp	0.58	25 others	1.31
Zylan Pharmaceuticals, Inc.	0.58		

Source of basic data: FDA list of registered drug (as of February 2010)

5. Profile of Traders

Pharmaceutical traders consist of wholesalers and retailers. In the 2006 CPBI, a total of 3,037 traders (that is 350 wholesalers and 2,687 retail outlets of drugs and pharmaceutical goods) were included. The table below shows the distribution of pharmaceutical traders among the regions. Many of these traders were concentrated in Metro Manila and nearby regions.

Region	Wholesalers	Retailers	Total traders
NCR	182	783	965
CAR	-	37	37
I – Ilocos	12	134	146
II - Cagayan Valley	5	73	78
III - Central Luzon	3	227	230
IVA - CALABARZON	11	285	296
IVB - MIMAROPA	3	59	62
V – Bicol	-	86	86
VI - Western Visayas	39	255	294
VII - Central Visayas	40	164	204
VIII - Eastern Visayas	6	62	68
IX - Zamboanga Peninsula	10	74	84
X - Northern Mindanao	23	143	166
XI - Davao	11	150	161
XII - SOCCSSARGEN	5	98	103
ARMM	-	9	9
CARAGA	4	48	52
Philippines	350	2,687	3,037

1/ Retailers of drugs and pharmaceutical goods; wholesalers of medicinal and pharmaceutical products

It is important to note that small enterprises dominate the pharmaceutical trading business in terms of number. In fact, two-thirds of all wholesalers and ninety-two percent of retailers are considered small enterprises (see Figure 10). These establishments are those that have less than 20 employed persons.

However, in terms of revenues, the picture turns the opposite way, at least with respect to the wholesalers. Although only a third of the wholesalers are large firms, they generate 96 percent of the total revenues of all wholesalers in 2006 (i.e. 109 billion out of the total 113 billion pesos revenues of all wholesalers). Meanwhile, the playing field is more even when it comes to the retailers where more than half (55 percent) of the total revenues of retailers are generated by the small enterprises.



Figure 10. Numbers of Pharmaceutical Traders by Size of Establishment

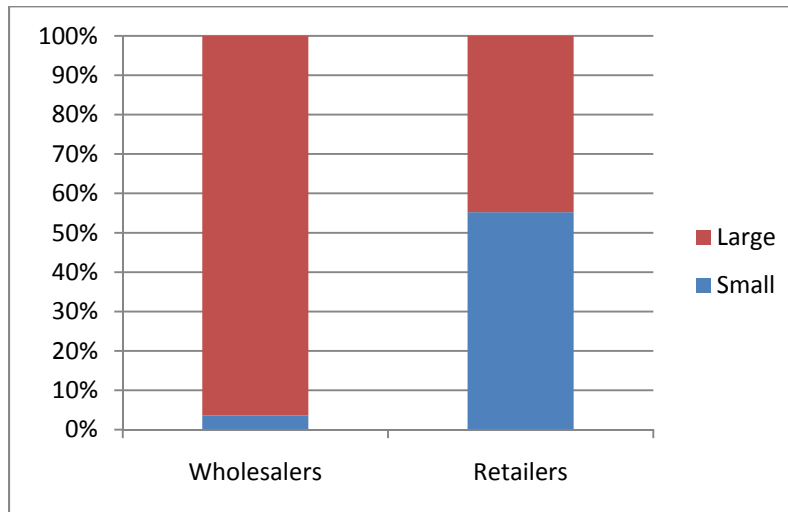


Figure 11. Share of Pharmaceutical Traders in Total Revenues by Size of Establishment

The pharmaceutical traders employed a total of 38,051 employees in 2006, averaging roughly 13 for each establishment. Large establishments employed an average of 55 while small ones had only about 7. Meanwhile, wholesalers had an average employment of forty (40) while retailers had about 9 employees per establishment. However, policy-wise, it is essential to take into account that small establishments employed the majority (52%) of the workers in the industry. Likewise, retailers employed around 63 percent of the total employment.

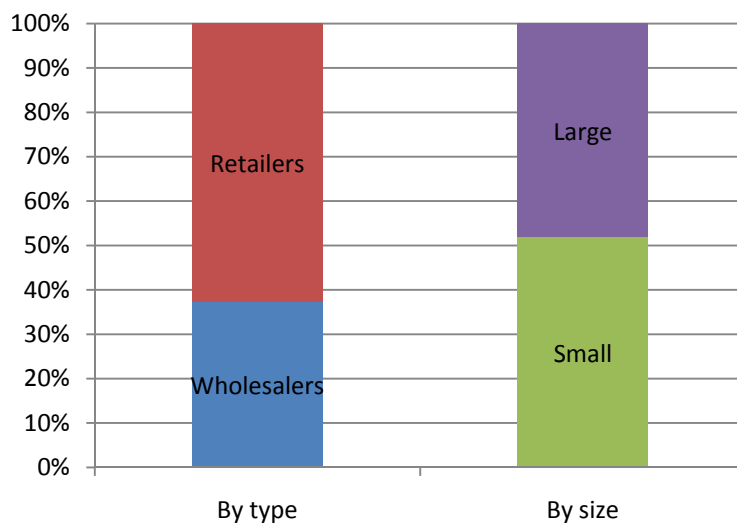


Figure 12. Share of traders to total employment by type and size

On the average, traders paid each of their employees a sum of P241,000 in gross salaries and wages 2006. Retail stores spent around P150,000 per employee for the year while wholesalers spent P390,000. Large establishments paid much higher annual salary, more than three-folds those of the small establishments. The gap is even wider among wholesalers where the large ones paid compensation over four times that of the small traders.

Trader/size	Average employment	Average annual wages and salaries (Philippine pesos)
Wholesalers	40	389,450
Small	10	102,591
Large	101	448,051
Retailers	9	152,338
Small	7	115,849
Large	31	248,582
Total	13	240,637
Small	7	114,238
Large	55	376,614

Source of basic data: 2006 CPBI

The average compensation for employees in the pharmaceutical trading industry was highest for those in Metro Manila and CALABARZON and lowest in ARMM and Bicol Region. The figure below shows the gross wages and salaries in the rest of the regions in the country.

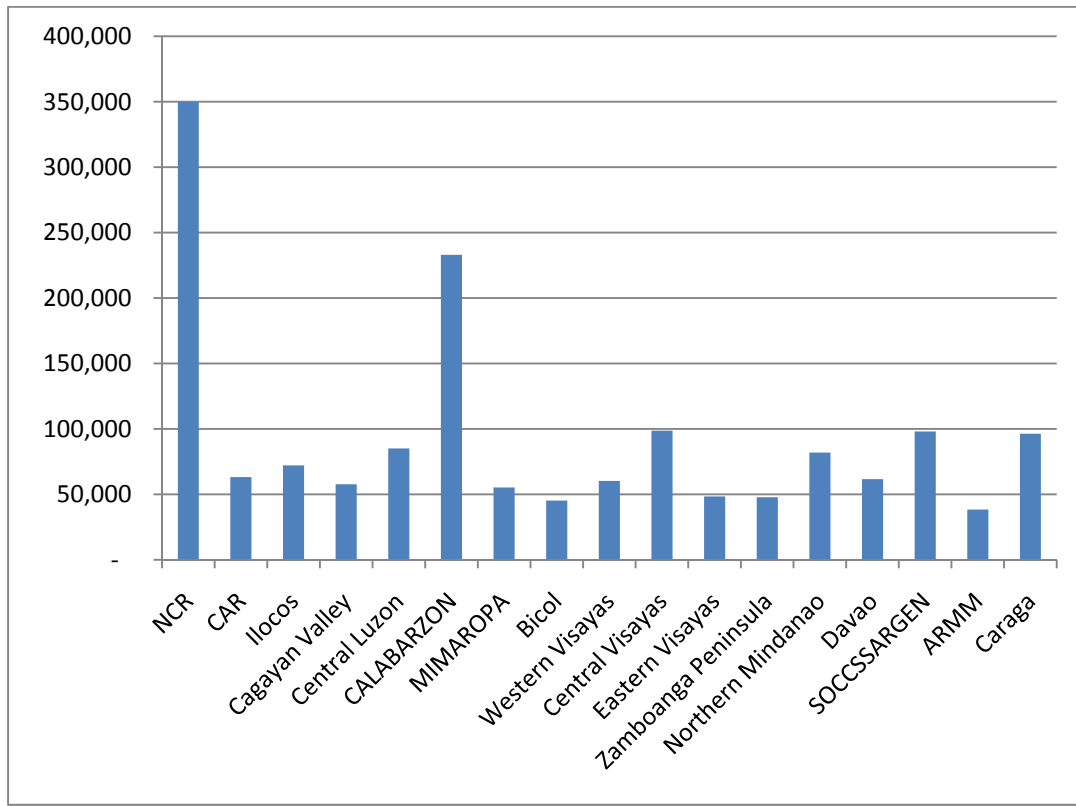


Figure 13. Average wage and salary in pharmaceutical trading establishments by region, 2006

Table 29 shows the revenues by type of pharmaceutical traders according to establishment size and category. On the average, an establishment raised around P61 million in revenues in 2006. In total, the industry had contributed a total of P185 billion worth of revenues of which the large establishments contributed more than three-fourths of the amount. In fact, the average revenue of a large trader was 26 times those of a small one. Also, each wholesaler had on the average 12 times more revenues compared to the retailers. The key revenue sources for them were obviously goods for resale which consisted as high as 97 percent of the total revenues.

Table 29. Revenue by type of pharmaceutical traders, 2006 (*000 Philippine pesos)					
Type/source of revenues	Total	Small	Large	Wholesaler	Retailer
TOTAL					
Revenue from main activity	6,394	6,394	-	-	6,394
Value of goods for resale	180,033,339	41,814,155	138,219,183	110,326,184	69,707,155
Value of industrial services done for others	133,821	-	133,821	133,821	-
Value of non- industrial services done for others	308,445	91,063	217,383	230,782	77,664
Value of other non- industrial services done for others	247,044	56,756	190,288	198,887	48,157
Income from renting and leasing	61,401	34,307	27,094	31,895	29,506
Interest income	305,909	36,666	269,243	256,471	49,438
Dividend income	4,233	-	4,233	4,233	0
Commissions and fees earned	3,456,377	1,450,200	2,006,177	2,006,443	1,449,934
Other income	556,539	168,286	388,253	367,024	189,515
Total revenue	184,805,056	43,566,763	141,238,293	113,324,957	71,480,099
AVERAGE					
Revenue from main activity	2	2	-	-	2
Value of goods for resale	59,280	15,452	417,581	315,218	25,942
Value of industrial services done for others	44	-	404	382	-
Value of non- industrial services done for others	102	34	657	659	29
Value of other non- industrial services done for others	81	21	575	568	18
Income from renting and leasing	20	13	82	91	11
Interest income	101	14	813	733	18
Dividend income	1	-	13	12	0
Commissions and fees earned	1,138	536	6,061	5,733	540
Other income	183	62	1,173	1,049	71
Total revenue	60,851	16,100	426,702	323,786	26,602
No. of establishments	3037	2706	331	350	2687

Table 30. Costs incurred by pharmaceutical traders by type, 2006 ('000 Philippine pesos)					
Type of cost	Total	Small	Large	Wholesalers	Retailers
TOTAL					
Materials and supplies purchased	1,234,150	165,400	1,068,750	973,658	260,492
Goods purchased for resale	151,630,754	36,828,393	114,802,361	89,705,030	61,925,723
Real estate purchased	-	-	-	-	-
Fuel purchased	579,405	95,617	483,788	456,537	122,868
Electricity purchased	878,769	326,630	552,139	312,870	565,899
Cost of industrial services					
Done by others	714,814	171,105	543,710	483,239	231,575
Cost of non-industrial services					
Done by others	8,788,481	1,519,276	7,269,205	6,659,320	2,129,161
Interest expense	348,513	57,777	290,736	298,964	49,549
Indirect taxes	908,651	313,911	594,740	477,831	430,820
Computer software expense	55,951	9,642	46,309	49,103	6,847
Research and experimental development	39,611	-	39,611	34,309	5,303
Bad and doubtful debts	162,135	9,427	152,708	153,916	8,219
Depreciation of fixed assets	777,478	225,986	551,492	505,329	272,148
Other costs	742,846	108,086	634,760	615,382	127,464
Total costs	166,861,558	39,831,249	127,030,309	100,725,488	66,136,070
AVERAGE					
Materials and supplies purchased	406	61	3,229	2,782	97
Goods purchased for resale	49,928	13,610	346,835	256,300	23,046
Real estate purchased	-	-	-	-	-
Fuel purchased	191	35	1,462	1,304	46
Electricity purchased	289	121	1,668	894	211
Cost of industrial services					
Done by others	235	63	1,643	1,381	86

Type of cost	Total	Small	Large	Wholesalers	Retailers
Cost of non-industrial services					
Done by others	2,894	561	21,961	19,027	792
Interest expense	115	21	878	854	18
Indirect taxes	299	116	1,797	1,365	160
Computer software expense	18	4	140	140	3
Research and experimental development	13	-	120	98	2
Bad and doubtful debts	53	3	461	440	3
Depreciation of fixed assets	256	84	1,666	1,444	101
Other costs	245	40	1,918	1,758	47
Total costs	54,943	14,720	383,777	287,787	24,613
No. of establishments	3037	2706	331	350	2687

The pharmaceutical trading industry incurred a total amount of P167 billion pesos in costs. Each establishment has spent about P55 million with small ones spending P15 million while the large firms paid out P384 million.

In terms of cost structure, the key expenditure item for traders is basically goods for resale which consisted around 90 percent of total costs. In terms of R&D, only large firms have spent, albeit modestly, on research and experimental development amounting to a total of 39.6 million pesos.

The trading sector, as a whole, had poured in a total amount of 1.8 billion pesos worth of fixed assets in 2006, an average of P590 million for each trader. Interestingly, smaller establishments invested in P406 million (or P150,000 per establishment) while large firms poured in the bulk of the industry's capital expenditures with P1.4 billion pesos (or P4.2 million for each firm).

Among various types of fixed assets, traders have put in the largest investment (36 percent) into transport equipment (owing to the nature of the business), followed by buildings, other structures and land improvements (33 percent), and computers and other machinery and equipment (summed at 29 percent). Table 31 below presents the detailed composition of capital expenditures in absolute amounts.

Table 31. Capital expenditures by type and size of establishments, 2006 ('000 Philippine pesos)

Item	Total	Small	Large	Wholesalers	Retailers
TOTAL					
Land	24,234	-	24,234	24,234	-
Buildings, other structures and land improvements	598,392	76,093	522,299	495,467	102,925
Transport equipment	638,740	242,425	396,315	380,485	258,256
Computers and peripherals	232,950	61,039	171,911	199,457	33,492
Other machinery and equipment	294,145	26,669	267,475	166,938	127,206
Other fixed assets	276	-	276	240	37
Total fixed assets	1,788,737	406,226	1,382,511	1,266,821	521,916
System and application software	31,295	-	31,295	31,264	31
AVERAGE					
Land	8	0	73	69	0
Buildings, other structures and land improvements	197	28	1578	1416	38
Transport equipment	210	90	1197	1087	96
Computers and peripherals	77	23	519	570	12
Other machinery and equipment	97	10	808	477	47
Other fixed assets	0	0	1	1	0
Total fixed assets	589	150	4177	3619	194
System and application software	10	0	95	89	0
No. of establishments	3,037	2,706	331	350	2,687

Essentially, the trading industry had invested a huge amount of P8 billion worth of fixed assets as of the year 2006. This amount averaged around P2.7 million for each establishment. Small companies had a share of 30 percent of the total book value of fixed assets, while large companies had 70 percent. Wholesalers make up 60 percent while retailers shared 40 percent of the total investment.

The biggest chunk of these assets was into buildings, other structures and land improvement, with 36 percent. This is followed by transport equipment at 27.4 percent and other machinery and equipment at 16 percent.

Table 32. Book value of fixed assets by type and size of establishments, 2006 ('000 Philippine pesos)					
Type/Item	Total	Small	Large	Wholesalers	Retailers
TOTAL					
Land	797,175	348,819	448,356	584,447	212,727
Buildings, other structures and land improvements	2,928,078	961,300	1,966,777	1,397,092	1,530,986
Transport equipment	2,212,333	710,176	1,502,156	1,561,074	651,258
Computers and peripherals	468,317	117,928	350,389	267,983	200,334
Book value of system and application software	391,070	6,908	384,161	381,599	9,471
Other machinery and equipment	1,272,554	256,016	1,016,538	635,566	636,988
Other fixed assets	13,937	380	13,557	10,752	3,185
Total fixed assets	8,083,463	2,401,529	5,681,934	4,838,513	3,244,950
Book value of intangible assets	465,532	8,732	456,800	421,678	43,854
AVERAGE					
Land	262	129	1,355	1,670	79
Buildings, other structures and land improvements	964	355	5,942	3,992	570
Transport equipment	728	262	4,538	4,460	242
Computers and peripherals	154	44	1,059	766	75
Book value of system and application software	129	3	1,161	1,090	4
Other machinery and equipment	419	95	3,071	1,816	237
Other fixed assets	5	0	41	31	1
Total fixed assets	2,662	887	17,166	13,824	1,208
Book value of intangible assets	153	3	1,380	1,205	16
No. of establishments	3,037	2,706	331	350	2,687

D. Contribution of the Pharmaceutical Industry to the Philippine Economy

In the profiles of pharmaceutical companies, manufacturers and traders alike, one can see that the sector contributes significantly to the Philippine economy not only in terms of investments but more importantly of employment. Aside from these, the contributions are in the forms of taxes, earnings in terms of external trade, and indirect effects to the local economy.

The pharmaceutical industry consisting of manufacturers and traders had poured in a total amount of 2.1 billion pesos worth of fixed assets in 2006. The book value of combined fixed assets as of 2006 was at 24 billion pesos, or an average of 8 million pesos per establishment. The fixed assets comprised of land (32%), other machinery and equipment (24%), buildings and other structures (22%), and others (Figure 14). The largest chunk of land value (90%) came

mostly from the manufacturers. Notably, the pharmaceutical sector had invested a total amount of P1.8 billion in ICT machinery and equipment.

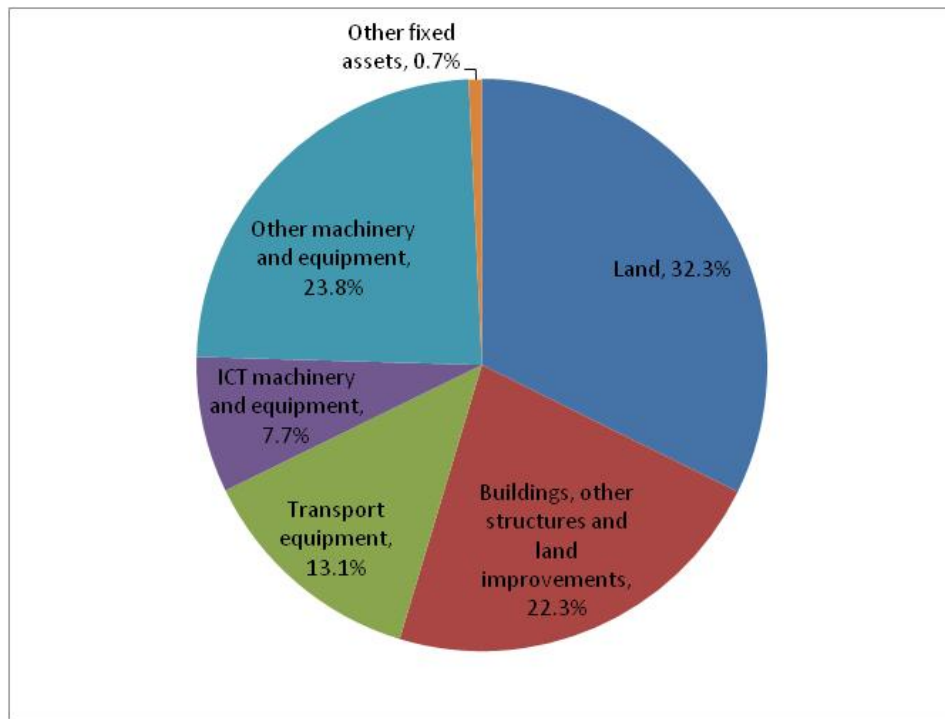


Figure 14. Book value of fixed assets of pharmaceutical establishments by type (manufacturers and traders), 2006 CPBI

The industry has also invested, albeit small, an amount of at least P385 million in R&D in 2006. This comes from the 3,092 pharmaceutical establishments included in the 2006 CPBI of the NSO. Much of the R&D expenditures came from the local manufacturers. The industry's contribution to the economy can also be examined through its linkages with others. One way to determine this is by looking at the values of services, industrial and non-industrial, done for others as well as the cost of services done by others. The higher the amounts of revenues and costs related to this aspect signals the depth of linkages that the establishments have with the domestic economy. Interestingly, these flows totaled 24 billion pesos, suggesting the deep network amongst various players in the industry.

The industry consisting of manufacturing, wholesaling, and retailing sectors, employed at least 52,967 in 2006. This estimate does not include small-sized manufacturing establishments, and other establishments not included in the survey. Forty-five percent of the employment is in the drugs and pharmaceutical goods retail business. The employment (38,051) in retail and wholesale of pharmaceutical products alone comprises 17 percent of the total employment for

the entire wholesale and retail trade sector of the Census of Philippine Business and Industry.²⁰ Meanwhile, pharmaceutical manufacturing contributes 1.5 percent of the total employment in all of manufacturing establishments (with ATE 20 and over).

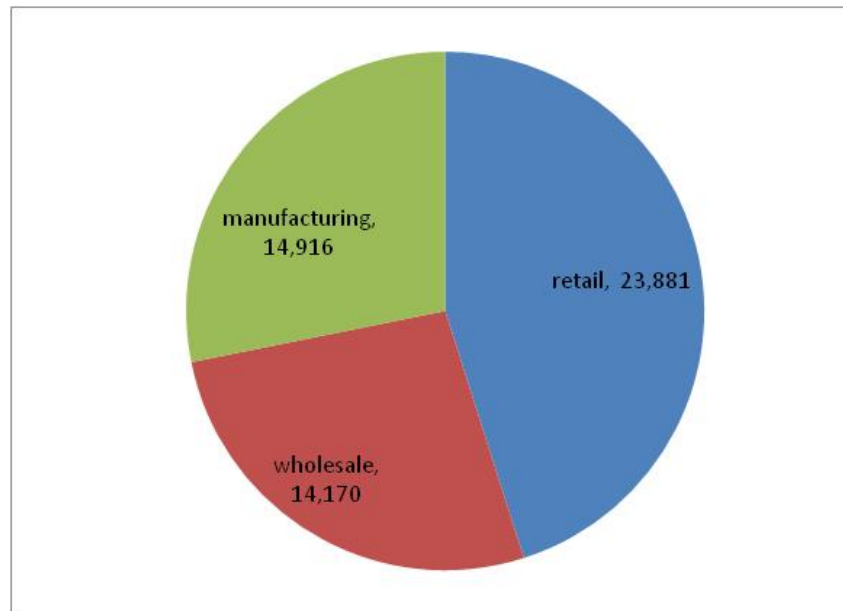


Figure 15. Employment in the pharmaceutical industry by sector, 2006

As previously discussed, the pharmaceutical industry is one of the highest paying industries. The manufacturers paid P6.9 billion in salaries and wages in 2006, or P462,700 per employee on the average. This amounts to 4.2 percent of the total amount paid by all manufacturing establishments with ATE 20 and above. The traders meanwhile, spent P9.1 billion in gross salaries and wages to its employees, an average of P241,000 for each employee. The total salaries and wages for the combined sectors was P16 billion.

To the extent that the pharmaceutical industry engages in trade with the rest of the world, it has the potential of enhancing the country's balance of payments position or contributing to the drain in foreign exchange reserves. The pharmaceutical industry has been steadily increasing its exports as it diversifies its products and markets. For instance, one local pharmaceutical company just started exporting to Nigeria. In 2008, exports of these products contributed USD 31.7 million to our foreign exchange reserves.

²⁰ The sector's total employment in 2006 was 228,622 based on CPBI preliminary estimates accessed from http://www.census.gov.ph/data/sectordata/cpbi06_wrmtx.html Retrieved March 15, 2011

Year	Value	Growth rate (%)
2002	21,196,109	
2003	21,624,187	2.02
2004	27,484,718	27.1
2005	28,850,529	4.97
2006	30,162,208	4.55
2007	35,006,008	16.06
2008	31,703,119	-9.44

Sources: 2002-2006 data, Processed by: Bureau of Export Trade Promotion (BETP); 2007-2008 data, Source: World Bank, World Integrated Trade Solution (WITS)

The foreign trade statistics from the National Statistics Office show that the value of imports of medicinal and pharmaceutical products has been steadily increasing over time. Latest data show that value of imports has reached USD 722 million in 2009.

Year	Value	Growth rate (%)
2002	364,519,357	
2003	395,749,287	8.57
2004	419,999,825	6.13
2005	458,163,082	9.09
2006	521,350,466	13.79
2007	584,051,831	12.03
2008	657,317,055	12.54
2009	722,926,749	9.98

Source: Foreign Trade Statistics, NSO

Imports of medicinal and pharmaceutical products continue to outpace exports. Net imports reached USD 625 million in 2008. This means that these products continue to drain our foreign exchange reserves.

Year	Net imports (in US dollars)
2002	343,323,248
2003	374,125,100
2004	392,515,107
2005	429,312,553
2006	491,188,258
2007	549,045,823
2008	625,613,936

Pharmaceutical companies contribute to the country by paying taxes and licenses. For instance, top manufacturers of pharmaceutical products paid P411 million in taxes and licenses alone in 2006. Local corporations paid on the average Php 8.6 million in taxes and licenses in 2008 while foreign corporations paid an average of Php 16.6 million. United Laboratories topped the list of taxpayers. Boehringer Ingelheim Phils., Inc came in second, followed by Wyeth and Glaxosmithkline Phils, all foreign corporations. Fifteen of the top 20 local corporations paid a total of Php 128.5 million. On the other hand, 17 of the top 20 foreign companies paid a total of Php 282.2 million.

Rank	Company	Taxes and licenses
1	United Laboratories Inc.	66,176.73
2	Pascual Laboratories	10,392.53
3	Natrapharm Inc.	2,740.70
4	GX International Inc.	2,495.00
5	Intermed Mrktng. Phils. Inc.	6,897.94
6	Euro-med Laboratories Phil., Inc.	22,924.60
7	Cathay Drug Co., Inc.	838.98
8	AM Europharma Corp.	922.23
9	Multicare Pharmaceuticals Phils., Inc.	1,516.85
10	Herbs & Nature Corp.	40.82
11	Terramedic	.
12	Int'l. Pharmaceuticals, Inc.	11,384.87
13	Rhea Pharmaceuticals Corp.	.
14	Elin Pharmaceuticals	837.73
15	Prohealth Pharma Phils., Inc.	974.4
16	Prosel Pharmaceuticals & Distributors, Inc.	133.09
17	Transfarma Philippines, Inc.	.

18	Medhaus Pharma, Inc.	260.37
19	Marcopharm	.
20	Inter Unimedix	.
	Simple average	8,569.12
	Weighted average 2/	49,139.85

Source: SEC; 1/ Refers to taxes and licenses only for 2008 or period closest to 2008 depending on data availability. 2/ Weights are based on 2008 Sales

Rank	Company	Taxes and licenses
1	Glaxosmithkline Phils., Inc.	30,253
2	Pfizer, Inc.	14,619
3	Wyeth Phils. Inc.	40,475
4	Abbott Laboratories Phils.	11,436
5	Novartis Healthcare Phils., Inc.	6,781
6	AstraZeneca Pharmaceuticals, Phils. Inc.	5,676
7	Sanofi-Aventis Philippines Inc.	3,413
8	Johnson & Johnson Phils. Inc.	.
9	Boehringer Ingelheim Phils., Inc.	52,497
10	Roche Phils., Inc.	25,113
11	Bristol Myers Squibb (Phils.) Inc.	.
12	Bayer Phils. Inc.	22,340
13	Schering Plough Corp.	4,430
14	Merck Sharpe & Dohme (IA) Corp	11,486
15	Servier Phils. Inc.	22,077
16	Merck Inc.	10,349
17	Solvay Pharma, Inc. Phils.	5,576
18	PL Asia Pacific Inc.	8,124
19	Eli Lilly Phils., Inc.	7,497
20	Getz Pharma phils. Inc.	.
	Simple average	16,597
	Weighted average 2/	19,616

Source: SEC; 1/ Refers to taxes and licenses only for 2008 or period closest to 2008 depending on data availability. 2/ Weights are based on 2008 Sales

Table 38. Rank of top 20 pharmaceutical companies in sales and taxes paid, 2009 (Million Philippine pesos)

Company	Sales	Rank	Taxes and licenses	Rank
United Laboratories Inc.	26,967	1	66.18	1
Glaxosmithkline Phils., Inc.	9,289	2	30.25	4
Pfizer, Inc.	9,188	3	14.62	10
Wyeth Phils. Inc.	5,435	4	40.48	3
Abbott Laboratories Phils.	4,192	5	11.44	12
Novartis Healthcare Phils., Inc.	4,173	6	6.78	19
AstraZeneca Pharmaceuticals, Phils. Inc.	4,055	7	5.68	20
Sanofi-Aventis Philippines Inc.	3,948	8	3.41	26
Johnson & Johnson Phils. Inc.	3,548	9	23.49	6
Pascual Laboratories	3,516	10	10.39	14
Boehringer Ingelheim Phils., Inc.	3,419	11	52.5	2
Roche Phils., Inc.	3,374	12	25.11	5
Bristol Myers Squibb (Phils.) Inc. (Mead Johnson)	2,800	13	ND	.
Bayer Phils. Inc.	2,393	14	22.34	8
Natrpharm Inc.	2,320	15	2.74	27
Schering Plough Corp.	2,192	16	4.43	23
Merck Sharpe & Dohme (IA) Corp	1,976	17	11.49	11
Servier Phils. Inc.	1,518	18	22.08	9
Merck Inc.	1,415	19	10.35	15
GX International Inc.	1,266	20	2.5	29

Source: IMS(Sales data); SEC (taxes and licenses data)

It is interesting to examine the contribution of the pharmaceutical companies in terms of manufacturing/supplying essential drugs. The tables below show the number and percentage of essential drugs manufactured by local and foreign companies by therapeutic category. The objective of these tables is to present which group (that is, the local firms or the foreign ones/MNCs) supply which essential drugs. The data are based on the authors' calculations using the FDA list of registered drugs that contains information on the manufacturers and the 7th Edition of the Philippine National Drug Formulary. The data on drugs include home remedies but exclude veterinary medicines and herbal medicines. The data on drugs were updated as of the end of December 2009 except for Immunological which were based from records as of February 2010. Also, local companies are defined in this paper as those with 90 percent and above paid-up capital which are owned by Filipino citizens. Foreign companies, on the other hand, refer to those with capitalization of 10 percent or more coming from foreign nationals. This group also includes all companies which are operating in other countries.

To develop the tables below, each essential drug under each therapeutic category was tagged if it is being manufactured by any local and/or foreign company. The reference on which is the manufacturer was the list of registered drugs from the FDA, as mentioned earlier. Regardless if there is only one (1) local company that produced the drug and a lot of foreign companies do produce it, that drug was tagged as being manufactured by both local and foreign companies. All drugs under the category that were tagged as being manufactured by local firms were then aggregated. This same procedure was done for the foreign companies. The sum for each group was then divided by the total number of essential drugs under each of the 22 therapeutic classes to get the percentages.

The tables indicate that foreign pharmaceutical companies manufacture the larger proportions of essential drugs compared to the local companies. For instance, 89 percent of medicines acting on the nervous system are manufactured by foreign pharma companies while only 48.4 percent are manufactured by local companies. The only therapeutic class where local companies outperform MNCs is the Ear, Nose, and Throat Preparations. Also, no local companies manufacture vaccines (that is, Immunologicals). About 93 percent of essential vaccines are produced by foreign companies.

However, it should be emphasized that these foreign companies are not operating in the country. It is the MNCs operating in the Philippines which import these drugs as finished products so they get to the local market. For example, there are no local companies which manufacture vaccines but there are no foreign companies either operating in the Philippines which manufacture these drugs. All of the essential vaccines are imported.

Table 39. Number of essential drugs manufactured by local and foreign pharmaceutical companies/MNCs by therapeutic category ^{1/}

No.	Therapeutic category	Manufacturer			Total number of essential drugs ^{2/}
		Local companies	Foreign companies/MNCs	Local and/or foreign companies/MNCs	
1	Medicines acting on the nervous system	44	81	82	91
2	Medicines acting on the musculo-skeletal system and joints.	6	21	21	23
3	Anti-infectives	60	81	85	97
4	Immunologicals	0	38	38	41
5	Cardiovascular medicines	39	59	59	66
6	Diuretics	5	5	6	6
7	Respiratory medicines	17	21	23	23
8	Antiallergics	12	12	12	12
9	Antineoplastic and immunosuppressants	3	48	48	58
10	Medicines affecting the blood	6	16	16	18
11	Blood products and blood substitutes	2	4	5	8
12	Antidotes	5	17	18	39
13	Gastrointestinal medicines	17	24	25	27
14	Hormones and hormone antagonists	21	53	54	55
15	Medicines acting on the uterus	4	5	5	5
16	Medicines correcting water electrolyte acid-base and caloric disturbances	25	29	31	45
17	Diagnostic agents	0	10	10	13
18	Dermatological and mucous membrane agents (topical)	22	26	28	35
19	Ophthalmological preparations	24	37	39	40
20	Ear, nose, and throat preparations	8	7	8	10
21	Vitamins and minerals	16	21	21	22
22	Disinfectants	6	6	8	8

Sources of basic data: Food and Drug Administration (FDA), Securities and Exchange Commission (SEC), and DOH Philippine National Drug Formulary (PNDF) Volume 1, 7th Edition, 2008; 1/ Based on FDA's drug list as of end- December 2009, except for Immunologicals which is based on list as of February 2010; and PNDF Volume 1, 7th Edition, 2008; 2/ Do not add up to total number of essential drugs (627, as per PNDF) because some drugs are included in multiple categories.

Table 40. Proportion of essential drugs manufactured by local and foreign pharmaceutical companies/MNCs by therapeutic category 1/

No.	Therapeutic category	Manufacturer		
		Local companies	Foreign companies/ MNCs	Local and/or foreign companies/MNCs
1	Medicines acting on the nervous system	48.4	89	90.1
2	Medicines acting on the musculo-skeletal system and joints.	26.1	91.3	91.3
3	Anti-infectives	61.9	83.5	87.6
4	Immunologicals	0	92.7	92.7
5	Cardiovascular medicines	59.1	89.4	89.4
6	Diuretics	83.3	83.3	100
7	Respiratory medicines	73.9	91.3	100
8	Antiallergics	100	100	100
9	Antineoplastic and immunosuppressants	5.2	82.8	82.8
10	Medicines affecting the blood	33.3	88.9	88.9
11	Blood products and blood substitutes	25	50	62.5
12	Antidotes	12.8	43.6	46.2
13	Gastrointestinal medicines	63	88.9	92.6
14	Hormones and hormone antagonists	38.2	96.4	98.2
15	Medicines acting on the uterus	80	100	100
16	Medicines correcting water electrolyte acid-base and caloric disturbances	55.6	64.4	68.9
17	Diagnostic agents	0	76.9	76.9
18	Dermatological and mucous membrane agents (topical)	62.9	74.3	80
19	Ophthalmological preparations	60	92.5	97.5
20	Ear, nose, and throat preparations	80	70	80
21	Vitamins and minerals	72.7	95.5	95.5
22	Disinfectants	75	75	100

Sources of basic data: Food and Drug Administration (FDA), Securities and Exchange Commission (SEC), and DOH Philippine National Drug Formulary (PNDF) Volume 1, 7th Edition, 2008; 1/ Based on FDA's drug list as of end- December 2009, except for Immunologicals which is based on list as of February 2010; and PNDP Volume 1, 7th Edition, 2008

Meanwhile, the pharmaceutical industry has many linkages with the other sectors of the economy. The Input-Output Table of the Philippines shows that pharmaceutical manufacturing industry requires the output of 66 sectors to manufacture drugs and medicines. The five most important suppliers are (i) other agricultural crops (wheat, milled oats, cereal crops, spice crops and construction related crops), (ii) manufacture of basic industrial chemicals, (iii) other crude vegetable oil, fish and other marine oils and fats (except coconut milk), (iv) manufacture of refined coconut oil and vegetable oil, (v) fish canning, (vi) manufacture of starch and starch products, (vii) manufacture of glass container, (viii) petroleum refineries including LPG, (ix) manufacture of drugs and medicines, and (x) manufacture of synthetic resins, plastic materials and other man-made fiber except glass.

In turn, the pharmaceutical manufacturing sector supplies inputs to 55 sectors. The most important sectors are (i) private medical, dental and other health services, (ii) public health and welfare services, (iii) egg production, (iv) manufacture of perfumes, cosmetics and other toilet preparations, (v) manufacture of drugs and medicines, (vi) social work, (vii) chicken, (viii) other hospital activities and medical and dental practices, including veterinary services, (ix) manufacture of miscellaneous chemical products, and (x) cattle.

The backward linkage index measures the relative importance of a sector as purchaser of raw material inputs from the all the production sectors. An industry with higher backward linkages than other industries means that expansion of its production is more beneficial to the economy in terms of causing other induced productive activities.²¹ The pharmaceutical manufacturing industry backward linkage index is 1.2311, lower than the index for the total manufacturing sector.

The forward linkage index indicates the relative importance of the sector as a supplier of raw materials to the entire production system. It shows the degree by which the output of one sector is utilized by the other industries for further production. An industry with higher forward linkages than other industries means that its production is relatively more sensitive to changes in other industries' output.²² The forward linkage index for the manufacture of drugs and medicines is relatively low at 0.8349, indicating that its output is not used by other sectors as much as the other manufacturing sectors.

²¹ NSCB. 2000 Input-Output Accounts of the Philippines.

²² NSCB. 2000 Input-Output Accounts of the Philippines.

Sector	Backward linkage index	Forward linkage index
Manufacturing	1.2648	2.878
Manufacture of drugs and medicines	1.2311	0.8349

To determine the contribution of the foreign and local drug pharmaceutical companies to the domestic economy, the I-O analysis is employed. The proportion of drugs imported by foreign companies is estimated to be 76 percent while the corresponding proportion for local companies is 22 percent.

Category	Foreign Companies	Local Companies
Total intermediate inputs	13.84	23.60
Compensation	1.37	2.34
Depreciation	0.43	0.74
Indirect taxes-subsidies	0.37	0.62
Operating surplus	2.95	5.03
Total primary inputs	5.12	8.74
Total inputs	18.96	32.34

While local companies have lower sales than foreign companies, their contribution to the domestic economy is greater because a larger proportion of their sales are produced domestically. Using I-O analysis, the contribution of the pharmaceutical industry is estimated. In 2009, it is estimated that close to PhP 19 billion were contributed by the foreign companies to the domestic output. On the other hand, local companies contributed about PhP32 billion. In terms of compensation to workers in the country, foreign companies paid PhP 1.37 billion while local companies paid PhP 2.34 billion.

E. Summary of Findings

The Philippines is one of the biggest pharmaceutical markets in the ASEAN region, next only to Indonesia and Thailand.²³ It is a lifeline to thousands of Filipino workers and a significant contributor in terms of value of output. This industry is one of the fastest growing industries in the country. Meanwhile, its output, drugs and medicines, account for 46 percent of the total medical out-of-pocket expenses of Philippine households. For poorer people, this percentage goes up to 55 percent.²⁴ Making essential drugs and medicines more affordable especially to the poor and underserved is one of the Millennium Development Goals (MDGs). It is therefore essential to examine the profile of the pharmaceutical industry in the country to better understand the supply chain of drugs and medicines for policy formulation purposes.

Using administrative data from agencies that have regulative powers over the industry, a profile of the Philippine pharmaceutical industry was developed. This report utilized data on drugs and medicines registration from the Food and Drug Administration (formerly Bureau of Food and Drugs), survey data from the National Statistics Office's Census of Philippine Business and Industry, Top 10,000 Corporations data, and firm-level records from the Securities and Exchange Commission (SEC). Sales data were also obtained from the IMS and the PHAP report.

The value of the industry is roughly estimated at P318 billion in 2008. This is based on sales data of 296 pharmaceutical establishments included in the Top 10,000 Companies of the country. The top list included 48 manufacturers of drugs and medicine including biological products, 131 wholesalers, and 117 retailers. All these translate into P179 billion worth of assets, and P85 billion of equity. The value of the Philippine pharmaceutical industry has been on the rise in the past years. In fact, from 2005 to 2009, the market has been increasing at an annual average rate of 8 percent. Both the local and foreign pharmaceutical companies contribute to this fast growth rate.

Moreover, the pharmaceutical industry is a lifeline to thousands of workers in the country. The manufacturers and traders of pharmaceutical products jointly employed around 53,000 workers in 2006 according to the Census of Philippine Business and Industry (CPBI) 2006. The industry is also among the top-paying industries. The CPBI 2006 shows that manufacturing establishments of pharmaceuticals, medicinal, chemical, and botanical products pay its workers on the average an annual salary of around P460,000, almost three-folds the average annual salaries of workers in the manufacturing sector. Manufacturers are also among the top grosser in terms of value of output.²⁵

As of December 2009, the Food and Drug Administration's records show that there are 284 drug manufacturers, 438 drug traders, 634 drug importers, 4,719 drug distributors of which 3,956 are wholesalers, and 32,538 retail outlets. The number of village retail outlets is likewise rapidly growing. The number of BNBs grew by 55 percent from 2006 to May 2010. The Botika ng

²³ 2008 PHAP report

²⁴ 2006 Family Income and Expenditure Survey (FIES)

²⁵ Only among establishments with average total employment of 20 and over

Barangay is also becoming increasingly visible in the regions. Meanwhile, the Food and Drug Administration and the Department of Health have been given stronger regulatory powers.

Over 80 percent of the market is captured by the top 20 pharmaceutical companies (HAI, nd). The multi-billion pesos pharmaceutical industry is led by a retailer chain – Mercury Drug which made around P71 billion in net sales in 2008. This was followed by a giant distributor – Zuellig Pharma with a net sales amounting to P57 billion. United Laboratories, a local manufacturer, came in third with around 23 billion. Several multinationals continue to dominate the rest of the top spots. These are Wyeth Philippines, Bristol Myers Squibb, GlaxoSmithkline, Abbott Laboratories, Pfizer, Roche, Boehringer Ingelheim, Bayer, and Novartis. The pharmaceutical industry is a rapidly growing industry with the number of companies growing at 26 percent from 2003 to 2007.

The manufacture and trade of drugs and medicines in the country are carried out by diverse players. Manufacturing is dominated by multi-national brand originator giants and numerous local generics/branded generics producers. Notably, as of May 2010, there are 59 pharmaceutical manufacturers which were listed by the FDA as having good manufacturing practices (GMP). Meanwhile, trading is done by few large companies and thousands of small retail outlets. The majority of the manufacturers and traders are based in Metro Manila. Meanwhile, a third of the retailers are concentrated in NCR and Region 4, now split into CALABARZON and MIMAROPA. ARMM, a very poor region, does not have any drug distributor/trader and has only 123 retail outlets to cater to its 4.1 million inhabitants. Majority of distributors are wholesalers. They are concentrated in NCR, Region 4, and Region 7. There are 634 registered importers of drugs and medicines. There are several types of drug retailers. These are drugstores, Botika ng Barangay, Botika ng Bayan, Chinese retailers, and retailers of non-prescription drugs. The most common type is the drugstore (73%), followed by the Botika ng Barangay (24%).

The supply chain can be describes in several ways depending on the type of pharmaceutical establishment. The multinational trader for instance purchases both finished drug products and raw and intermediate materials. The finished products go directly to its distribution unit or affiliates, in many cases, Zuellig, while the materials for production go to its toll manufacturer, Interphil. After production which include repacking and labelling, Interphil then dispatches the products to Zuellig or other affiliates for distribution. There are also MNCs which can be considered purely importer. Servier Philippines Inc., for instance, is a pure importer as far as drugs is concerned.

Meanwhile, the local pharmaceutical companies can be categorized into two broad groups – the drug traders and the drug manufacturers. The drug traders are Natrapharm, Medhaus Pharma, GX International, Prohealth Pharma, Cathay Drug, among others. This group subcontracts production of their drugs to toll manufacturers, usually local toll manufacturers. At the same time, they also import finished products and distribute them to the local market either through their own distribution units or affiliates.

The second group consists of local manufacturers which are manufacturing either for themselves and/or for other companies. The local manufacturers included United Laboratories (along with its subsidiaries namely Asian Antibiotics, Amherst, and Westmont), Pascual Laboratories, AM-

Euopharma, AD Drugstel, Euro-med, among others. The other manufacturers are so-called toll manufacturers because they are primarily contracted by drug traders to manufacture, process, package, or repackage the latter's drug products. These companies include Lloyd laboratories, Hizon Laboratories, Swiss Pharma, Ace Pharmaceuticals, and Allied. The two groups are not mutually exclusive such that there are companies which exhibit the characteristics of both groups. Pascual and United Laboratories, for instance, manufacture their own brands and distribute these through their own subsidiaries. However, they also act as toll manufacturers for several companies.

One of the key players in the industry is the manufacturing sector. The total revenues of manufacturers amounted to around P62 billion in 2006, averaging 1.1 billion per establishment. This total amount ranked 7th highest among all the sub-sectors in the manufacturing sector. This comes from the 2006 CPBI conducted by the National Statistics Office where 55 manufacturers with average total employment of 20 and over were included.

In 2006, drug manufacturers employed a total of 14, 916 individuals; an average of 271 people per establishment. In terms of compensation, the pharmaceutical manufacturing sector pays one of the highest rates in the manufacturing industry. In 2006, manufacturers paid P6.9 billion in salaries and wages. Each employee received an estimated average amount of P462, 700 or about US\$9,000, almost three-folds the average annual salaries of workers in the overall manufacturing industry for that year.

Meanwhile, the total cost that manufacturers incurred in 2006 amounted to P47 billion. R&D expenditure was a very tiny part of the total cost at only 0.7 percent, or P345 million. The biggest chunk of the costs, 43 percent, paid by manufacturers went to the purchase of raw materials. In terms of capital expenditures, manufacturers have poured in a sum of P351 million worth of capital expenditures in 2006, an average of P6.4 million for every establishment which was almost the same as the expenditure on R&D. The largest amount of capital expenditures was spent for machinery and equipment (P207 million). This was followed by transport equipment (P98 million) and buildings (P30 million).

The total book value of fixed assets that manufacturers have put in amounted to P16 billion. The bulk (P7 billion) was on land, followed by machinery and equipment (P5.4 billion) and buildings (P2.4 billion). The value of intangible assets was P9 million. In terms of capacity utilization, the industry can accommodate further growth as there is considerable underutilization of capacity. There were only 7 out of the 55 establishments which had capacity utilization rates of 90 percent and above. Thirty-eight (38) of them had operated only from 60 to 89 percent capacity utilization rates while ten out of the 55 manufacturers had rates below 60 percent.

Pharmaceutical traders consist of wholesalers and retailers. In the 2006 CPBI, a total of 3,037 traders (that is 350 wholesalers and 2,687 retail outlets of drugs and pharmaceutical goods) were included. Small enterprises, those that have less than 20 employed persons, dominate the pharmaceutical trading business in terms of number. In fact, two-thirds of all wholesalers and ninety-two percent of retailers are considered small enterprises.

Although only a third of the wholesalers are large firms, they generate 96 percent of the total revenues of all wholesalers in 2006 (i.e. 109 billion out of the total 113 billion pesos revenues of all wholesalers). Meanwhile, the playing field is more even when it comes to the retailers where more than half (55 percent) of the total revenues of retailers are generated by the small enterprises.

On the average, a trading establishment raised around P61 million in revenues in 2006. In total, the industry had contributed a total of P185 billion worth of revenues of which the large establishments contributed more than three-fourths of the amount. In fact, the average revenue of a large trader was 26 times those of a small one. Also, each wholesaler had on the average 12 times more revenues compared to the retailers. The key revenue sources for them were obviously goods for resale which consisted as high as 97 percent of the total revenues.

The pharmaceutical traders employed a total of 38,051 employees in 2006, averaging roughly 13 for each establishment. Large establishments employed an average of 55 while small ones had only about 7. Meanwhile, wholesalers had an average employment of forty (40) while retailers had about 9 employees per establishment. However, policy-wise, it is essential to take into account that small establishments employed the majority (52%) of the workers in the industry. Likewise, retailers employed around 63 percent of the total employment.

In terms of compensation, traders paid on the average each of their employees a sum of P241,000 in gross salaries and wages in 2006. Retail stores spent around P150,000 per employee for the year while wholesalers spent P390,000. Large establishments paid much higher annual salary, more than three-folds those of the small establishments.

The pharmaceutical trading industry incurred a total amount of P167 billion pesos in costs in 2006. Each establishment spent about P55 million with small ones spending P15 million while the large firms paid out P384 million. The key expenditure item for traders is basically goods for resale which consisted around 90 percent of total costs. In terms of R&D, only large firms have spent, albeit modestly, on research and experimental development amounting to a total of 39.6 million pesos.

Meanwhile, pharmaceutical traders had poured in a total amount of 1.8 billion pesos worth of fixed assets in 2006, an average of P590 million for each trader. Interestingly, smaller establishments invested in P406 million (or P150,000 per establishment) while large firms poured in the bulk of the industry's capital expenditures with P1.4 billion pesos (or P4.2 million for each firm). Among various types of fixed assets, traders have put in the largest investment (36%) into transport equipment (owing to the nature of the business), followed by buildings, other structures and land improvements (33%), and computers and other machinery and equipment (summed at 29%).

Essentially, the trading industry had invested a huge amount of P8 billion worth of fixed assets as of the year 2006. This amount averaged around P2.7 million for each establishment. Small companies had a share of 30 percent of the total book value of fixed assets, while large companies had 70 percent. Wholesalers make up 60 percent while retailers shared 40 percent of the total investment. The biggest chunk of these assets was into buildings, other structures and

land improvement, with 36 percent. This is followed by transport equipment at 27.4 percent and other machinery and equipment at 16 percent.

In summary, the pharmaceutical sector is a vibrant fast-growing industry that contributes significantly to the Philippine economy not only in terms of value-added but more importantly in terms of generating much needed employment. The industry players are diverse; they consist of few giant establishments and numerous small producers/traders. Formulating policies therefore must take into consideration how each player may be affected by policy issuances.

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List of Acronyms

FDA	Food and Drug Administration (formerly Bureau of Food and Drugs)
SEC	Securities and Exchange Commission
FIES	Family Income and Expenditure Survey
NSO	National Statistics Office
MDG	Millennium Development Goals
ASEAN	Association of South East Asian Nations
MIMS	Monthly Index of Medical Specialties
MDRP	Maximum Drug Retail Price
CPBI	Census of Philippine Business and Industry
NCR	National Capital Region (also known as Metro Manila)
CAR	Cordillera Administrative Region
ARMM	Autonomous Region of Muslim Mindanao
ATE	Average Total Employment
SSS	Social Security System
DOH	Department of Health
IPO	Intellectual Property Office
GMP	Good Manufacturing Practices
PITC	Parallel Drug Importation Program
NCPAM	National Center for Pharmaceutical Access and Management
PNDF	Philippine National Drug Formulary
OTC	Over-the-counter
BNB	Botika ng Bayan
BnB	Botika ng Barangay

Definition of Terms

Manufacturer- an establishment engaged in any and all operations involved in the production of health products including preparation, processing, compounding, formulating, filling, packing, repacking, altering, ornamenting, finishing and labeling with the end in view of its storage, sale or distribution; does not apply to the compounding and filling of prescriptions in drugstores and hospital pharmacies; a trader shall be categorized as a manufacturer – RA 9711

Distributor/importer/exporter – any establishment that imports or exports raw materials, active ingredients and/or finished products for its own use or for wholesale distribution to other establishments or outlets; if the distributor/importer/exporter sells to the general public, it shall be considered a retailer – RA 9711

Distributor/wholesaler – any establishment that procures raw materials, active ingredients and/or finished products from local establishments for local distribution on wholesale basis – RA 9711

Appendix 1. List of establishments with Good Manufacturing Practices (GMP) as of May 2010

No.	Name of Establishment	Validity	Products	Date Issued
1	Accord Bio Laboratories	4-Aug-10	Cephalosporin/Penicillin (Capsule & Powder for Injection)/ Non-Penicillin (Capsule, Suspension & Syrup)	4-Aug-09
2	Air Liquide Phils., Inc.	21-Dec-10	Medical Oxygen	21-Dec-09
3	Amherst Laboratories, Inc.	8-Jul-10	Non-penicillin non-sterile (tablets, capsules, powder for suspension, ointments and creams)	8-Jul-09
4	Amherst Parenterals, Inc.	8-Jul-10	Small volume parenterals & Large volume parenterals	8-Jul-09
5	Asian Antibiotics, Inc.	3-Dec-10	Cephalosporin/Penicillin (Capsule, Tablet, Granules/Powder for Suspension)/Steroids (Creams, Ointments & Tablets)	3-Dec-09
6	Atgas Traders	24-Aug-10	Medical Grade Oxygen	24-Aug-09
7	Caloocan Gas Corporation	29-Sep-10	Medical Grade Oxygen	29-Oct-09
8	Compact Pharmaceutical Corporation	3-Jul-10	Non-penicillin (Capsule, Tablet Syrup); Rifampicin Capsule/Penicillin (Capsule, Powders/Granules for Suspension & Drops for Suspension)	3-Jul-09
9	Consolidated Industrial Gases, Inc. (Pampanga Branch)	24-Nov-10	Medical Oxygen	24-Nov-09
10	D. Libunao Gas Manufacturing Corp.	18-Jun-10	Medical Grade Oxygen	18-Jun-09
11	Diamond Labs. Inc.	1-Jun-10	Non-penicillin (Capsule, Suspension & Syrup)/Penicillin & Cefalexin (Capsule & Powder for Suspension)	1-Jun-09
12	Doctors Pharmaceuticals, Inc.	25-Aug-10	Non-Penicillin (capsules, plain & coated tablets, syrups & liquid suspension)	25-Aug-09
13	EL Laboratories, Inc.	18-Dec-10	Non-Penicillin (Hard Gel Capsule, Tablet, Suspension, Syrup & Nasal Solution)/Sterile Products (Sterile Solution for Inhalation, Ophthalmic & Otic Solution)/Cephalosporin (Hard Gel Capsule, Granules for Suspension & Tablet)	18-Dec-09
14	Euro-Med Laboratories Phil., Inc., Mandaluyong City	14-Dec-10	Non-Penicillin (Oral dosage forms: Tablet and Liquid, IV Fluids & External Preparations)	14-Dec-09
15	Greenstone Pharmaceutical H.K., Inc.	22-Oct-10	medicated ointment and medicated oil	22-Oct-09
16	Gruppo Medica, Inc.	18-Jun-10	Non-penicillin (Capsule, Suspension, Syrup & Topical Solution)	18-Jun-09
17	International Pharmaceuticals, Inc. (RDII-RVII-DM-006)	12-Aug-10	Galenicals	12-Aug-09
18	Interphil Labs., Inc. (RDII-RIV-DM-40)	7-Dec-10	Cephalosporin/Penicillin (Capsules and Powders for Suspension)	7-Dec-09

Appendix 1. List of establishments with Good Manufacturing Practices (GMP) as of May 2010

No.	Name of Establishment	Validity	Products	Date Issued
19	International Pharmaceuticals, Inc. (RDII-RVII-DM-033)	20-Aug-10	Ethanol for Disinfection, Ethanol for Disinfection with isopropanol, Ethyl Alcohol 70% Solution & Ethyl Alcohol 75% Solution	12-Aug-09
20	J.M. Tolmann Laboratories, Inc.	26-Aug-10	Cephalosporin (Capsules & Powders for Suspension)/Non-Penicillin (Capsules, Tablets, Syrups, & Suspension)	26-Aug-09
21	JB Orchid Pharmaceuticals, Inc.	20-Aug-10	Non-penicillin (Tablet, Capsule, Syrup & Suspension)/ Penicillin (Capsule & Powder for Suspension)	20-Aug-09
22	La Croesus Pharma Inc.	31-Jul-10	Non-penicillin (Capsule, Liquid & Tablet)/ Penicillin (Capsule & Powder for Suspension)	31-Jul-09
23	Lejal Laboratories, Inc.	25-Nov-10	Non-penicillin (Capsule, Tablet & Liquid Dosage Forms-Syrup and Suspension)	25-Nov-09
24	Lloyd Labs., Inc.	9-Sep-10	Non-penicillin (syrups, suspensions, plain & coated tablets, capsules, creams and ointments, powder for suspension); (steroid liquid, tablets, creams & ointments & except dry powder inhalation)/Cephalosporin (Powders & granules for suspension, capsules & tablets)/Penicillin (capsules, tablets, powders & granules for suspension)	9-Sep-09
25	Lumar Pharmaceutical Laboratory	7-Oct-10	Non-penicillin (Tablets, Capsules, Powders, Powders for Suspension, Syrups & Suspension)/Penicillin & Cephalosporin (Capsules, Granules for Suspension & Granules for Oral Drops)	7-Oct-09
26	Macro Asia Pharma Corp. (DRUG REPACKER)	13-Sep-10	Non-Penicillin (Capsule, Tablet)/Penicillin & Cephalosporin (Capsules)	13-Sep-09
27	Manufacturing Services & Trade Corporation	16-Nov-10	Medicated Soap	16-Nov-09
28	Medi-RX, Inc.	13-Oct-10	Non-penicillin (Capsule, Syrup, Suspension & Oral Drops)/Penicillin/Cephalosporin (Capsule, Powder for Suspension & Powder for Oral Drops)	13-Oct-09
29	New Myrex Labs., Inc.	25-Sep-10	Cephalosporin (Capsules & Powder for Suspension)/Non-Penicillin (Capsule, Liquid, Powder for Suspension & Tablet)/Penicillin (Capsule & Powder for Suspension)	25-Sep-09
30	Northfield Laboratories, Inc.	3-Dec-10	Non-Penicillin (Capsule, Tablet, Syrup, Softgel Capsule, Powder in Sachet & Herbal Tea)	3-Dec-09
31	Pascual Laboratories, Inc.	15-Dec-10	Non-penicillin (Capsules, Plain & Coated Tablets, Powders, Herbal Tablets & Capsules, Syrups, Solutions, Suspension, Creams and Ointments)Sterile Products (Eye/Ear Drops, Eye Ointment & Small Volume Parenterals)	15-Dec-09
32	Pentagon Gas Corporation	23-Dec-10	Medical Grade Oxygen	23-Dec-09
33	Scheele Laboratories Phil., Inc.	19-Nov-10	Cephalosporin (Capsules and Powders/Granules for Suspension)/Non-Penicillin (Capsules, Plain and Coated Tablets, Syrups, Suspensions, Powders/Granules for Suspension & Oral Drops)/Penicillin and its Derivatives (Capsules and Powders/Granules for Suspension)	19-Nov-09

Appendix 1. List of establishments with Good Manufacturing Practices (GMP) as of May 2010

No.	Name of Establishment	Validity	Products	Date Issued
34	Southern Ind'l. Gases Phils. Inc. - Davao City	13-Oct-10	Medical Oxygen	13-Oct-09
35	Southern Ind'l. Gases Phils. Inc. - Ormoc City	7-Oct-10	Medical Oxygen	7-Oct-09
36	Southern Industrial Gases Phils., Inc. (Bago City)	28-Dec-10	Medical Oxygen	28-Dec-09
37	Splash Corporation	3-Jul-10	Medicated Astringents/ Exfoliants No. 1, 2, 3	3-Jul-09
38	Swiss Pharma Research Laboratories, Inc.	7-Oct-10	Cephalosporin & its derivatives (Capsule & Powder for Oral Drops/Suspension)/Non-Penicillin (Tablet, Coated Tablet, Liquid, Suspension, Antiseptic Feminine Wash & Suppositories)	7-Oct-09
39	Telstar Manufacturing Corporation	28-Dec-10	Galenic Preparations	28-Dec-09
40	United Laboratories, Inc.	7-Jul-10	Non-sterile non-penicillin (capsule, tablet, syrup, powder & powder for suspension)	7-Jul-09
41	YSS Laboratories Company, Inc.	4-Dec-10	Sterile Penicillin Powders for Injection (Human & Veterinary)	4-Dec-09
42	Telstar Manufacturing Corporation	28-Dec-10	Galenic Preparations	28-Dec-09
43	Baxter Healthcare Philippines, Inc.	25-Jan-11	Large Volume Parenteral Solutions, Peritoneal Dialysis Solutions & Hemodialysis Concentrates	25-Jan-10
44	Singapore Pharmawealth Lifesciences, Inc.	14-Jan-11	Penicillin (Capsules, Sterile-Powder for Injection & Anesthesia only)	14-Jan-10
45	Consolidated Industrial Gases, Inc. (Laguna)	8-Feb-11	Compressed Medical Air & Medical Grade Oxygen	8-Feb-10
46	Southern Industrial Gases Phils. Inc. (Misamis Oriental)	9-Feb-11	Medical Grade Oxygen	9-Feb-10
47	Drugmakers's Laboratories, Inc.	10-Feb-11	Cephalosporin (capsule form in strip seal & blister pack and Granules for suspension in amber bottles)/Non-penicillin (Liquid-Suspension & Syrup form); Capsule form in soft & hard gelatin capsules in strips seal/blister packs; Tablets (Steroid, non-steroidal products) in blister & strip foil packs/Other antibiotics (capsule form in blister pack & granules for suspension in amber bottles)/Penicillin (Capsule form in strip seal & blister pack & granules for suspension in amber bottles)	10-Feb-10
48	Metrolab Industries, Inc.	18-Feb-11	Medicated Soap	18-Feb-10
49	Euro-Med Laboratories Phil., Inc. (Cavite Plant)	25-Mar-11	Sterile Products (Small & Large Volume Parental Solutions, Ophthalmic Solutions in a blow fill seal technology)	25-Mar-10
50	Medic-Pro Corporation (MEDICAL DEVICE MANUFACTURER)	8-Mar-11	Disposable Syringes	8-Mar-10

Appendix 1. List of establishments with Good Manufacturing Practices (GMP) as of May 2010

No.	Name of Establishment	Validity	Products	Date Issued
51	Lorenzo C. Reyes Laboratory, Inc.	31-Mar-11	Medicated Ointment & Medicated Soap	31-Mar-10
52	Balangcas Industrial Gases	31-Mar-11	Medical Grade Oxygen	31-Mar-10
53	Oro Oxygen Corporation	6-Apr-11	Medical Oxygen	6-Apr-10
54	Southern Industrial Gases Phils., Inc. - San Fernando, Plant - Cebu)	19-Apr-11	Medical Oxygen	19-Apr-10
55	Medgen Laboratories, Inc.	19-Apr-11	Non-Penicillin (Tablets, Capsules, Syrups & Suspension/Penicillin (Capsules & Powders for Suspension)	19-Apr-10
56	Smithkline Beecham	21-Apr-11	Non-Penicillin (Capsule, Cream, Ointment, Suspension, Syrup and Tablet)	21-Apr-10
57	Pharmatechnica Laboratory, Inc.	30-Apr-11	Non-penicillin (Capsule, Tablet, Suspension & Syrup)/P	30-Apr-10
58	Ingasco Incorporated	25-May-11	Medical Oxygen	25-May-10
59	Hizon Laboratories, Inc. (Rizal)	17-May-11	Non-Sterile Products only (Non-penicillin-oral (capsule, powder for suspension & tablet); Non-penicillin-liquid (suspension & syrup)	17-May-10

Source: Food and Drugs Administration (FDA)