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Working Paper

Assessing Competition in Philippine Markets

PIDS Discussion Paper Series, No. 2008-23

Provided in Cooperation with:

Philippine Institute for Development Studies (PIDS), Philippines

Suggested Citation: Aldaba, Rafaelita M. (2008) : Assessing Competition in Philippine Markets, PIDS Discussion Paper Series, No. 2008-23, Philippine Institute for Development Studies (PIDS), Makati City

This Version is available at:

<https://hdl.handle.net/10419/126748>

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Philippine Institute for Development Studies
Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

Assessing Competition in Philippine Markets

Rafaelita M. Aldaba

DISCUSSION PAPER SERIES NO. 2008-23

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September 2008

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Abstract

This paper reviews the current empirical literature on competition and market structure of Philippine industries. It shows that weak competition is one of the fundamental factors that explain limited growth, productivity, and employment in the economy. Philippine experience has shown that reforms such as trade liberalization, deregulation, and privatization, while necessary, are not sufficient to foster effective competition. The success of these reforms depends on the creation of a competitive domestic market environment; which is in turn determined by the interplay of behavioral, regulatory and structural constraints along with the broader aspects of competitive infrastructure.

With the removal of many regulatory barriers, the economy is already substantially open. However, competition in many industries has remained limited due to structural factors such as large capital and economies of scale requirements, lack of middle and medium enterprises leading to a hollow industrial structure, and weak linkages of SMEs with large enterprises. In agriculture, regulatory barriers still exist while in infrastructure, the capacity and independence of our regulators are still evolving and need to be strengthened. Maintaining a competitive environment requires coordinated policies to implement continued liberalization and deregulation in tandem with the necessary support measures that will address the structural obstacles to the entry and growth of domestic enterprises. These efforts should be pursued jointly with well-functioning competition and regulatory agencies.

Keywords: competition, market structure, regulation

Assessing Competition in Philippine Markets

Rafaelita M. Aldaba¹

I. Introduction

Since the 1980s, the Philippines implemented market-opening reforms such as trade liberalization, deregulation, and privatization in order to encourage competition in the economy. However, the overall impact of these reforms on growth, investment, and employment has been limited. In the 1980s and 1990s, average growth rate was only around 1.7% and 2.8%, respectively. With the country's unimpressive growth, unemployment rate has remained high and poverty reduction has been slow. Since the early 1990s, the unemployment level has hovered at 8 to 12%, about three times that of Thailand and about twice that of Malaysia (ADB, 2007).

Growth has, however, picked up in the last eight years. For the first time in 30 years, the Philippine economy expanded by 7.3% in 2007. From 2000 to 2007, the average growth rate was 5.1%, the highest in the last three decades. Employment growth was still modest at an average rate of 2.3% during the period 2000-2006. Average investment rate (measured by gross fixed capital formation/GDP) remained sluggish at 21.4% in the 1980s, 22.7% in the 1990s, and 19.8% in the 2000s. Meanwhile, poverty incidence rose from 30 to 32.9% as the Gini coefficient, which is among the highest in Southeast Asia, remained high at 0.45.

The services sector has continued to be the major source of growth and provider of employment. The sector grew at an average rate of 6% in the period 2000-2007 and accounted for an average share of 45% of total employment. Industry growth averaged around 4.3% during the same period but contributed only about 15% of total employment. Agriculture, forestry, and fishery grew at an average rate of 4% but registered a share of 37% of total employment.

A lot of reasons have already been cited on the constraints to growth, investment, and employment generation (World Bank, 2007; ADB, 2007). The most important ones include the country's tight fiscal condition due to huge fiscal deficits, lack of infrastructure, and weak investor confidence arising from governance issues like corruption and political instability. Another fundamental reason may be the weakness of competition in the economy (Aldaba, 2005a). Competition plays a vital role in the

¹ Senior Research Fellow, Philippine Institute for Development Studies. This paper was prepared for the World Bank Philippine Office under the Philippine Shared Growth: Study on Sectoral Market Structure Project. The views expressed in the paper are those of the author and do not necessarily reflect the views and policies of the World Bank. The paper is being circulated to provide information, generate discussion and elicit comments.

process of development (Cook et al, 2004). A competitive market economy is important because it can allocate scarce resources more efficiently than any alternative system.

Competition is affected not only by the number of firms and degree of concentration but also by the openness to trade and prevailing regulations (World Bank,1999). The presence of market imperfections like abuse of dominant position and other anti-competitive business practices along with trade barriers or government regulations limit market entry creating inefficiencies and leading to reduced long-term growth. These weaken competition and prevent structural changes from taking place resulting in resources being tied to low-productivity industries. Weak competition reduces the pressure on firms to adopt new technology or innovate, resulting in low growth of productivity and a loss of competitiveness. It is also important to note that the degree of competition is affected by the broader environment within which firms operate. Carlin and Seabright (2000) referred to this as the “competitive infrastructure” covering communications, financial and fiscal systems and regulatory constraints.

The main objective of this paper is to assess the degree of competition in Philippine markets based on existing literature on market structure and competition in various sectors of the Philippine economy. The paper is divided into six sections. After the introduction, section two will discuss the different market structures along with a brief description of the behavioral, government regulation, and structural factors that may affect competition. Section three will present an overview of the economic reforms pursued in the country followed by an analysis of the economic performance of the country in the last three decades. Section four will survey the existing literature on market structure and anti-competitive practices. Drawing from these findings; section five presents a competition matrix (by industry) combining market structure, firm behavior in terms of ability to exercise market power by preventing entry and controlling prices, and the impact of behavior on economic performance. The final section will present the policy implications of the paper.

II. Market structures and barriers to competition

Markets can be competitive, oligopolistic, or monopolistic. A situation of perfect competition is characterized by the following: (i) prices are exogenous (firms have no ability to change the price, firms can only change their level of total revenue or profit by varying their level of output); (ii) all firms have access to all relevant information necessary to inform their decisions about production and consumption; (iii) firms can sell unlimited amount at the market price; (iv) each firm’s demand curve is perfectly elastic though the industry demand curve is downward sloping; (v) many buyers and sellers; and (vi) firms can freely enter and exit the market. Under perfect competition conditions, firms have no market power, economic profits are zero and the firms will be earning a normal or competitive return on investment. Thus, under perfect competition, price equals marginal cost and the price cost margin is zero.

In a monopoly, there is only a single seller of a product without close substitutes. A natural monopoly occurs because of economies of scale, that is, average total cost declines as the firm's scale becomes larger. In this situation, a single firm can supply a good or service to an entire market at a smaller cost than would two or more firms. A monopolistic firm is a price-maker, it has the ability to control price (it sets the price at the same time that it chooses the quantity to supply). A monopolist faces the market demand curve (downward sloping) because it is the only seller in the market. Faced with a downward sloping demand curve, the monopolist can influence the price, if it wants to sell more, it must reduce the price.

In an oligopoly, there are only a few sellers offering similar or identical products. When firms in an oligopoly individually choose production to maximize profits, they produce a quantity of output that is greater than the level produced by monopoly and less than the level produced by perfectly competitive firms. The oligopoly price is less than the monopoly price but greater than the competitive price (which equals marginal cost). Oligopolists can maximize their profits by forming a cartel and acting like a monopolist. The greater the number of firms in the oligopoly, the closer the quantity and price will be to the levels that would prevail under perfect competition.

In a monopolistic competition situation, the market structure is characterized by product differentiation by such variables like location and advertising. This allows each firm some market power.

Firms may gain market power by limiting competition, i.e., by erecting barriers to trade, entering into collusive arrangements to restrict prices and output, and engaging in other anticompetitive business practices. The presence of barriers to entry impedes competition and allows firms to acquire and exercise market power. Market power enables firms, unilaterally (monopoly) or in collusion with others (cartel), to profitably raise prices and maintain these over a significant period of time without competitive response by other existing or potential firms. Barriers to entry are necessary for market power. Market power can be created through mergers or agreements between competitors not to compete or through restrictive vertical arrangements and predatory pricing which is an abuse of preexisting market power. Large firms may take advantage of their market power by abusing their dominant position or monopolization. This entails the suppression of competition by restricting or foreclosing the entry of smaller rivals, for example by increasing competitors' costs of entering a market or charging predatory prices which harms the competitive process. A firm's exercise of market power can harm consumers and other producers through higher prices (rather than competitive prices), reduced output, and poorer quality products. In general, market power results in inefficient allocation of resources and negatively affects industry performance and economic welfare.

Competition can be lessened significantly by (a) government regulatory policies, (b) behavioral restraints and (c) structural characteristics of the market that can act as barriers to entry (see WB-OECD,

1999). Regulatory barriers are barriers imposed by government policies including investment licensing, tariff and non-tariff measures, antidumping and countervailing duties along with safeguard measures, special permits, license to operate, regulations influencing the use of some inputs, discriminatory export practices, exclusionary lists, and ownership restrictions.

Behavioral barriers are associated with abuse of dominant position where “relatively large” firms engage in anti-competitive conduct by preventing entry or forcing exit of competitors through various kinds of monopolistic conduct including predatory pricing and market foreclosure. These are often classified into two: horizontal and vertical restraints. The former refer to barriers imposed through collaborating actions by firms that sell in the same market, often referred to as “naked” restraints of trade, cartel behavior, or collusion. Examples are price-fixing, bid rigging, and allocation of territories or customers, and output restriction agreements.

Vertical restraints refer to restrictions imposed through restrictive contractual agreements between supplier and purchasers/retailers in both upstream and downstream markets. Examples include:

- Resale price maintenance agreements: retail price is fixed by the producer or price floors or ceilings are imposed
- Exclusive distribution agreements: distributors are assigned exclusivity within a geographic area or over particular types of clients, or over specific products
- Exclusive dealing agreements: downstream firms are prohibited from dealing with competing producers or distributors
- Tie-in sale agreements: downstream firms are required to purchase a certain range of products before being allowed to purchase a particular product
- Quantity forcing: downstream firms are required to purchase a minimum quantity of a product.

Structural barriers are due solely to conditions outside the control of market participants. Economies of scale (increasing returns to scale) is an example of a structural barrier. When there are increasing returns to scale, there is a minimum size that firms have to attain if they are to have average cost as low as possible. If the minimum efficient scale is so large that only one firm of that size can serve the entire market, there will be a monopoly. This situation often occurs in public utilities such as distribution of water and electricity. Other examples are:

- Sunk costs: costs that a firm cannot avoid by withdrawing from the market, they are a sort of entry fee
- Absolute cost advantage: access to natural resource or human resources
- Large capital requirements
- Network industries: firms that are competitors share some critical facility like in transportation and telecommunications.

It is important to note that the strength of competition is a function not only of the behavior of firms but also of the external environment within which firms compete. This includes the state of transport and communication, framework of laws and regulations, effectiveness of the financial system in matching investment resources with entrepreneurial opportunities, as well as information available to consumers. Carlin and Seabright (2000) call this external environment “competitive infrastructure” referring to both physical and institutional infrastructure. When this “competitive infrastructure” is inadequate, competition becomes weak.

The degree of competition is often measured by indicators like the four-firm concentration ratio (CR4) and price cost margin (PCM). The four-firm concentration ratio is used to estimate industrial concentration. It refers to the proportion of an industry’s output accounted for by the four largest firms. The price cost margin (PCM) or the Lerner index is used as a direct measure of market power. It is estimated as follows: $PCM = [(Price - Marginal Cost) / Price]$. The price cost margin is also proportional to the firm’s market share and inversely proportional to the elasticity of demand ($PCM = \alpha / \epsilon$ where α is firm i’s market share and ϵ is the elasticity of demand). A firm facing an elastic demand function for its product must charge a price close to marginal cost. A firm with market power is able to charge a price substantially above marginal cost. A firm without market power will charge a price close to marginal cost. In the presence of market power, the firms will be able to set prices above those prevailing under competitive conditions, leading to excessive economic profits or “rents”. When prices exceed marginal cost, the price cost margin becomes positive and varies between zero and one.

It is important to recognize that the economic profit or “rent” or a positive price cost margin can also serve as a reward for entrepreneurship and encourage innovation to take place. Innovation can take the form of new products or processes that lead to the creation of new markets. In these cases, high price margins are rewards for successful innovation and efficient mechanisms adopted by firms. This should not last forever since competition will erode it.

Note also that high levels of market concentration as well as the presence of monopolies (a type of industrial structure when there is only one large firm) or oligopolies (when there are a few large firms) are not necessarily detrimental to competition. Large firms may achieve a dominant position in the market through legitimate ways like innovation, superior production or distribution methods, or greater entrepreneurial skills.

For as long as markets remain contestable (when entry into a market is easy), we would expect large firms in an oligopolistic environment to act independently or monopolies to behave in a competitive manner. If entry is easy and costless, the potential threat from imports or from domestic competitors will make incumbent firms behave competitively. As soon as one firm or a group of firms attempts to increase

prices or lower quality from competitive levels, a new firm can come in to serve the market and this will drive prices back down to competitive levels.

III. Market-oriented Reforms in the 1980s-1990s and Economic Performance

A. Major Economic Policy Reforms

In the past two decades, the Philippines implemented a substantial number of economic policies, ranging from substantial unilateral trade liberalization, deregulation, privatization and other market reforms to promote competition, increase productivity and stimulate economic growth. This brief discussion of reforms serves as a backdrop for the succeeding analysis.

Manufacturing and Agriculture

After more than three decades of protectionism and import substitution, the Philippine government started to unilaterally liberalize the trade regime by removing tariffs and non-tariff barriers beginning in the early 1980s. The first major reform towards the rationalization of the protection structure started in 1981, under a World Bank Structural Adjustment Loan. The tariff reform program (TRP I) was a major element of the overall trade policy package covering tariff reform, removal of import restrictions, elimination of the protective elements of the tax system, and curtailment of exemptions to import-substituting industries.

In July 1991, the Aquino government legislated the second phase of the tariff reform program (TRP II) through EO 470. This simplified the tariff structure by reducing the number of rates to four ranging from three percent to 30 percent in a period of six years. In 1992, Executive Order 8 was legislated and tariffed the quantitative restrictions on 153 agricultural products and tariff realignment of 48 commodities. In 1995, the government initiated the third round of tariff reform (TRP III) as a first major step in its plan to adopt a uniform five percent tariff by 2005. This further narrowed down the tariff range for industrial products.

In 1996, Republic Act 8178 legislated the tariffication of quantitative restrictions imposed on agricultural products and the creation of tariff quotas. Tariff quotas impose a relatively lower duty up to a minimum access level (or in-quota rate) and a higher duty beyond this minimum level (or out-quota rate). This brought down the percentage of regulated items from about four percent in 1995 to three percent of the total number of product lines in 1996. By 1997, most quantitative restrictions were lifted, with the important exception of rice.

In January 2001, EO 334, which was to constitute TRP IV, was passed to adjust the tariff structure towards a uniform tariff rate of 5 percent by the year 2004, except for a few sensitive agricultural and manufactured items. However, this was not implemented due to intense pressure by lobby

groups to reverse it. A series of Executive orders were issued to either increase tariffs or postpone scheduled tariff reductions. In 2003, a comprehensive tariff review was carried out which culminated in the issuance of Executive Orders 241 and 264. These twin Executive Orders modified the tariff structure such that the tariff rates on products that are not locally produced were made as low as possible while the tariff rates on products that are locally produced were adjusted upward.

Banking

After more than 30 years of interventionist financial policies, the Philippines initiated a financial liberalization program in the early 1980s. The program entailed a gradual liberalization of interest rates between 1981 and 1983 and the easing of restrictions on the operations of financial institutions. Further reforms were instituted in 1986 to address the interlinked problems of fraud or insider abuse of bank owners or officers and ineffective prudential supervision and regulation. In the 1990s, other banking sector reforms were pursued including the deregulation of entry of new domestic banks and domestic bank branching as well as the easing of restrictions on the entry of foreign banks. Another important feature of the reform process was the progressive increase in minimum capitalization and encouragement of mergers and consolidations to promote financially strong and well-managed banking institutions. In 2000, the General Banking Law was enacted to replace the 52-year old General Banking Act. With this law, a seven-year window has been provided during which foreign banks may own up to 100 percent of one locally-incorporated commercial or thrift bank, without the obligation of divesting later. This law also encouraged the establishment of microfinance-oriented banks.

Electricity

The first wave of power sector reforms took place in 1987 as the generation sector was opened up to competition through the issuance of Executive Order 215 which allowed the private sector to invest and participate in augmenting the sector's generation base capacity. In 1990, the government passed Republic Act 6957, the first build-operate-transfer ²(BOT) law in Asia. This relaxed the rules on entry of private firms and reduced the scope for government intervention.

In 1992, Republic Act 7638 established the Department of Energy, which was responsible for policy formulation on, planning for, and management of, the energy sector. Republic Act 7648 was legislated in 1993, which enabled the Ramos administration to expedite independent power producers (IPP) contracts for the construction, rehabilitation, improvement, and maintenance of power projects. In

² Under BOT, the assets revert to the state at the end of the concession terms while under BOO, the ownership of the existing assets and the responsibility for their future expansion and maintenance are transferred to the private sector.

1994, the BOT law was replaced with Republic Act 7718, which increased the number of variants of the BOT concept.

In June 2001, another wave of deregulation was implemented through the legislation of RA 9136 or the Electric Power Industry Reform Act (EPIRA), which aimed to accelerate the total electrification of the country. It also aimed to ensure the quality, reliability, security, and affordability of electric power in a regime of free and fair competition. Under this law, the industry would be restructured by separating the natural monopolies from the potentially competitive parts: the National Power Corporation's remaining power facilities and its transmission system would be privatized and a wholesale spot market for bulk power would be created.

The law distinguishes four separate segments in the power sector: generation, transmission, distribution, and supply. Generation and supply would be competitive and open while transmission and distribution segments would be regulated. The law also spells out the main rules for the regulation of these four segments as well as the rules for transition and the obligations and rights of all players involved: the service providers and government agencies.

Water

The water sector covers three major areas: Metro Manila, provincial urban areas, and rural areas. Privatization in the sector has been limited to Metro Manila and the Subic and Olongapo areas. Outside the MWSS service area, the supply of water is highly fragmented and installed in a piecemeal method resulting in gaps in the availability of water especially in the rural areas (Llanto, 2002). Water supply facilities have been put up by either water districts, private entities and, to some extent, by local government units in the rural areas. The rural areas are serviced by the rural waterworks and sanitation associations, barangay waterworks and sanitation associations, and LGUs. Water districts have continued to resist privatization. Reforms have been designed to improve the performance of the Local Water Utilities Administration (LWUA), enhance credit-worthy water districts' access to commercial credit, and encourage local governments to play a bigger role in improving access to water supply. (F. Medalla, undated).

Air Transport

In 1995, Executive Order 219 deregulated the air transport industry through the removal of restrictions on domestic routes and frequencies as well as government controls on rates and charges. In international air transport, EO 219 legislated changes in the number of carriers that can be designated as the country's flag carriers and changes in the basis for the negotiation of traffic rights and routes with emphasis on national interest and reciprocity between the Philippines and other countries. These market

reforms challenged the supremacy of the only designated flag carrier, PAL. In 1992, the government privatized PAL after controlling it for 14 years. PR Holdings³ won 67 percent shares of PAL. In 1999, however, beer and tobacco magnate, Lucio Tan was able to control 90 percent of PAL.

In air cargo⁴, the Diosdado Macapagal International Airport (Clark Field) and Subic Bay International Airport have been opened to foreign freight carriers through Executive Order 253 issued in December 2003. In 2004, the Philippines was set to sign open skies agreement on cargo with Singapore, Thailand, and Brunei. However, the Civil Aeronautics Board decided to defer action until a thorough study is carried out. PAL has strongly opposed the policy citing that only Singapore Airlines, one of the world's biggest cargo airlines, would stand to gain from the agreement.

While deregulation and liberalization have been pursued vigorously in domestic air services, restrictive policies and regulations remain in international air services and the government has yet to adopt deeper reforms. Open skies will allow entry on all routes as well as unlimited capacity and frequency. Executive Order 500, which was legislated in January 2006, would have adopted an open skies policy at the DMIA and Subic. However, this was amended in August 2006 through EO 500-A which re-imposed restrictions to the entry of foreign airlines to Subic and DMIA .

Water Transport

Changes in policies and regulations in the shipping industry were first introduced in 1989. These included the removal of the ad valorem charges and deregulation of first and second class passage rates. In 1990, the 3/10 percent valuation surcharge for insurance premiums was abolished and freight rates for refrigerated cargoes, transit cargoes, and livestock were also deregulated. In 1992, further deregulation was made in the freight rates between Class A and Class B cargoes. Through Executive Order 213 of 1994, all freight rates were deregulated except for noncontainerized basic commodities. Initially, the operators were not allowed to set their own rates, the Domestic Shipping Consultative Councils (DOSCONs) were created in various regional centers of the country to serve as a forum for negotiating the rates. In 1999, the DOSCON process was finally abolished.

Telecommunications

The telecommunications sector, which was dominated by a private monopoly, the Philippine Long Distance Company (PLDT), for more than half a century was liberalized in the late 1980s. This

³ Unknown during this time, billionaire and former Marcos crony Lucio Tan, was a secret investor of PR Holdings. In 1993, he revealed that he was PR Holding's largest stakeholder and installed himself as chairman and CEO of PAL in 1994. Tension emerged as the government tried to dissolve PR Holdings and take back control of PAL from Tan. Eventually, PR Holdings was dissolved but Tan has kept control of PAL.

⁴ Air cargo accounts for only two percent of the country's total export volume but in terms of total export revenues, it constitutes around 80 percent of the total.

reform process was accelerated with the implementation of substantial policy changes in the early 1990s. In 1992, the cellular mobile service was liberalized. In 1993, Executive Order 59 mandated the interconnection of all carriers while Executive Order 109 opened the basic telephone service to new entrants.

Foreign direct investment (FDI)⁵

Simultaneous with the other market-oriented reforms, the country accelerated the FDI liberalization process through the legislation of Republic Act 7042 or the Foreign Investment Act (FIA) in June 1991. The FIA considerably liberalized the existing regulations by allowing foreign equity participation up to 100% in all areas not specified in the Foreign Investment Negative List (or FINL, which originally consisted of three component lists: A, B, and C)⁶. Prior to this, 100% eligibility for foreign investment was subject to the approval of the Board of Investments. The FIA was expected to provide transparency by disclosing in advance, through the FINL, the areas where foreign investment is allowed or restricted. It also reduced the bureaucratic discretion arising from the need to obtain prior government approval whenever foreign participation exceeded 40%.

In March 1996, RA 7042 was amended through the passing of RA 8179 which further liberalized foreign investments allowing greater foreign participation in areas that were previously restricted. This abolished List C which limited foreign ownership in “adequately served” sectors. Currently, the FIA has two component lists (A and B) covering sectors where foreign investment is restricted below 100% are those falling under the Constitution or those with restrictions mandated under various laws.

The mid-1990s witnessed the liberalization of the banking sector which allowed the entry of foreign banks. In March 2000, the passing of the Retail Trade Liberalization Act (Republic Act 8762) allowed foreign investors to enter the retail business and own them 100% as long as they put up a minimum of US\$7.5 million equity. Singapore and Hong Kong have no minimum capital requirement while Thailand sets it at US\$250,000. A lower minimum capitalization threshold (\$250,000) is allowed to foreigners seeking full ownership of firms engaged in high-end or luxury products. R.A. 8762 also allowed foreign companies to engage in rice and corn trade.

⁵ This draws from Aldaba (2006).

⁶ List A: consists of areas reserved for Filipino nationals by virtue of the Constitution or specific legislations like mass media, cooperatives or small-scale mining.

List B: consists of areas reserved for Filipino nationals by virtue of defense, risk to health and moral, and protection of small and medium scale industries.

List C: consists of areas in which there already exists an adequate number of establishments to serve the needs of the economy and further foreign investments are no longer necessary.

To develop international financial center operations in the Philippines and facilitate the flow of international capital into the country, foreign banks have been allowed to establish offshore banking units (OBUs). Incentives have also been offered to multinationals that establish regional headquarters (RHQ) or a regional operating headquarters (ROHQ) in the Philippines.

While substantial progress has been made in liberalizing the country's FDI policy, certain significant barriers to FDI entry still remain. The sectors with foreign ownership restriction include mass media, land ownership where foreign ownership is limited to 40%, natural resources, firms that supply to government-owned corporations or agencies (40%), public utilities (40%), and Build-Operate-Transfer (BOT) projects (40%).

List A

Due to constitutional constraints, List A restricts foreign investment in the practice of licensed professions as well as in the following industries: mass media, small-scale mining, private security agencies, and the manufacture of firecrackers and pyrotechnic devices. Foreign ownership ceilings are imposed on enterprises engaged in, among others, financing, advertising, domestic air transport, public utilities, pawnshop operations, education, employee recruitment, public works construction and repair (except Build-Operate-Transfer and foreign-funded or assisted projects), and commercial deep sea fishing.

The exploration and development of natural resources must be undertaken under production sharing or similar arrangements with the government. For small-scale projects, a company should be at least 60 percent Filipino-owned to qualify. High-cost and high-risk activities such as oil exploration and large-scale mining are open to 100 percent foreign ownership. In 1998, private domestic construction was deleted from List A, lifting the 40 percent foreign ownership ceiling previously imposed on such entities.

Rural banking remains completely closed to foreigners. In securities underwriting, the limit on foreign ownership was raised from 40 percent to 60 percent in 1997. The limit for financing companies was also raised to 60 percent in 1998. The insurance industry was opened up to majority foreign ownership in 1994 with minimum capital requirements increasing along with the degree of foreign ownership.

In retail trade, foreign equity remains banned in retail companies capitalized at less than \$2.5 million.

List B

Under List B, foreign ownership in enterprises is generally restricted to 40 percent due to national security, defense, public health, and safety reasons. List B also protects domestic small- and medium-sized firms by restricting foreign ownership to no more than 40 percent in non-export firms capitalized at no less than US\$200,000.

Land Ownership

Land ownership is constitutionally restricted to Filipino citizens or to corporations with at least 60 percent Filipino ownership. The Philippine Constitution bans foreigners from owning land in the Philippines. Foreign companies investing in the Philippines may lease land for 50 years, renewable once for another 25 years, or a maximum 75 years.

BOT

The legal framework for build-operate-transfer (BOT) projects and similar private sector-led infrastructure arrangements is covered under RA 6957 (as amended by RA 7718). The BOT law limits foreign ownership to 40% in BOT projects. Note that many infrastructure projects like public utilities, franchises in railways/urban rail mass transit systems, electricity distribution, water distribution and telephone systems are in general natural monopolies.

Omnibus Investments Code

The Omnibus Investments Code mandates the incentives and guarantees to investments in the Philippines. Certain provisions of the incentives law impose more stringent conditions on foreign-owned enterprises which seek to qualify for BOI-administered incentives. In general, foreign-owned firms producing for the domestic market must engage in a "pioneer" activity⁷ to qualify for incentives. "Non-pioneer" activities are generally opened up to foreign equity beyond 40 percent only if, after three years, domestic capital proves inadequate to meet the desired industry capacity.

For firms seeking BOI incentives linked to export performance, export requirements are higher for foreign-owned companies (at least 70 percent of production should be for export) than for domestic companies (50 percent of production for export).

Foreign-owned companies must divest to a maximum 40 percent foreign ownership within thirty years or such longer period as the BOI may allow. Foreign firms that export 100 percent of production are exempt from this divestment requirement.

B. Economic Performance: 1980s-2000s

Market reforms like trade liberalization reduce barriers to competition. They are expected to sharpen competitive pressure and lead to welfare gains, particularly when monopolies and cartels characterize the structure of the market. In the context of the new trade theory, gains from trade are derived not only from specialization and comparative advantage, but also from the reduction of

⁷ Pioneer projects are those which (i) engage in the manufacture, processing or production; and not merely in the assembly or packaging of goods, products, commodities or raw materials that have not been or are not being produced in the Philippines on a commercial scale; (ii) use a design, formula, scheme, method, process or system of production or transformation of any element, substance or raw materials into another raw material or finished goods which is new and untried in the Philippines; (iii) engage in the pursuit of agricultural, forestry, and mining activities considered as essential to the attainment of the national goal; and (iv) produce unconventional fuels or manufacture equipment which utilizes non conventional sources of energy. Non pioneer projects include those that are engaged in common activities in the Philippines and do not make use of new technology.

deadweight losses created by firms that have market power. Trade liberalization leads to lower price cost margins and causes more efficient firms to expand and less efficient firms to either contract or exit, thus, inducing additional efficiency gains. This increases productivity and innovation and enhances long-run economic growth.

Despite the substantial economic reforms carried out over a period of twenty years, average GDP growth rate from the 1980s till the 1990s remained low (see Table 1) especially when compared with our Southeast Asian neighbors who were able to attain respectable growth rates during the same period. As the economy tried to recover and catch up with our neighbors, modest increases were registered as our growth rate rose from 1.7% in the 1980s to 2.8% in the 1990s. From 2000 to 2007, an average growth rate of 5.14% was posted, the highest in the last three decades.

Table 1: Average value added growth rates and structure

Economic Sector	Average Growth Rate			Value added share		
	1980-89	1990-99	2000-07	1980-89	1990-99	2000-07
Agriculture, Fishery, Forestry	1.26	1.49	3.98	23.50	21.58	19.47
Industry Sector	0.43	2.48	4.31	37.59	35.06	33.41
Mining & Quarrying	3.03	-1.45	12.92	1.66	1.35	1.46
Manufacturing	0.88	2.33	4.41	25.88	25.09	24.15
Electricity, Gas and Water	5.32	5.34	4.07	2.60	3.05	3.22
Construction	-1.42	2.91	2.84	7.44	5.57	4.58
Service Sector	3.26	3.70	6.23	38.91	43.37	47.11
Trade	3.02	3.55	6.31	13.90	15.26	16.62
Transportation, Communication & Storage	3.69	4.40	8.74	5.29	6.04	8.13
Financing, Insurance, Real Estate & Business Services	2.25	3.66	4.90	8.88	9.91	9.75
Community, Social & Personal Services	4.43	3.61	5.04	10.84	12.14	12.49
GDP	1.66	2.78	5.14	100	100	100

Source: National Income Accounts, NSCB.

The services sector has been the best performer in all three decades as both agriculture and industry, manufacturing in particular, experienced sluggish growth during the 1980s up to the 1990s. However, in the most recent period, both sectors posted average growth of 3.98% and 4.41%, respectively. In contrast, services average growth rate increased continuously from 3.3% in the 1980s to 3.7% in the 1990s and 6% in the 2000s. Broad growth took place in the services sector as its sub-sectors registered consistently rising growth rates in the same periods under review.

The transportation, communication, and storage sector posted the highest average growth rate of 8.74% during the period 2000-2007. This was followed by trade with an average growth rate of 6.3%. Community, social and personal services grew by 5% while financing, insurance, real estate and business

services registered an average rate of 4.9 percent during the same period. The growth in the transportation, communication, and storage sub-sector as well as in finance may be attributed to the market reforms introduced in telecommunications, shipping, air transport, and finance sub-sectors in the 1990s.

It is also evident from Table 1 that a large portion of the economy's output is accounted for by the services sector. This sector's share has continued to increase from an average of 39% in the 1980s to 43% in the 1990s to 47% in the most recent period. Trade has constituted the bulk of the services sector followed by community, social and personal services sub-sector and transportation, communication, and storage services sub-sector.

The share of agriculture, fishery, and forestry has gradually declined from around 24% in the 1980s to 22 percent in the 1990s and to 19.5% in the 2000s. The share of the industrial sector to total output decreased from its peak of about 38 percent in the 1980s to 35% during the 1990s and 33% in the period 2000-2007. The manufacturing sub-sector represents the most important industrial sector, accounting for about 26% of total output in the 1980s, 25% in the 1990s, and 24% in the 2000s.

Table 2: Employment growth rates and structure

Economic Sector	Employment growth rate			Employment structure		
	1981-89	1990-99	2000-06	1980-89	1990-99	2000-06
Agriculture, Fishery and Forestry	1.1	0.7	2.2	49.6	42.8	37.1
Industry	2.9	2.8	1.2	14.5	16.0	15.4
Mining and Quarrying	-0.9	-4.6	7.0	0.7	0.5	0.3
Manufacturing	2.3	2.1	1.1	9.9	10.2	9.5
Electricity, Gas and Water	3.5	5.7	-1.5	0.4	0.4	0.4
Construction	4.4	5.3	1.5	3.5	5.0	5.1
Services	4.5	4.1	3.5	35.9	41.1	47.5
Wholesale and Retail Trade	5.7	3.8	5.1	12.6	14.6	18.2
Transportation, Storage & Communication	4.3	6.1	3.4	4.5	5.9	7.4
Financing, Insurance, Real Estate & Business Services	2.5	6.2	8.1	1.8	2.2	3.1
Community, Social & Personal Services	3.8	3.6	1.6	17.1	18.5	18.8
Other Services			-77.8		0.0	
Industry not Elsewhere Classified		18.7		0.0	0.0	0.0
TOTAL EMPLOYED	2.6	2.5	2.6	100.0	100.0	100.0

Source: National Income Accounts, NSCB.

In terms of employment contribution, the services sector has become the largest provider of employment in the most recent period (Table 2). The share of the labor force employed in the sector

consistently increased from around 36% in the 1980s to 41% in the 1990s and to almost 48 percent in 2000-2007.

The share of industry to total employment has been almost stagnant from the 1980s to the most recent period. Manufacturing, which is the most important industrial sub-sector, has failed in creating enough employment to absorb new entrants to the labor force as well as those who move out of the agricultural sector. Its share dropped from 10% in the 1980s-1990s period to 9.5% in the 2000-2007 period. While the share of agriculture has been declining, the sector has remained an important source of employment. From 50% in the 1980s, the agriculture sector's share in total employment continuously declined to 43% in the 1990s and is currently around 37%.

Table 3 compares the levels and trends in the productivity of labor across the different economic sectors from the 1980s to the current period. The results indicate that labor productivity is low and disparities across the three major sectors are wide. Industry has the highest labor productivity, which declined from the 1980s to the 1990s and although some improvement in the current period has been witnessed, it still has not reached its 1980s level.

Table 3: Average Labor Productivity (in pesos, 1985 prices)

Major Sector	1980-89	1990-99	2000-06
Agriculture, Fishery, Forestry	15180	15940	18705
Industry Sector	84000	68913	77394
Mining & Quarrying	82202	92967	147084
Manufacturing	83984	77976	90615
Electricity, Gas and Water	230344	218604	304150
Construction	70613	35403	31735
Service Sector	34751	33271	34957
Trade	35793	33010	32209
Transportation, Communication & Storage	38101	32759	38514
Financing, Insurance, Real Estate & Business Services	159772	142512	113752
Community, Social & Personal Services	20222	20731	23594
TOTAL ECONOMY	32100	31524	35442

Source: National Income Accounts, NSCB and Labor Force Survey, NSO.

Within the industry sector, electricity, gas, and water together with mining and quarrying are the leading sub-sectors. Both sub-sectors experienced increases in productivity levels between the 1980s and the current period. At present, the electricity, gas, and water sub-sectors posted an average labor productivity level of P304,150 while mining and quarrying had a productivity level of P147,084. Though the average labor productivity in manufacturing declined between the eighties and the nineties, it increased in the 2000s with an average level P90, 615.

The average labor productivity in the services sector has remained at about the same level between the 1980s and the 2000s. The financing, insurance, real estate and business services sub-sector

has the highest average level of labor productivity within services, although this has been falling since the 1980s. Decreasing labor productivity has also been experienced in the largest services sub-sector, trade.

The agriculture, fishery, and forestry sector has the lowest level of labor productivity which remained almost stagnant from the 1980s up to the nineties, although a modest increase has been recorded in the most recent period.

C. Firm Size Structure and Distribution

In terms of number of establishments, micro and small and medium enterprises (MSMEs)⁸ dominate the economy accounting for almost 99.6% of the total number of establishments in 2003 while large enterprises comprised only 0.4% of the total. Small enterprises are more predominant than medium enterprises. Both large and SMEs are highly concentrated in the National Capital Region (NCR) and Calabarzon. Microenterprises, on the other hand, are relatively less geographically concentrated.

In terms of distribution by sector, most establishments are in the wholesale and retail trade sector, notably in the micro category. As Table 4 shows, this sector accounted for 51 percent of the total number of establishments, followed by manufacturing with a share of 17 percent. Hotels and restaurants is third with a share of 12 percent. Among SMEs, wholesale and retail trade also dominates with a share of 32 percent, followed by manufacturing with a share of 22 percent of the total number of establishments. On the other hand, among large enterprises, manufacturing comprised the bulk at 46 percent of the total.

Table 4: Number of Establishments in the Philippines by Industry, 2003

Industry Sector	TOTAL	%	MICRO	%	SMEs	%	LARGE	%
Agriculture, Hunting & Forestry	2,920	0.4	1,397	0.2	1,406	2.6	117	4.4
Fishery	1,130	0.2	506	0.1	596	1.1	28	1.1
Mining and Quarrying	300	0.0	193	0.0	99	0.2	8	0.3
Manufacturing	121,476	16.9	108,037	16.3	12,226	22.3	1,213	45.6
Electricity, Gas and Water	1,027	0.1	401	0.1	524	1.0	102	3.8
Construction	2,567	0.4	1,437	0.2	1,026	1.9	104	3.9

⁸ There are two operational definitions of small and medium enterprises in the Philippines: employment-based definition and asset-based definition. The former is the most widely-used in the country and it defines the different size categories as follows [National Statistics Office and Small and Medium Enterprise Development Council Resolution No. 1, Series 2003]:

Small enterprises: 10-99 employees

Medium: 100-199 employees

Large: 200 or more employees

Enterprises with 1-9 workers are considered as micro enterprises.

In terms of total assets, the SME Development Council defined the size categories as follows:

Small enterprises: P3-15 million

Medium: P15-100 million

Large: P100 or more

Enterprises with P3 million or less are classified as micro enterprises.

Wholesale and Retail Trade	365,161	50.8	347,530	52.5	17,420	31.7	211	7.9
Hotels and Restaurants	87,770	12.2	80,859	12.2	6,858	12.5	53	2.0
Transport, Storage & Communications	9,328	1.3	6,817	1.0	2,365	4.3	146	5.5
Financial Intermediation Real Estate, Renting & Business Activities	16,449	2.3	14,359	2.2	2,000	3.6	90	3.4
Education	35,270	4.9	31,492	4.8	3,473	6.3	305	11.5
Health and Social Work Community, Social & Personal Service Activities	8,911	1.2	4,854	0.7	3,873	7.1	184	6.9
	27,660	3.8	26,505	4.0	1,091	2.0	64	2.4
	39,461	5.5	37,438	5.7	1,977	3.6	46	1.7
TOTAL	719,420		661,825	92.0	54,934	7.6	2,661	0.4

Source: National Statistics Office.

In terms of employment, the manufacturing sector generated the most jobs with a share of 30 percent followed by wholesale and retail trade with a share of 27 percent of total employment. SMEs employed 32 percent of the total number of workers in all establishments. Table 5 shows that manufacturing jobs accounted for 26 percent while wholesale and retail trade comprised 22 percent of total SME employment. Among large enterprises, manufacturing jobs comprised 48 percent of the total number of jobs generated by large enterprises. For microenterprises, jobs generated by the wholesale and retail trade consisted the bulk of the total.

Table 5: Employment Distribution by Sector, 2003

Industry Sector	TOTAL	MICRO	SMEs	LARGE
Agriculture, Hunting and Forestry	2.5	0.2	1.0	1.3
Fishery	0.6	0.1	0.3	0.2
Mining and Quarrying	0.4	0.0	0.1	0.2
Manufacturing	30.3	5.7	8.3	16.3
Electricity, Gas and Water	1.5	0.0	0.6	0.9
Construction	2.9	0.2	0.9	1.8
Wholesale and Retail Trade	27.3	17.4	7.0	2.9
Hotels and Restaurants	7.8	4.2	2.9	0.7
Transport, Storage and Communications	4.9	0.7	1.9	2.4
	4.3	1.2	1.8	1.2
Financial Intermediation	7.6	1.7	2.5	3.4
Real Estate, Renting and Business Activities	4.4	0.3	2.4	1.7
	2.5	0.9	0.8	0.8
Education	4.9	0.7	1.9	2.4
Health and Social Work Other Community, Social and Personal Service Activities	4.3	1.2	1.8	1.2
	3.1	1.7	0.9	0.5
TOTAL	100.0	34.2	31.5	34.3

Source: National Statistics Office.

Within the manufacturing industry, the large bulk of Philippine enterprises are microenterprises, which comprised 89% in 2003, while SMEs and large enterprises accounted for 11% and 1%,

respectively of the total number of manufacturing enterprises (see Table 6). Note that during the years 1983 to 1999, the number of establishments in the manufacturing industry increased from 56,047 to 130,931 in 1999. However, the total number of enterprises declined from 2000 up to 2003.

Despite their relatively small number, Table 5 indicates that SMEs employed around one-third of total employment in the manufacturing industry. In 2003, large enterprises contributed 54 percent while microenterprises accounted for 19 percent of total manufacturing employment. There was likewise a general decline in employment from 2000 to 2002, although a recovery is evident in 2003 as total employment rose from around 1.5 million workers in 2002 to around 2 million workers in 2003.

Table 6: Number of Manufacturing Enterprises in the Philippines

Year	MICRO	%	SMALL	%	MEDIUM	%	LARGE	%	TOTAL
1983	50,313	89.8	4,512	8.1	505	0.9	717	1.3	56,047
1988	69,446	88.3	7,678	9.8	683	0.9	828	1.1	78,635
1994	81,554	88.4	9,061	9.8	752	0.8	913	1.0	92,280
1995	86,900	88.8	8,928	9.1	1,027	1.0	982	1.0	97,837
1999	113,861	87.0	14,611	11.2	1,137	0.9	1,322	1.0	130,931
2000	108,998	86.9	14,121	11.3	1,110	0.9	1,238	1.0	125,467
2001	108,986	88.0	12,627	10.2	988	0.8	1,194	1.0	123,795
2002	108,847	88.5	12,128	9.9	1,020	0.8	982	0.8	122,977
2003	107,398	88.6	11,910	9.8	853	0.7	1,024	0.8	121,184

Source: National Statistics Office.

Table 7 indicates that from 1995 up to 2002, SMEs employed almost one-third of total employment in the manufacturing industry. Together with micro enterprises, their employment contribution ranged from 50% to 54% between 1988 and 2003. Note that the employment contribution of large enterprises declined from 57% in 1983 to 48% in 2003. A general decline in manufacturing employment is also evident from 2000 to 2003.

Table 7: Manufacturing Employment by Size

Year	MICRO	%	SMALL	%	MEDIUM	%	LARGE	%	TOTAL
1983	186,735	21	127,450	14	70,884	8	503,498	57	888,567
1988	247,173	23	201,553	18	95,994	9	545,389	50	1,090,109
1994	287,630	24	213,979	18	105,464	9	575,809	49	1,182,882
1995	271,699	22	227,949	18	137,384	11	615,874	49	1,252,906
1999	366,689	22	361,514	22	154,992	9	791,277	47	1,674,472
2000	354,025	22	354,328	22	150,734	9	730,127	46	1,589,214
2001	353,415	23	309,952	20	136,648	9	734,088	48	1,534,103
2002	353,255	24	294,487	20	143,003	10	676,443	46	1,467,188
2003	360,576	25	285,027	19	118,896	8	698,173	48	1,462,672

Source: National Statistics Office.

In terms of value added, the share of small and medium enterprises (SMEs) increased from 23 percent of the total manufacturing value added in 1994 to 28 percent in 1998 (see Table 8). However, this fell to 21 percent in 2003. Large firms contributed 79 percent of the total, an increase from its level of 72 percent contribution in 1998.

Table 8: Value Added Contribution 1994, 1998 and 2003 (in percent)

	1994		1998		2003	
	SMEs	Large	SMEs	Large	SMEs	Large
Total	23	77	28	72	21	79
311 Food Processing	35	65	41	59	26	74
312 Food Manufacturing	28	72	55	45	34	66
313 Beverages	17	83	7	93	18	82
314 Tobacco	0	100	0	100	0	100
321 Textiles	26	74	33	67	44	56
322 Wearing Apparel	37	63	40	60	31	69
323 Leather and Leather Products	35	65	44	56	12	88
324 Leather Footwear	32	68	58	42	62	38
331 Wood and Cork Products	43	57	77	23	58	42
332 Furniture (wood & metal)	49	51	49	51	65	35
341 Paper and Paper Products	25	75	45	55	46	54
342 Printing and Publishing	49	51	39	61	54	46
351 Industrial Chemicals	62	38	65	35	65	35
352 Other Chemicals	16	84	25	75	22	78
353 Petroleum Refineries	0	100	1	99	0	100
354 Petroleum and Coal Products	100	0	82	18	100	0
355 Rubber Products	21	79	36	64	30	70
356 Plastic Products	66	34	49	51	50	50
361 Pottery, China and Earthenware	13	87	23	77	22	78
362 Glass and Glass Products	22	78	18	82	26	74
363 Cement	0	100	3	97	0	100
369 Other Nonmetallic Mineral Prods	47	53	43	57	56	44
371 Iron and Steel	25	75	47	53	57	43
372 Nonferrous Metal Products	5	95	23	77	19	81
381 Fabricated Metal Products	50	50	57	43	52	48
382 Machinery except Electrical	35	65	23	77	10	90
383 Electrical Machinery	9	91	8	92	8	92
384 Transport Equipment	28	72	24	76	19	81
385 Professional and Scientific Eqpt	26	74	19	81	7	93
386 Furniture of metal (1994 only)	44	56	-	-	-	-
390 Miscellaneous Manufacture	39	61	53	47	62	38
Value Added current prices (in million P)	324.2		664.2		738.95	
Value Added constant 1985 prices (in million P)	147.14		221.9		192.1	

Source: National Statistics Office Census and Survey of Manufacturing Establishments

Table 9 presents labor productivity as measured by value added per worker in the manufacturing industry for the years 1994, 1998 and 2003. On the whole, though an increase in the labor productivity of both SMEs and large enterprises was registered between the years 1994 and 1998, the same fell in 2003. For SMEs, labor productivity dropped from P139,000 to P97,000 while for large enterprises, labor productivity declined from P227,000 to P211,000.

Table 9: Value Added per Worker, 1994, 1998 and 2003 (in million pesos at 1985 prices)

	1994		1998		2003	
	SMEs	Large	SMEs	Large	SMEs	Large
Total	0.110	0.196	0.139	0.227	0.097	0.211
311 Food Processing	0.205	0.173	0.302	0.280	0.124	0.263
312 Food Manufacturing	0.114	0.174	0.340	0.191	0.089	0.185
313 Beverages	0.711	0.494	0.230	0.573	0.302	0.535
314 Tobacco	0.044	0.727	0.029	1.026	0.052	0.475
321 Textiles	0.063	0.075	0.054	0.070	0.070	0.074
322 Wearing Apparel	0.076	0.058	0.066	0.061	0.040	0.046
323 Leather & Leather Products	0.030	0.040	0.050	0.032	0.088	0.137
324 Leather Footwear	0.021	0.044	0.040	0.035	0.024	0.025
331 Wood and Cork Products	0.057	0.062	0.085	0.041	0.041	0.044
332 Furniture except Metal	0.042	0.048	0.047	0.065	0.067	0.062
341 Paper and Paper Products	0.100	0.218	0.135	0.202	0.139	0.160
342 Printing and Publishing	0.066	0.203	0.061	0.326	0.042	0.184
351 Industrial Chemicals	0.320	0.358	0.214	0.364	0.327	0.420
352 Other Chemicals	0.209	0.669	0.226	0.734	0.177	0.580
353 Petroleum Refineries	0.000	4.438	1.289	9.973	0.000	28.643
354 Petroleum and Coal Products	0.100	0.000	0.052	0.023	0.280	0.000
355 Rubber Products	0.062	0.095	0.060	0.046	0.055	0.091
356 Plastic Products	0.125	0.096	0.097	0.119	0.076	0.085
361 Earthenware	0.034	0.079	0.034	0.089	0.102	0.068
362 Glass and Glass Products	0.180	0.371	0.101	0.259	0.131	0.204
363 Cement	0.000	0.447	0.287	0.724	0.562	0.934
369 Other Nonmetallic Mineral Products	0.078	0.149	0.071	0.104	0.059	0.195
371 Iron and Steel	0.150	0.485	0.138	0.187	0.142	0.133
372 Nonferrous Metal Products	0.074	0.578	0.138	0.309	0.164	0.481
381 Fabricated Metal Products	0.082	0.110	0.072	0.104	0.108	0.083
382 Machinery except Electrical	0.053	0.105	0.076	0.229	0.061	0.198
383 Electrical Machinery	0.123	0.137	0.144	0.216	0.121	0.141
384 Transport Equipment	0.182	0.239	0.137	0.221	0.153	0.375
385 Professional and Scientific Equipment	0.159	0.056	0.099	0.054	0.091	0.110
386 Metal Furniture (1994 only)	0.038	0.049	-	-	-	-
390 Miscellaneous Manufacture	0.044	0.066	0.069	0.089	0.104	0.080

Source: National Statistics Office Census and Survey of Manufacturing Establishments

In general, the labor productivity of SMEs has remained only about half the labor productivity of large enterprises. Some narrowing of the gap was evident in 2003. Still, SMEs suffer from low productivity. According to the World Bank (2004), the value added per worker relative to all firms was approximately 46% in the Philippines as compared to 64% in Indonesia, 65% in Malaysia, and 84% in Thailand.

IV. Survey of literature on market structure and anti-competitive practices

A. Manufacturing and Agriculture

The Philippine manufacturing industry is, historically, one of the most favored sectors by policy makers in terms of the level and magnitude of protection and other incentives that it received from the fifties till the eighties. Through regulatory policies; prices, domestic supply, and market entry were effectively controlled by government institutions mandated to promote the growth and development of manufacturing sub-sectors including cement, cars, trucks, motorcycles, integrated steel, electrical appliances, sugar milling/refining, flour milling, textile, synthetic fiber and paper. The government tolerated collusive arrangements in industries such as cement and flour milling and directly involved itself in the economy through the creation of state-controlled monopoly in the iron and steel industry. It also allowed entry barriers in glass manufacturing and pulp and paper that kept inefficient firms to continue operating.

The trade reforms from the 1980s up to the mid-1990s led to the decline of the mean tariff rate and the shrinking of tariff variation. Average nominal tariff rates were reduced from a range of 70 to 100% to within a three to 30% range. Overall, average effective protection rates declined from 53% in 1983 to 36% in 1988. In 1995, this further dropped to around 25% and to 8.59% in 1998. With the removal of import restrictions, the number of regulated items as a percentage of the total number of products fell from 32% in 1985 to around eight percent in 1989. In 1996, this declined to about three percent and by 1998, most quantitative restrictions were removed except those for rice.

With the three major trade reform programs implemented from the 1980s to the 1990s, average protection rates have fallen to relatively low levels. However, the trade reform process is far from complete. In the early 2000s, the government started to adopt a selective protection policy with the issuance of executive orders that changed tariffs on an ad hoc basis. As such, the applied duties on certain finished products were lower than the tariff rates that apply to their inputs. Petrochemicals, float glass, and steel are prominent examples of intermediate inputs receiving higher tariff protection than their final user products. This has increased the cost of production which greatly affects the competitiveness of user products.

Due to the recent policy of selective protection, effective protection in the economy has become uneven (Aldaba, 2005b). Wide dispersions in effective protection across sectors have resulted in distortions and inefficient allocation of resources in the economy. The number of tariff peak⁹ products, which are mostly concentrated in agriculture products and related food manufactures, went up especially between 1998 and 2004. The sectors with tariff peaks consist mostly of agricultural products with in- and out- quota rates as well as manufactured products. These include sugarcane, sugar milling and refining, palay, corn, rice and corn milling, vegetables like onions, garlic, and cabbage, roots and tubers, hog, cattle and other livestock, chicken, other poultry and poultry products, slaughtering and meat packing, coffee roasting and processing, meat and meat processing, canning and preserving fruits and vegetables, manufacture of starch and starch products, manufacture of bakery products excluding noodles, manufacture of animal feeds, miscellaneous food products, manufacture of drugs and medicines, manufacture of chemical products, and manufacture and assembly of motor vehicles. These are the same sectors which have continued to enjoy relatively higher level of effective protection.

The structure of protection has also remained biased for importables as the latter continue to receive higher levels of protection than exportables. With the highly dispersed protection structure, incentives have been created not only for lobbying and rent-seeking activities, but also for corrupt practices and smuggling of products.

Moreover, the government has resorted to the use of contingent protection measures such as safeguard measures and anti-dumping duties. Reports from the Tariff Commission showed that between 2001 and 2004, safeguard measures were granted on cement, ceramic tiles, clear float glass, tinted float glass, figured glass, and glass mirror. Note that the petitioner for glass is Asahi Glass Philippines, a local monopoly controlling almost 87 percent of the market. The duty which expired last 2006 has been extended for another three years.

Overall Manufacturing Industry

Early studies on the manufacturing industry indicated that the policy of high trade barriers combined with heavy government regulation deterred competition from abroad and contributed to the oligopolistic structure of the Philippine manufacturing industry. With agreements to fix prices (in sugar and cement, for instance), prices were no longer the product of competition among rival producers but more an outcome of negotiations between the government and a small number of producers. Price

⁹ Tariff peaks refer to tariffs that are greater than three times the mean tariff rate. An increase in tariff peaks occurs when high tariffs are reduced by less than the average reduction over all tariffs. The greater the percentage of tariff peaks in a country's tariff schedule, the greater the potential economic distortions particularly when highly substitutable products are present in both domestic and world markets (see Aldaba, 2005b).

controls resulted not only in simply limiting the potential for price competition among producers but also in preventing the development of a culture of competition in the country.

Lindsey [1977] analyzed the determinants of concentration in the manufacturing industry, and its relationship to industry profitability. He characterized the manufacturing sector as monopolistic and identified capital intensity and degree of fabrication as barriers to competition. He concluded that the high levels of concentration led to monopoly power.

Using 1979 manufacturing establishment data, Emmanuel de Dios (1986) examined the effects of tariffs on industrial structure and competition. His results showed that tariff protection led to concentration along with capital intensity, minimum efficient scale and working capital requirement as barriers to entry that led to concentration. Using price cost margin was used as competition variable and effective protection rate as trade proxy, his results showed that effective protection rate (EPR) interacted with concentration ratio was positive and significant. Capital-labor ratio was found to be negatively correlated with PCM while concentration ratio had a positive relationship with PCM.

Based on manufacturing data covering 29 industries for 1988, Imbat and Tanlapco (1993) analyzed the impact of trade liberalization on price cost margins. Their results showed that import competition which was measured by the share of import value in aggregate domestic demand had a negative effect on price cost margin.

Loreli de Dios (1993) also used the same 1988 manufacturing data set in testing the relationship between trade liberalization and market power. Industry average tariff rate and a dummy variable representing import restrictions were used as trade liberalization variables. The results showed that tariff protection was positively correlated with mark-up while the dummy variable was negatively correlated with mark-up which was unexpected. The three-firm concentration ratio was also found to be significantly positively correlated with mark-up. De Dios noted that the regression results were tentative given the level of product aggregation done and the unweighted average tariff rates used. She also pointed out that the cumulative impact of deregulation may not be too obvious when looking at a single year cross section of industries on which many other factors are at work but which were left out of the model.

Aldaba (2003 and 2002a) examined the performance and state of competition in the Philippine manufacturing industry after the liberalization from the 1980s to the 1990s. Aldaba showed that after trade liberalization, the average four firm concentration ratio remained high for the years 1988, 1994, and 1995. At the same time, price cost margins also increased during the same years under study. Adopting a conventional regression specification of the concentration-profits relationship, the results showed a

positive correlation between concentration and profitability. The author noted that this positive relationship is consistent with both the structuralist school and the efficiency hypothesis¹⁰.

Aldaba (2005a) further reviewed the impact of trade liberalization on competition, structure, and performance of major economic sectors in the Philippines. Large margins were found not only in manufacturing but also in agriculture and banking as well as in infrastructure sectors like electricity, air transport, water transport, and telecommunications. The study indicated that the strength of competition is a function not only of the behavior of firms but also of the overall market environment within which they compete. This includes the state of a country's infrastructure, institutional framework of laws and regulations, and the effectiveness of the financial system in matching investment resources with entrepreneurial opportunities all matter in the extent to which liberalization will be able to enhance competition and growth. Philippine experience shows that after two decades of implementing liberalization and other market-opening policies, competition and productivity growth remained weak not only due to the presence of structural and behavioral barriers to entry, but also to the country's inadequate physical and institutional infrastructure. Due to the fundamental weakness of competition in a lot of major economic sectors, the gains from liberalization remained limited which slowed down the country's economic growth.

Aldaba (2007) indicated that the overall performance of the manufacturing industry remained weak in terms of output and employment generation. Trade indicators such as import penetration and export penetration ratios showed that liberalization led to the growing integration of the Philippines with the global economy. With trade reforms, improvements in firm level efficiency and resource allocation were also observed. Though, in terms of market structure, the manufacturing industry was still highly concentrated while competition seemed to be limited as implied by the persistently high price cost margins.

¹⁰ These are the two major opposing theories in industrial organization that explain the need to preserve competition. The structuralist school is rooted on the traditional structure-conduct-performance (SCP) paradigm of industrial concentration which states that a concentrated industry (structure) will facilitate collusion (conduct) and hence monopoly pricing (performance). Firms operating in oligopolistic industries with large market shares are more likely to coordinate their pricing and output or to unilaterally engage in anticompetitive behavior. The Chicago school was developed in reaction to the structuralist viewpoint that industrial concentration fosters collusion and hence, monopoly pricing. The Chicago school maintains that markets are workably competitive and market structure reflects differential efficiency, not strategic behavior.

Using a simultaneous two-equation (concentration and profitability) system¹¹, Aldaba showed that high concentration accompanied by high profitability is not necessarily inimical to competition. The results showed that high concentration was largely influenced by the superior efficiency of big firms and the presence of import competition. Both have highly significant positive impact on concentration. As import penetration increases, the concentration of large domestic firms rises. With competition from imports, inefficient domestic manufacturers shut down which leads to an increase in concentration. The domestic firms that survive import competition are those that employed internal measures to improve their efficiency such as laying-off workers and searching for cheaper and better quality raw material inputs. These efficiency measures allow firms to increase their mark-up ratios. At the same time, consolidations and mergers with other companies were also carried out and along with the exit of inefficient firms, the more efficient firms were able to expand their output and this gets reflected in increasing concentration ratios and rising price cost margins.

With respect to the relationship between profitability and domestic concentration, the results indicated a positive association between the two which may imply market power as the SCP approach would suggest. However, the presence of imports would restrain domestic manufacturers from exercising their market power. The highly significant negative coefficient on import penetration is a clear indication that imports have a disciplining effect on domestic manufacturers.

Industry Case Studies

The Barriers to Entry Study (1992) highlighted the presence of high concentration in telecommunications, glass, man-made fibers, cement, iron and steel, and passenger cars. This gave rise to uncontested markets in these industries. The Study noted that the entry barriers in were generally induced by government policy and at times, these government policy induced barriers even reinforced the existing structural barriers to entry such as excess capacity, absolute advantages (through franchises, credit subsidies and fiscal incentives) and limit pricing (via price and rate regulation). This was the case for favored industries under the government's progressive manufacturing programs which included cars,

$$^{11} \text{CR4}_{jt} = f(\text{PCM}_{jt}, \text{CAR}_{jt}, \text{MPR}_{jt}) \quad \text{concentration equation}$$

$$\text{PCM}_{jt} = f \left(\begin{matrix} \text{CR4}_{jt} & \text{MPR}_{jt} & \text{CAR}_{jt} & \frac{K_{jt}}{Q_{jt}} & \text{GDPGR}_t \\ + & - & + & + & \end{matrix} \right) \quad \text{profitability equation}$$

CR4: four-firm concentration ratio

PCM: price cost margin

MPR: import penetration ratio

CAR: cost advantage ratio

K/Q: capital-output ratio

GDPGR: gross domestic product growth rate

trucks, motorcycles, integrated steel mill, and synthetic fiber along with special “modernization” programs for distressed industries like textiles and cement. The government was also seen to have a hand in tolerating or abetting cartel-like behavior in industries such as flour milling, cement, and inter island shipping.

The Development Bank of the Philippines studies on cement (1991) and pulp and paper (1992) industries indicated the oligopolistic behavior of firms in the two industries. The government created the Philippine Cement Industry Authority (PCIA) to regulate the entry of new firms and control the supply and price of cement. The PCIA worked closely with the manufacturers’ association, the Philippine Cement Manufacturers Corporation (Philcemcor), and delegated the setting of production quotas to it. Philcemcor held regular monthly meetings to set production quotas and arrange geographical apportionment of the markets.

In the pulp and paper industry, PICOP, the country’s main supplier of newsprint and corrugating board, represented 50 percent of industry aggregate for newsprint while its production of corrugating medium represented 61 percent of the total. The DBP Study indicated that the oligopolistic structure was fortified by trade policies which discouraged foreign suppliers from competing with local producers on a larger scale. The Study also noted that oligopolistic prices tended to increase freely following an expansion in demand, but during depressed times, the oligopolists strongly resisted price reductions and oftentimes, resorted to secret price cutbacks.

The World Bank Report on the Philippines (1993) characterized the country’s manufacturing sector as highly concentrated and this contributed to the reduction of competition which hampered efficiency gains to structural reform. The Report, however, noted that by the end of the 1980s, the degree of concentration eased substantially. Its estimates revealed that the degree of concentration declined from 70 percent to 63 percent between 1983 and 1988. The Report concluded that, although oligopoly and rent-seeking behavior remained rife in the Philippines, there was evidence that the economy became more competitive and efficient in resource use towards the end of the 1980s.

The Philippine Institute for Development Studies’ *Catching Up With Asia’s Tigers* (1996) analyzed the response of country’s highly protected manufacturing industries to the trade policy reform of the 1980s focusing on the following industries: motorcycle and parts industry, meat and dairy processing, appliance, packaging, synthetic resin and plastic, agricultural machinery, and shipbuilding and repair.

1. Motorcycle and Parts Industry

The industry was composed of six assemblers all of which belonged in the country’s Top 1000 Corporations with Norkis leading the market in terms of sales since 1973. The industry operated under a local content program beginning in 1973. Under the program, only the participants were allowed to

import CKD packs, the contents of which were defined from time to time to exclude those approved as local content. The firms were protected from foreign competition since CBU imports were banned. They also benefited from tax incentives as they were registered with the Board of Investments under the Investment Incentives Act. After more than two decades of implementation, the program failed to overcome the constraints to the industry's viability primarily due to underdeveloped state of the basic metalworking sector and lack of economies of scale.

2. Meat and Dairy Processing

The leading firms in the meat processing industry were: San Miguel Corporation, RFM, General Milling, and Purefoods. The industry is an oligopoly with a competitive fringe. Concentration was highest in slaughtering where concentration ratio increased from 62 percent in 1983 to 76 percent in 1988. Price-cost margins were high, but fell from 62 percent to 28 percent between 1983 and 1988. The degree of concentration in meat processing, preserving and canning was lower but increased from 26 percent in 1983 to 55 percent in 1988. Price cost margins declined from 21 percent to seven percent.

The high level of concentration in slaughtering was due to the existence of binding quantitative restrictions on live swine which prevented imports from providing the necessary competition. There was more competition in meat processing, preserving and canning as entry was easy into small-scale meat processing. While there were import restrictions imposed on the sector, these were not binding due to rampant smuggling. For large-scale meat processing, entry barriers existed and these covered high cost of capital, high degree of product differentiation, brand loyalties and advertising.

The dairy processing industry was composed of a few large multi-product firms and several medium-scale and small competitors with milk processing dominating the whole industry and San Miguel Corporation as the undisputed industry leader. Between 1983 and 1988, some concentration was found in ice cream (an increase from 48 percent to 51 percent), infant formula processing (an increase from 62 percent to 64 percent), powdered milk (an increase from 46 percent to 50 percent), and butter and cheese (an increase from 64 percent to 89 percent).

In the dairy processing, entry barriers due to sunk costs were formidable, but for others, notably dairy farming and ice cream making, smaller-scale investment was possible. Contestability in the latter might be the reason for competitive prices. While natural barriers to imports existed, differences in scale economies and nature of the product (perishability) served as entry barriers rendering import discipline ineffective.

3. Appliance

The appliance industry was composed of 30 firms, most of which were licensees or joint ventures with foreign manufacturers. The five largest firms in terms of gross revenues were: MEPCO, Philacor, Concepcion Industries, General Electric, and Union Industries. The largest four firms accounted for 70 to 80 percent of total gross revenues which seemed to indicate that the industry was highly concentrated. Concentration within the industry might be explained by protection as well as the observed smallness of the domestic market. The structural entry barriers identified were: economies of scale, access to distribution channels, product differentiation, capital requirements, and technology acquisition. Entry also seemed to be difficult for rank beginners in the domestic market but not for established appliance firms seeking new markets. Established firms had access to distribution channels and product differentiation might not pose serious problems as they enjoyed strong ties with distributors and consumer loyalty. The industry remained concentrated between 1983 and 1988. Price cost margins fell indicating that increased competition from imports might have reduced the profitability of incumbents.

4. Packaging

The Philippine packaging industry was characterized by the co-existence of an oligopolistic core (a few large plants dominating the market) and a large number of small plants accounting for a small percentage of industry sales. Entry into the lower end of the spectrum was relatively free, entry barriers in the form of huge capital requirements and scale economies inhibit entrants from getting into the upper end. Concentration ratios for the industry clustered around 48 percent, except for glass which had a high level of concentration (98 percent). The price-cost margin for glass was also high (it increased from 16 percent in 1983 to 44 percent in 1988). The number of firms in this subsector remained almost stable with only two new entrants between 1983 and 1988. The high entry barriers in the glass-based subsector could be attributed to the dominance of a highly vertically-integrated conglomerate which had plants operating in the different subsectors.

Trade reforms did not reduce the level of concentration and market power in the glass-based sector. Concentration in the glass and plastic-based sectors increased while concentration in the metal and paper-based sectors declined. Parallel movements were observed in the price-cost margins. High concentration was not necessarily harmful to the industry considering the small size of the domestic market relative to the minimum efficient scale of technology employed in the industry. In the case of glass-based packaging, economies of scale implied that the efficient industry would necessarily be the concentrated one.

5. Flat Glass Manufacturing

The glass and glass products industry was highly concentrated with the top three firms contributing 84 percent of the total industry value added. In the flat glass subsector, Republic Glass (RGC) was the only domestic manufacturer. Its major stockholders were Gervel (owned by Geronimo Velasco) and Jaka Investments (owned by Juan Ponce Enrile). In 1989, RGC entered into a joint venture with Asahi Glass Company of Japan.

Flat glass is a highly capital and skills intensive industry which would present a barrier to potential entrants. The relatively small domestic market for flat glass might not allow the new entrant to exploit economies of scale unless it would be able to arrange a tie-up with foreign firms with similar arrangement as that of RGC and Asahi Glass.

Imports were the only potentially strong competitors of RGC. However, RGC has been protected from imports through quantitative restrictions and high tariff walls. RGC registered with the Board of Investments as a preferred pioneer enterprise and as an export producer which entitled it to tax and non-tax incentives. RGC had been operating efficiently. It had been a profitable firm and had never experienced a loss since it started operating. It adopted a two-tiered pricing system, a high price for domestic market where it wielded some monopoly power and a low price for the world market.

The entry barriers in the flat glass industry were structural in nature. This derived from RGC's expanded production capacity, modernized production process, and special financial, technical, and marketing arrangement with Asahi Glass. The protection and incentives granted to RGC by the government allowed it to enjoy extra benefits (extract monopoly profits), which presented a barrier to other entrants. The rate of duty for flat glass was scheduled to be reduced from 50 percent in 1991 to 30 percent in 1995. With the liberalization of flat glass, RGC was expected to behave competitively.

6. Synthetic resin and plastic

The synthetic resin industry fell under two categories: thermoplastic (softened repeatedly by heating) and thermosetting (hardened only once when heated). In 1991, there were 17 resin firms with Mabuhay Vinyl Corporation and Resins Inc. as the dominant firm in terms of gross revenues. The industry was composed of only a few players as it was capital intensive in nature and investment cost was relatively high. The thermoplastic subsector was oligopolistic with the presence of a few large-scale firms requiring high investment and producing a limited range of products. The thermosetting subsector was not as oligopolistic as the thermoplastic subsector and was also less capital intensive.

The plastic processing industry was non-oligopolistic with the coexistence of large, medium, and small scale firms. In 1988, there were 300 establishments in the industry. Plastic packaging giants such as San Miguel and Asia Brewery operated together with medium sized firms in toys and housewares and

small scale firms in laminated and printed plastics. Plastic processing did not require high capital investments like synthetic resin manufacturing. The relatively lower capital requirements and the diversity of available products indicated a freer entry compared to the resin industry.

After the trade reform, the concentration ratio in the resin industry increased from 54 percent to 69 percent for the period 1983 to 1988. This was accompanied by an increase in the price cost margins from 20 percent to 33 percent between 1983 and 1988. The increase in concentration was due to the presence of import regulations on three resin items which had effectively limited import competition. This allowed large firms to hold on to their dominant positions in the market even after the implementation of trade reforms. The plastic processing industry was not highly concentrated. The concentration ratio slightly increased from 20 percent to 24 percent while its price cost margin fell from 20 percent to 15 percent due to greater foreign competition.

7. Agricultural machinery

The agricultural machinery industry was composed of a few large and medium scale establishments and many small scale firms. The tariff reform considerably rationalized the protection structure of the industry. The effective protection rate increased from a low level of 7.3 percent in 1983 to 38 percent in 1988. After the tariff reform, the concentration ratio of the industry fell from 61 percent in 1983 to 54 percent in 1988. This was accompanied by a substantial reduction in price cost margin from 32 percent in 1983 to only nine percent in 1988. These movements in the concentration ratio and price cost margins implied increased internal competition among firms. Entry in small-scale manufacturing was easy as the industry was relatively open and required low capital and high labor and very little economies of scale. Barriers to expansion were: lack of access to financial resources, difficulty of technology acquisition, high interest cost, and too many firms competing in an industry where there was depressed demand.

8. Shipbuilding and repair

The shipbuilding industry was characterized by market segmentation: large shipyards which catered to big ships and small and medium yards which serviced smaller vessels. The concentration ratio of small and medium firms increased from 49 percent to 54 percent between 1983 and 1988 because highly efficient new entrants gained a large share of the market indicating an improvement in competition. Their price cost margins dropped from 45 percent to 20 percent between 1983 and 1988. For large firms, concentration ratio increased from 59 percent to 79 percent which could be explained by these plants' acquiring the market shares of the firms that had ceased operating. While the level of concentration indicated oligopolistic structure, large plants also had more advanced technology and

bigger facilities. This enabled them to service larger vessels more efficiently than other plants with inferior technology and facilities with lower capacities. Concentration ratios were not sufficient to prove collusive behavior among plants. The price cost margins fell from 32 percent to 17 percent between 1983 and 1988. The entry barriers for the shipbuilding and repair sector were: large capital requirements for setting up the dry-docking facilities, high interest rates, technology acquisition, access to finance and excessive competition (which was more pronounced for small firms engaged in repair where entry did not require much capital).

The boatbuilding industry was found to be highly concentrated, although there was a substantial reduction in the concentration ratios during the 1983-1988 period. This indicated an improvement in the level of competition faced by the incumbent firms. The price cost margins for the boatbuilding industry declined from eight percent in 1983 to negative five percent in 1988. The entry barriers were: limited domestic demand, control by existing firms of the distribution channels, and bureaucratic procedures (for new entrants).

9. Automotive

For more than two decades, the automotive industry developed under a system of protection, regulation and promotion through high tariffs, local content scheme, and import restrictions. Beginning in 1990, the industry has been opened up to accommodate new players and introduce new vehicle categories. Towards the mid-1990s, importation of all types of passenger and commercial vehicles was liberalized. Almost simultaneously, restrictions on the number of models were removed and entry into previously closed vehicle segments was opened up.

With the increasing liberalization of the industry, the long waiting time for customers' orders which characterized the industry for a long period of time finally ended. As the market was opened to new players, competition came into play. Customers had a wider array of brands and models to choose from and which they could readily obtain in less than a week after an order was placed. With more market players, competition grew stiffer. Discounts, rebates, easy financing packages and a host of other promotional gimmicks were provided to customers. The production of vehicles in the country grew steadily from 1991 up to 1996 reaching a level of 137,365 units in 1996, the highest level of production in the history of the industry.

There are currently 19 operating assemblers registered with the BOI. Out of these, 12 are assemblers of passenger cars and the remaining ones are mainly engaged in commercial vehicle assembly. All the four segments of the vehicle market are highly concentrated as indicated by their four firm concentration levels. In the passenger car segment, the industry is dominated by the big four: Honda, Toyota, Mitsubishi, and Nissan with concentration ratios or market shares of the four largest firms even

rising from 74 percent in 1996 to 81 percent in 1999. In the LCV segment, concentration level declined from 80 percent in 1996 to 76 percent in 1999. Note that the LCV segment has the lowest concentration levels owing to the strong presence of imports. The leaders in this segment are Mitsubishi, Honda, Universal Motors, and Isuzu. In the AUV segment, there are only three major competing firms led by Toyota and followed by Mitsubishi and Isuzu. Hence, concentration level in the AUV segment has remained at very high levels. In the trucks and buses segment, the leading firms are Mitsubishi, Isuzu, Phil-Hino, and Columbian. Concentration level in this segment has also remained high. Industry leaders Toyota, Mitsubishi, Honda, Nissan, Pilipinas Hino, and Columbian Motors were consistently among the top 1000 corporations in the Philippines from 1986 to 1996.

The complex package of assistance, however, failed to promote an efficient industry capable of competing internationally. The industry performed poorly and paled in comparison with assemblers in other Southeast Asian countries. Its high cost structure in the mid 1990s tended to price vehicles assembled in the country out of world markets. The fundamental obstacle to production efficiency is the diseconomy of scale associated with production oriented to internal markets of limited size. Despite the small size of the Philippine market however, there are currently seven car assemblers manufacturing eighteen models at a total of around 60,000 units. The average production per model is around 3,300 units which is very small. As one top auto executive noted; with this scale of production, it would be difficult to compete in a zero tariff environment.

Another problem is the failure of the government's local content program to develop the parts manufacturing sector as a world-class export sector. High assembly costs was also due to the high cost of components and parts which are produced at relatively low volumes in small-scale plants. As Gimenez (1994) pointed out, except for those parts with significant exports, domestic parts are not competitive in terms of both price and quality due to the following problems: lack of locally manufactured raw materials, hence many of the raw materials used by components manufacturers are imported; low productivity and lack of quality measures among small and medium parts makers; old equipment and technology, many are using technologies that are more than 20 years behind; and lack of mold design technology, tool and die making.

10. Downstream Oil

Since the deregulation of the downstream oil industry in 1998, new players have entered the petroleum industry and have gained a foothold in terms of market share. Prior to deregulation, the industry was dominated by what is generally known as the Big Three namely Petron, Shell, and Caltex. Their combined share declined from 95.6 percent in 1998 to 91.3 in 1999 and further to 90.1 percent in 2000. As of the third quarter of 2000, 61 new players engaged in different activities in the oil industry. In

terms of investment, new players invested about P12 billion in the industry. Fuels bulk marketing received the highest level of new investments followed by retailing. Note that bulk sales have lower entry barriers compared to other sectors, as they do not require extensive distribution or retail networks. They also have simple facilities' requirements and low capital outlay. After deregulation, the country's total refining capacity increased to 400 billion barrels per day, a marked improvement from the lackluster performance prior to the reforms. The big three still control all refineries with the highest refining capacity accounted for by Petron.

While deregulation has allowed the entry of a significant number of new players in the industry, competition was not yet been sufficient to lead to a downward pressure on retail pump prices. Retail outlets are expensive to construct (estimated at around P10-20 million per outlet) and often require tedious environmental and planning approvals. Retail requires extensive or retail networks and currently, the big three players dominate the retail networks, hence, new players are unable to price gasoline way below those of the big players. This advantage to the incumbent firms poses as an entry barrier, which competition policy should address.

The successive price increases from January 1999 to July 2000 triggered widespread protests and public perception that the industry deregulation has failed and led to a cartel by the big three oil companies. To mitigate the retail price increases, the government has responded by adjusting tariff rates on imported crude oil and refined petroleum products. However, this is merely a short-term solution that has a huge implication on the fiscal deficit.

Using various econometric models, Salas (2002) assessed retail gasoline price movements and crude cost changes in the Philippines. His findings indicated that the oil firms' decision to adjust prices is determined by changes in crude cost over the previous eight weeks. Oil firms pass on any changes in crude costs within this time frame by adjusting their retail prices. In terms of price adjustment speed, the same study found that deregulation resulted in a faster retail price adjustment to crude cost changes over time. This is encouraging since faster adjustment speed denotes more competitive pricing; however, this is mitigated by the fact that the adjustment speed obtained was still slow relative to the case in the US.

Another interesting finding was the divergence in the price adjustment speed as retail prices responded more quickly and more fully to crude cost increases rather than to similar crude cost reductions. Oil firms adjusted their retail prices faster when there are so-called under-recoveries. They increase their retail prices much faster when crude costs rise in contrast to their slower price reduction when crude costs fall.

The results of the simulation of crude cost changes indicated that on the eighth week following an increase in crude cost, firms were able to pass on to retail prices about 90% of the increase. In contrast, firms pass on at most 60% in the case of a reduction in crude cost. This behavior seems to indicate that

positive economic profits are being made in the industry, hence presenting scope for more competition. Equally important, this signals the need to closely analyze firm behavior as asymmetric pricing could be an indication of tacit collusion and market power among firms in the industry. The author also indicated that the temporary suspension of import duties did not result in a relief for consumers as originally intended, but, was instead taken advantage of by the oil firms to increase their profit margins.

It should be noted that deregulation has allowed the industry to attain some levels of competition as new players gained market share and continued to plan expansion projects. In response, the big players tried to enhance their market share through advertisements, raffle promos, fuel rebates, and their tie-up with convenience stores. But, given the present capacity constraint faced by the new small players, it would take some time before they can aggressively engage in price competition.

With deregulation, it is also necessary to formulate competition law and policy that will protect the competitive process and encourage competitive behavior in order to promote economic efficiency. Under the present law, a Department of Justice-Department of Energy task force was created to oversee anticompetitive acts. The task force is mandated to investigate and prosecute cases of predatory pricing, cartels and unreasonable price increases. The task force convened a number of times but its work has been hindered by the lack of manpower, lack of experience in anti-trust investigations, lack of judicial precedents in this area and inability to investigate cases outside the three anticompetitive violations earlier specified (R. Galang & C. Solleza, 2001). Cabalu et al (2001) noted some issues on the current framework of the downstream oil industry such as missing and inadequate components like mergers and government-imposed barriers to entry, inappropriate penalties for violations of antitrust offences are inappropriate; they are either too harsh or too lenient and lack of knowledge among enforcement officials and the judiciary to effectively enforce current laws.

11. Pharmaceutical Drugs

With its highly concentrated market structure, the pharmaceutical drugs industry is characterized as oligopolistic. In 2002, around 72% of the market is controlled by MNCs while local companies and joint ventures account for the remaining 28% (about 19% can be attributed to United Laboratories). The manufacturing industry imports around 90% of its total raw materials and only top Filipino company, United Laboratories, has a chemical plant that produces the raw materials for ampicillin and amoxicillin not only for its own internal use but also for other local drug manufacturers. Wholesale distribution is controlled by three companies and in retailing, Mercury Drug Corporation dominates with its share of around 40-50% of the market.

The industry is regulated by the Bureau of Food and Drugs (BFAD) which is the government agency responsible for regulating entry in the industry to ensure public safety and welfare. It inspects,

registers and licenses drug manufacturers and distributors and controls the registration and approval of all pharmaceuticals.

In 1988, the government legislated the Generic Drugs Act in order to make drugs more affordable and accessible particularly for the poor. However, as Lecciones (2004) indicated, the Generics Law failed to effectively encourage the extensive use of generic prescribing by medical practitioners. Generic drugs, though cheaper than their branded counterparts, do not sell due to customers' lack of information on generic drugs' safety and efficacy.

In 2000, the government implemented the Parallel Drug Importation (PDI) Pharma Plan 50. Through the Philippine International Trade Corporation (PITC), the government imported off-patent drugs from an essential drug list. The imports, which were primarily sourced from India, competed directly with the same branded products marketed in the Philippines by trademark owners with existing marketing authorization from the (BFAD). However, due to the limited volume of imports (only about 0.16% of the total comparative pharmaceutical market) and limited distribution network (only 70 out of 600 government hospitals), the Plan failed to bring down drug prices and increase the access of the poor to cheaper medicines.

Currently, the market is made up of generic and branded drugs with the latter accounting for the bulk (90%) of total industry sales. Lecciones noted that most mainstream physicians prescribe and support these expensive branded drugs over the more affordable, but poorly perceived generic medicines. Physicians, in general, perceive generics to be of lower quality and could advise their patients against their use (Lao, 1999). This tendency has been reinforced by the high promotion and gift-giving practices by drug companies to promote expensive branded medicines to physicians and pharmacists. This gift-giving behavior seems to be anti-competitive.

Drug prices in the country have remained high and are considered to be one of the most expensive in Asia (Balasubramaniam, 1995). Among the major reasons cited for the high prices of drugs are: high costs of research and development; patent protection that creates monopolies, and consumers' attitude that tend to use price to signal quality and efficacy. While intellectual property protection is important for the discovery of new medicines, the Doha Declaration on the WTO Trade Related aspects of Intellectual Property Rights (TRIPS) Agreement recognizes its implications on prices and allows flexibilities in its implementation. The Philippine intellectual property laws which were adopted in June 1997 have not yet been amended to reflect these flexibilities which include compulsory licensing, parallel importing and the freedom to determine the grounds upon which such licenses are granted. Changes in the legal structure are necessary along with competition policy in order to reduce market power and encourage more competition in the industry.

12. Cement

The existence of an alleged cartel has been a persistent question in the Philippine cement industry. Historically, the industry thrived under a government-sanctioned cartel. Collusion in the industry, which was an acceptable practice in the past, took place through the firms' informal agreement to set production quotas and to assign geographic markets among themselves (Lamberte, De dios et al, 1992). This practice divided the country into regional markets served by a dominant player which eliminated competition from taking place.

As the government pursued market-oriented reforms in the 1980s, the industry was deregulated and liberalized. In the early 1990s, the cement companies invested in capacity expansion; however, they encountered serious financial difficulties due to the 1997-98 Asian financial crisis. Foreign companies came in and bought into the industry through mergers and acquisitions. The industry which used to be dominated by Phinma and several family-owned firms is now controlled by the world's Big Three cement companies: Holcim, Lafarge, and Cemex.

With the completion of most mergers and consolidations in the industry, prices started to go up from P45 in December 1998 to P70 in February 1999, rising to P97 by December 1999. In May 2000, ex plant price/bag was already P109 reaching P132 per bag in May 2001. Note that prior to 1997, price movements in the industry were fairly stable with prices generally rising during the dry season and falling during the rainy months. With the 1997-98 crisis, prices dropped from P104 per bag in March 1997 to P45 per bag in December 1998.

Considering that the industry was facing oversupply and low demand, price coordination was seen as the only explanation for the price increases. During this period of rising prices, there was excess capacity in the world market; imports were coming in and sold at prices lower than those charged by domestic manufacturers. The domestic cement industry strongly resisted the entry of imports; Philcemcor filed a dumping suit against a Taiwanese and Japanese cement corporations. Failing to find sufficient evidence to support the industry's request for anti-dumping measures, the Tariff Commission did not grant the request. Subsequently, Philcemcor sought refuge through Republic Act 8800, which allows industries affected by import surges to request for safeguards. In November 2001, the Department of Trade and Industry ruled the imposition of a temporary additional duty of P20.60 per bag of imported cement. In turn, the industry promised that there would be no price increases during this period and committed to sell cement within the price range P125-P135. With the safeguard measure in place, imports fell from 19% in 2001 to 2.4% in 2002 and 0.08% in 2003. Average prices did fall in 2002. However, since 2003, prices have continued to rise again, averaging P120 in 2003, P147 in 2004, P158 in 2005, P170 in 2006 and P175 in early 2007. During these years, both production and consumption were falling while construction growth rate was either negative or very low.

Trade liberalization in the 1990s did not lower domestic prices. Imports have been largely limited and have not gone beyond ten percent, except in 2000 and 2001 when import penetration increased from 12% to 20%. This can be attributed to the excess supply abroad and the high domestic prices prevailing in the country. However, rather than compete against imports, domestic firms kept their prices high till 2001. With the imposition of safeguard measures, competition was virtually non-existent as import rates dropped to 0.8% in 2003 and to almost zero in 2004 while domestic prices continued to go up after 2002. In July 2004, the Supreme Court voided the safeguard duty on imported cement resulting in a slight increase in imports.

In examining the determinants of competition in the cement industry, Aldaba (2007) showed that imports arising from trade liberalization do not have a disciplining effect on domestic firms. Using a model developed by Haskel and Scaramozzino (1997), the study tried to determine the behavior of cement firms and the results showed that leading firms are characterized by collusive behavior. Their tendency to engage in strategic behavior and the use of anti-dumping and safeguard measures as alternative protection instruments have weakened imports' competitive effect. Aldaba concluded that while the elimination of trade barriers is a necessary condition, it is not sufficient to generate effective competition if firms can successfully engage in anti-competitive practices. To effectively discipline domestic firms with collusive tendencies, trade liberalization must be accompanied by strict competition policy.

In the early 2000s, the House Committee on Trade and Industry initiated investigations on the re-emergence of a cement cartel but no resolution has been made. The DTI also conducted investigations on the alleged collusion among firms to keep cement prices above normal levels but no substantial results have come out. Consumer groups threatened to file a criminal case against the cartel, but this never prospered. As Aldaba (2007) pointed out, without an effective competition policy, it is very difficult to prosecute domestic cartels and the task becomes even more difficult with international cartels which require close cooperation with other countries' competition agencies.

13. Rice and Corn

Rice is a staple food in the country and the single most important crop in the agriculture sector, hence it has become a political commodity. Rice flows through a quite complex marketing channel. Paddy traders purchase paddy from farmers for resale to rice millers, wholesalers, and retailers. Ricemillers dry, store, and mill paddy into rice, subsequently transporting and selling the rice to wholesalers and retailers.

The government through the state-owned National Food Authority (NFA) has monopoly control over international trade in rice and corn. The NFA also engages in domestic marketing operations to

stabilize rice prices. It intervenes in domestic pricing through its policy of setting a price floor to maintain a reasonable return to farmers and defending a price ceiling to ensure low prices to consumers. It also controls rice imports through a quantitative restriction on imported rice. Given these conflicting objectives, studies showed that NFA has suffered considerable losses while prices have been volatile and farmers' incomes have been low. Excessive and costly government regulation in rice failed to stabilize supply and prices because it hardly cornered a substantial portion to make an impact on the market (AGILE, 2000; Intal and Garcia, 2005). Studies also indicated that NFA's inefficient management of rice importing and buffer stock operations often resulted in abnormal seasonal fluctuations and widening regional price differences. For instance, the sharp rise in prices in 1995 was due to delayed decision to import and delayed contracting when the lean months started already (AGILE, 2000).

Farm prices have continued to remain below palay support prices. The profit squeeze has resulted in less investment in postharvest facilities and reduced planting due to the lack of incentives in terms of more attractive palay prices. Hence, rice productivity has remained low: rice yield in the Philippines is $\frac{1}{2}$ of China, $\frac{7}{10}$ of Indonesia and Vietnam and $\frac{3}{4}$ of developing Asia average (Intal and Garcia, 2005).

Meanwhile, newspaper reports blame the price manipulations being done by the rice cartel to maintain low farmgate prices. The market power of traders extends not only to inputs and processing activities but also to the market price of rice. Based on a price symmetry¹² model, Reeder (2000) tested for the presence of market power among rice traders. Using rice prices from 1973 to 1996, Reeder calculated a retail-to-farm price ratio of 2. As the author indicated, this does not imply unreasonable earnings on the part of traders but this does not necessarily reflect the absence of excessive profits (Barker et al, 1985). Reeder further noted that this may imply a cost plus pricing strategy in determining the price of rice. The results of the symmetry tests cannot confirm the presence of market power among traders.

The high level of protection conferred on rice has resulted in domestic wholesale rice prices being double what they would be if unrestricted private sector imports were allowed (Cororaton, 2004). In terms of the gap between the domestic retail price of ordinary rice and the world price for the same rice variety, the same study indicated that the gap has widened from 20 percent in 1989 to 130% in 2001. Currently, farmers and other private sector importers are allowed to make some of the importations, however, the NFA still has full authority on the quantity of imports and who receives the import licenses and the rules and procedures that must be adhered to.

Corn is also regulated by NFA through import licensing. Like rice, its local marketing is also characterized as oligopolistic. Many have blamed opportunistic traders for the erratic price fluctuations of corn. To empirically test whether traders take advantage of ill-informed farmers, Mendoza and Rosegrant

¹² Price symmetry is the market's ability to respond similarly and instantaneously to both an increase and decrease in prices. An overreaction to price increases while remaining opposed to price decreases could indicate the presence of market power among traders.

(1995) analyzed corn pricing behavior using an autoregressive conditional heteroskedasticity (ARCH) model to time series data of regional corn markets. Their results showed that farmers were knowledgeable about prevailing market prices. The authors noted that the farmers' access to market outlets in nearby towns was limited by inadequate and costly transportation and poor infrastructure. Nevertheless, they seldom allowed traders the opportunity to manipulate prices. Because farmers had regular contacts with several traders and neighboring farmers, they obtained information quickly and were able to verify its accuracy, thus squelching traders' ability to manipulate prices. The results also showed that although the market is imperfectly integrated, pricing was not discriminatory, as one would expect in a highly concentrated market. A more efficient domestic pricing and distribution of corn would necessitate the building of infrastructure, improving market information services, and instituting relevant standards for corn grading that could enhance market competition and facilitate an efficient market exchange.

14. Sugar

The sugar industry is another agricultural crop that has been heavily regulated and protected by the government. Government intervention in the industry has been extensive because of the need to divide the higher than normal returns among millers and planters due to the Philippine's preferential access to the US sugar market which the country enjoyed till the 1980s.

The government set up the Sugar Regulatory Administration (SRA) to control and regulate the sugar market. It classifies all sugar produced and imported in the country into different classes by type of market: "A" for US, "B" for domestic consumption, "C" is reserve sugar, and "D" is sugar for export to other countries other than the US and E for input into processed for export. SRA also enforces the production sharing system (known as quedan system) between domestic planters and millers. At the start of the crop year, SRA estimates total domestic production and issues a Sugar Order stating the percentage allocations for various categories. These percentages are applied to the raw sugar produced at the sugar mill from the cane produced from each farm.

Aside from traditional regulation, sugar has been heavily protected. Although the quantitative restrictions on sugar were lifted in 1992, these were replaced with tariff quotas under the minimum access volume (MAV). This allowed the importation of raw and refined sugar within the MAV at 50% in-quota tariffs in 1996. Volumes of imported refined sugar beyond the MAV are levied a higher tariff rate of 100% in 1996. This declined to 80% in 1997 and to 65% in 1999.

The Philippine Exporters Confederation, Inc (1998) Study on the sugar industry highlighted its oligopolistic structure. The industry was controlled by the "integrated sugar magnates" which controlled milling, refining, and marketing. The combined outputs of the top seven producers represented about 38

percent of the total raw sugar production, 40 percent of the total milled sugar, and 70 percent of the total refined sugar. The study noted that the oligopolistic structure of the industry led to the high cost of domestic sugar. This resulted in the reduced competitiveness of industries such as food processing that use large quantities of sugar for their products.

In terms of performance, output and industry productivity have declined. Borrel et al (1994) noted that the industry's costs of production are higher than Thailand, Australia, Brazil, or South Africa. Investments in new technology are limited to only a few firms. In 1991-92, the average recovery rate of Philippine mills was 78% while in Australia the average was 92%. To improve recovery rates, the country's sugar mills need to be upgraded.

Because of the declining sugar production in the country, the Philippines has been a net importer of sugar such that every year the MAV has to be raised. In 1999, the Philippines imported 500,000 metric tons of sugar. In 1998, domestic prices of sugar in the country skyrocketed despite a worldwide sugar glut because of delays in importation and the milling process. Tolentino (1999) indicated that the domestic price of sugar exceeded international levels continuously since the mid-1980s with the gap between domestic and international prices rising during the years under review. Despite the worldwide glut in sugar, Filipino consumers never got to enjoy low sugar prices as they continued to pay high prices due to the heavy protection provided by the government to the industry. Domestic food processors and beverage companies have been clamoring for the reduction of sugar tariffs.

The present quedan system and the Sugar Regulatory Administration's powers of market classification remain as barriers to effective competition in the industry. The sugar sharing system poses a disincentive for producers to make the necessary investments which would lead to the uptake of the best technology and practices to increase productivity and lower costs. Under the quedan system, which provides cane growers and millers equal access to premium markets, producers are penalized for increasing productivity and output. In the absence of effective competition, there is very little incentive for firms to modernize and improve their efficiency.

15. Poultry and Chicken

The poultry and chicken subsector together with the livestock industry that includes other animals are the main sources of meat and eggs in the economy. The poultry subsector is dominated by five major integrators that control almost 80 percent of the chicken supply in the Philippines, with the remaining 20 percent supplied by other commercial farms and backyard raisers. The five biggest firms consist of Swift Foods, Vitarich Corporation, San Miguel Foods, Purefoods, and Tyson's Agroventures. The San Miguel Group owns both San Miguel Foods and Purefoods.

Tariff quotas under the minimum access volume (MAV) are imposed on poultry and chicken. The MAVs are set by the Department of Agriculture (DA) in consultation with the domestic industry. The DA is also responsible for allocating the MAV as well as the issuance of MAV certificates. From 1998 to 2001, the in-quota rate was 45% while the out-quota rate was 60% (in 1998, it was 80%). Beginning in 2003, the in and out quota rates imposed on chicken (fresh, chilled, or frozen) imports have been reduced to a uniform rate of 40 percent. However, an additional duty of 15 percent under Republic Act 8800 or the Safeguard Measures Act has been imposed on out-quota imports.

In the last quarter of 2003, the price of dressed chicken started to go up from a monthly average of P85.80 per kilo in September to P89.43 per kilo in October. Chicken prices further went up to P95.48 in November, P107.2 in December and P113.22 in January 2004. In December 2003, prices soared to unheard of levels of P140-150 per kilo. Prices, however, dropped to P92.81 in February and to P85.32 in March 2004 as a result of the bird flu outbreak that hit Asia. With the government announcement that Philippine chicken was safe, in May, prices again started to increase.

Newspaper reports expressed concerns on what was perceived as price manipulation and cartel behavior among chicken raisers. The DA pointed out that the rising chicken prices were not due to a supply shortage but to the high prices of corn, a major ingredient in feed production. The storms badly affected corn production during the second and third quarters of 2003 and this was aggravated by the failure of NFA to import corn during the period. The DA decided to allow the importation of 10 million kilos of chicken in order to ease the shortage and temporarily suspended the imposition of the 15% special safeguard measure duty. In early March, it also approved the tariff-free importation of 350,000 metric tons of yellow corn.

The local poultry raisers did not welcome the DA's move to import chicken and complained that they were not consulted by the DA in setting these import volumes. The United Broiler Raisers Association, meanwhile, pointed at the wet markets as the sources of the price increases. The Philippine Association of Broiler Integrators, Inc. indicated that their price increases were indeed due to the rising price of feeds. When feed prices are high, broiler integrators would rather kill young chicks.

16. Bananas and Pineapples

Bananas and pineapples are export-oriented industries grown in Mindanao and largely produced by multinational corporations (MNCs). MNCs used to engage in direct growing through their own subsidiary plantations, but, with the implementation of the Comprehensive Agrarian Reform Law (CARL); almost all plantations have been managed by cooperatives of agrarian reform beneficiaries under contract agreements with MNCs. New schemes such as contract growing, joint venture, and leaseback agreements evolved. In growership arrangements, the grower or agent provides land and labor

as his counterpart and shares expenses with the principal. The price of the output will depend on the arrangements on inputs. A price review is carried out every two years or if raw materials price increase by 5%. In leaseback contracts, agents are hired as employees of contractors who paid them rental fees and shoulder all expenses incurred in pineapple production and marketing.

In a study of contractual arrangements in bananas and pineapples, Digal (2007) indicated that contractors like Dole and Del Monte operate in industries dominated by few export-oriented firms. Each exporter has its own cooperatives or farmers' associations that supply fresh bananas. Each firm has its own brand and support facilities. In the banana industry, the major exporters are Lapanday with a market share of 25%, Del Monte with 20%, and Dole Stanfilco, Marsman-Drysdale and others which account for the remaining share of 55%. In the pineapple industry, the major exporters are Del Monte, Dole, and Tiboli Agricultural Development Corporation.

Digal noted that with only a few buyers for the export market, these buyers may have the tendency to exercise market power in the input or output markets. He identified certain issues that he noted may indicate exercise of market power: low lease rental, limited access to alternative sources of credit aside from the contractor, asset specificity that obliges growers to deal with former owners of the land, limited market access, and information asymmetry particularly on output prices and quality of inputs provided by contractors. He also noted that with the growers' increasing access to markets and information and with a growing number of farmers who explore direct exporting, their bargaining power with contractors is expected to improve.

B. Services

17. Banking

Initial studies on the impact of the financial reforms on competition and efficiency in the banking sector found some modest effects. Montinola and Moreno (2001) indicated that the small impact of the reforms on competition and efficiency was due to the limited scope of liberalization. Manzano and Neri (2001) concluded that the macroeconomic policy pursued by the government masked the competitive pressure that foreign banks would have exerted on the local banking industry. In another paper by Milo (2001), the analysis showed that while the concentration ratios in the banking sector fell, there was no significant effect on bank spreads.

More recent research suggests that on the overall, the financial reforms have led to an overall decline in market power in the financial sector. Using an econometric model assessing the impact of financial reforms on competition in the banking sector, Pasadilla and Milo (2004) found that firms were behaving competitively with the entry of foreign and domestic banks increasing banking competition. In a study by Manlangit and Lamberte (2004), the results showed that small banks seemed to be more profit

and cost efficient than large banks. They also found that foreign banks were more profit and cost efficient than domestic banks with the gap between domestic and foreign banks declining after the reforms.

18. Electricity

Republic Act 7648 was legislated in 1993 to enable the government to expedite independent power producers (IPP) contracts for the construction, rehabilitation, improvement, and maintenance of power projects. The participation of private investors in the generation sector started in 1988 when the National Power Corporation (NPC) signed its first build-operate-transfer (BOT) contract with Hopewell Energy Management of Hong Kong for the construction of two 110-megawatt turbine power plants in Luzon. To generate additional capacity, the NPC contracted with several IPPs through BOT and related schemes. The contracts that were initially awarded through negotiation but later through bidding procedures. The World Bank (2000) described the standard NPC contract as an energy conversion agreement, under which NPC purchases all fuel and pays the generator for converting it into electricity at a predetermined heat rate.

Between 1993 and 1998, the generation sector evolved from a monopoly to a monopsony of NPC to a de facto deregulated sector in which private power producers can sell electricity to distributors and large industrial users. In 1998, the total generating capacity was 11,988 megawatts distributed as follows: 8,619 megawatts in Luzon, 1,554 megawatts in the Visayas, 1,552 megawatts in Mindanao, and 263 megawatts scattered throughout the country belonging to small island grid. NPC accounted for about 54 percent of the total installed generating capacity while independent power producers contracted by NPC generated the rest. In addition, a total of 518 megawatts of privately owned installed generation capacity served distributors.

Competition was still limited even with the IPP scheme. What transpired in the sector was another form of public procurement with the IPPs becoming a contractor to the existing monopoly, NPC, for a set of specialized services. The contracts allowed a generous off-take (take-or-pay) where NPC agreed to purchase power from IPPs regardless of the required level of dispatch. NPC management locked the company into multi-year power purchase agreements which were at least 25 percent more expensive than its own generated power and which must be paid 75-80 percent even if it chose not to actually get the electricity (Tuano, 2001).

In the absence of clear rules and appropriate regulatory framework during that time, negotiated deals were carried out by NPC and the private contractors. Under these circumstances, the deals negotiated unduly favored investors while NPC became a monoposonist in the market for capacity and energy. To protect their investments, the private investors focused on obtaining satisfactory power purchase contracts and looked to the government to underwrite the risks. Given the lack of credible rules

or operating experience with pricing regimes in the Philippines, the procurement of private generation capacity became possible only with the government assuming all risks with respect to prices and quantities. The IPP received a physical quantity of fuel from NPC and then converted this to kilowatt hours for a processing fee, taking no risks with respect to either input or output prices. The government has borne virtually all risks except construction costs and some risks associated with the efficiency of operation and availability.

RA 9136 or the Electric Power Industry Reform Act (EPIRA) was legislated in June 2001 to accelerate the total electrification by restructuring the industry to separate the natural monopolies from the potentially competitive parts. Generation and supply would be competitive and open while transmission and distribution segments would be regulated. This would privatize the NPC's remaining power facilities and transmission system and create a wholesale spot market for bulk power.

Llanto and Patalinghug (2004) indicated some weakness in the competition-related provisions of the EPIRA. They pointed out that the cross-ownership stipulation allowing a company to operate or control 30 percent of the installed generating capacity of a grid and/or 25 percent of the national installed generating capacity might lead to access problems and conflict of interest. This stipulation allows a distribution company to enter into supply contracts with its generation subsidiaries. The classic example is the case of MERALCO's supply contracts with Lopez-owned power plants. They suggested the prohibition of cross ownership across monopolistic and competitive segments of the production process.

The case of the Philippine electric power industry has shown that deregulation is not a trivial process and designing an effective regulatory framework and enforcing it is not easy. The absence of clear rules and an appropriate regulatory framework in the early stage of deregulation led to discretionary decision making which resulted in high long-term costs and a societal backlash. More needs to be done particularly in terms of ensuring competition in the industry. Access rules for transmission and distribution (who will be dispatched, in what order, and when) as well as a pricing system (price caps or rate of return minus adjustments for efficiency changes) that would allow consumers to share in efficiency gains are still in need of attention. The Philippines is currently in the process of shifting towards price cap regulation for retail tariffs of all distribution utilities. The regulatory approach for distribution retail tariffs are still based on the rate of return regulation principle with assets revalued on a replacement cost basis. The rate of return base cannot be greater than 12 percent.

19. Water

In 1997, the government privatized water supply and sanitation systems in Metro Manila by granting concessions to bill and collect for water and sewerage services for 25 years to the Ayala-led Manila Water Company, Inc. (MWCI) and Maynilad Water Services Inc. (MWSI) of the Lopezes. In

return, the concessionaires would be responsible for the expansion and improvement of water and sewerage services and would assume payment of the loans incurred by MWSS to develop water resources as concession fees. The MWSS service area was divided into two zones for benchmarking and competition purposes (Santos, 2003). The east zone was awarded to MWCI while the west was given to MWSI. The Metro Manila Water and Sewerage System (MWSS) Regulatory Office was created to monitor and enforce compliance with contract terms. The Regulatory Office was under the jurisdiction of the MWSS Board of Trustees whose chairman and members are appointed by the President.

Four companies submitted bids for the east and west water concessions. In both zones, MWCI won because of its very low base price bid of P2.32 per cubic meter versus MWSI's P4.96 per cubic meter¹³. These were both way below the MWSS base price of P8.78 per cubic meter and even lower than the P5.36 per cubic meter which MWSS charged its customers in 1991. MWSS requested technical assistance from the International Finance Corporation (IFC) in assessing MWCI's bid which some people thought was unsustainable and a stray one. The IFC believed that the MWCI bid was attainable but it expressed concern over the company's access to debt financing, considering that cash flow would be negative in the first ten years of its operation.

Five years after privatization, water service performance in Metro Manila improved considerably. Water availability increased from 17 hours/day in 1996 to 21 hours/day in 2002; water coverage as percentage of population rose from 67% to 79% during the same years; staff/1000 connections fell from 9 to 4 while non revenue water (remained high) but declined from 62 to 61 between 1996 and 2002 (Santos, 2003). Water quality also improved.

Although the MWSS Regulatory Office lacks independence the way it has been set up, Fabella (2006) commended it for properly regulating water service in Metro Manila. The RO applies a price cap mechanism in regulating the two concessionaires. Effectively, the bid base price served as cap on the final tariff that the two concessionaires could charge. In addition, the two firms face a cap on the rate of return, which was set at 12 percent. The price cap could be changed through the extra-ordinary price adjustment (EPA)¹⁴ and rate rebasing process. Yardstick competition is also used by the MWSS-RO in evaluating the cost and efficiency of the two firms. As Fabella (2006) noted, based on an analysis of their performance data, there was no collusion found between the two. He also indicated that benchmark competition greatly empowered the RO in its role as guardian of public interest in privatization and regulation.

Immediately after the privatization of the MWSS, prices dropped from P8.78 per cubic meter to P2.32 per cubic meter in the east service area and to P4.96 per cubic meter in the west service area. After

¹³ This draws from Solon and Pamintuan, 2000, "Opportunities and Risks in the Privatization –Regulation of the MWSS" in Philippine Review of Economics, Vol. XXXVII, No.1, UP School of Economics and PES.

¹⁴ This comes every ten years unless the MWSS-RO allows for an early rebasing after 5 years.

less than a year, the two concessionaires filed for EPA increases in 1998 due to the 52 percent increase in the peso-dollar exchange rate and the occurrence of the El Nino phenomenon. Having aggressively bid to win the concession, the impact of the Asian financial crisis was heavier on MWCI. The latter requested to raise its base price to P5.55 while MWSI requested P5.70. In October 2001, the contracts between MWSS and the two concessionaires were amended to allow both firms to double their base rates in 2002. This was intended to help MWCI and MWSI cope with the impact of the financial crisis on their costs as well as on the costs of servicing the debt that they agreed to inherit from MWSS. This also paved the way for the firms to revise the concession targets leading to further rate increases beginning in 2003 under the rate rebasing process. The amendment allowed the rate rebasing exercise to take place every five years.

Towards the end of 2002, MWSI announced its decision to terminate the concession agreement because of massive financial losses and failure to pay its loan payments, also called concession fees. Despite two hefty rate increases in 2001 and 2002, it failed to meet its concession targets and its water losses from leaks and theft continued to go up. While MWCI does not face the same financial difficulties due to mismanagement and inefficiency, it has also underperformed the targets that it made when it submitted and won the bid.

In 2003, a Paris-based arbitration panel ordered MWSI to pay the government about P8 billion in overdue concession payments. MWSI in turn petitioned the regional court for debt relief and corporate rehabilitation. In March 2004, the government decided to take over the west concession area with the MWSS controlling the company. In December 2006, Metro Pacific and DMCI won the right to jointly operate MWSI in a government auction.

In the provincial urban areas, the Subic Water and Sewerage was granted, through a competitive bidding, a 25-year exclusive right to provide water supply services within the urban areas of the Subic Bay Metropolitan Authority, Olongapo, and Subic. In the rest of the country, Llanto noted the absence of an able and independent regulator that will regulate water prices and quality. Currently, the Local Water Utilities Administration (LWUA) regulates the water districts while local governments regulate provincial or municipal-based water utilities. The National Water Resource Board (NWRB) regulates and controls the operation of utilities outside the jurisdiction of the MWSS, LWUA, and the local governments.

20. Airlines

The deregulation in 1995 allowed the entry of new airlines such as Cebu Pacific, Air Philippines, Grand Airways, Asian Spirit, and Mindanao Express, in the industry which was dominated by Philippine Airlines for 22 years. Cebu Pacific operates regional flights to Hong Kong and South Korea. Air Philippines, an affiliate of PAL, concentrates on the domestic market but mounts charter flights to Brunei and Indonesia. Asian Spirit concentrates on tertiary routes. With the demise of Grand Airways and

Mindanao Express, three airlines (PAL, Cebu Pacific, Air Philippines) are competing in the major markets while Asian Spirit and SEAir (which entered in 2002) serve short-distance routes.

The reforms led to greater competition on the major routes and domestic travel grew rapidly after deregulation (Austria, 2002). Competition arising from promotional and discount fares continues to open the air industry to travelers who could not afford to travel by air prior to deregulation. Competition has intensified resulting in lower airfare, improved quality of service and overall efficiency in the industry. Foreign investment in the industry is allowed, however participation is limited to 40%.

Table 10 below shows a decline in PAL's market share, although it still remains the dominant player. The four-firm concentration ratio indicates that the industry is an oligopoly with two dominant players, PAL and Cebu Pacific. HHI in the industry has remained high due to the dominance of PAL in most routes and near duopoly in markets served by both PAL and Cebu Pacific (Manuela, 2007). Note also that major routes are more concentrated than industry while minor routes are about twice as concentrated. Major routes are virtual duopolies while minor routes are monopolies.

Table 10: Concentration in the Philippine Airlines Industry, 1999-2003

Airline	1999	2000	2001	2002	2003
PAL	40	50	54	52	53
Cebu Pacific	29	28	36	30	30
Air Philippines	26	17	16	12	13
Asian Spirit	5	5	4	4	3
SEAir	-	-	-	2	1
CR4	100	100	100	98	99
HHI domestic industry	3517	3928	3758	3731	3598
HHI major routes	3623	4025	3892	3809	3785
HHI minor routes	4021	8174	7585	9029	6370

Source: Civil Aeronautics Board as cited in W. Manuela, 2007.

Currently, trade in air services occurs through a common regulatory framework of bilateral air services agreement (ASAs) between pairs of countries where two countries agree to exchange air rights that would provide their respective carriers equal access to each other's market. The ASAs determine the countries' carriers, capacities and frequencies (in terms of number of flights and number of seats that a designated carrier can operate) for a particular route. The Philippines has 57 ASAs, 22 of which are considered active (Forsyth et al, 2004). Local carriers like PAL continue to oppose accelerated liberalization of air traffic rights as this would prejudice the operations of the local industry with foreign airlines competing more aggressively by offering lower rates (Batino,2004).

PAL is still the country's uncontested flag carrier in both domestic and international routes. After the Asian financial crisis, PAL was declared bankrupt and forced into rehabilitation. Austria (2002)

noted that the absence of competition in the international routes has resulted in PAL's poor performance and growth. PAL is unable to use all the entitlements in the country's ASAs. It used only 61 percent of the country's traffic rights per week compared to 81 percent by foreign airlines. In nine countries, PAL failed to use any of the country's entitlements.

The limited competition in international air services resulted in reduced passenger traffic, tourists and tourist receipts. For instance, when the Philippines abrogated the RP-Taiwan ASA in 1999, the number of arrivals from Taiwan dropped from 182,914 to only 91,650. This was very costly for the country; as Lim (2004) estimated, the abrogation resulted in foregone losses of 900,000 incoming seats from Taiwan and US\$50 million in terms of tourist spending. Lim also pointed out that the Middle East market, where 1.2 million OFWs are based, was underserved with only 34 flights weekly. In contrast, Asia, where 0.9 million OFWs are located; had 320 flights. The UAE requested more flight frequency from the government but failed. PAL and Gulf Air (designated carrier of UAE) also have a code-share service¹⁵ between Manila and Abu Dhabi. Gulf Air also requested that the second code-shared frequency on the route from Abu Dhabi to Manila and vice versa be regularized. While the Department of Transportation and Communications was in favor of the request, for unknown reasons the Civil Aeronautics Board did not approve the application. PAL also opposed the said request.

In terms of infrastructure, the Ninoy Aquino International Airport handles 95% of international traffic and the airport is constrained by the lack of facilities for transit and transfer of passengers. Secondary gateways like Cebu and Subic are underutilized while investments are needed for expansion in Clark (Forsyth et al, 2004). The opening of Terminal 3 has been delayed due to the Supreme Court decision to nullify the concession contracts.

In a paper on state aid and subsidies, Aldaba (2005c) identified certain special favors that PAL receives from the government which may distort competition since rival airlines are not provided with the same treatment. PAL's franchise to establish, operate, and maintain air transport service in the Philippines and other countries was legislated on June 11, 1978 through Presidential Decree (PD) 1590. The same law allowed the government to own, control, and manage PAL and provided a franchise term of fifty years. The same law has provided very generous incentives to PAL through exemption from the payment of taxes, duties fees, and other charges. Even after PAL's privatization and abandonment of its missionary routes, it has continued to enjoy fiscal incentives such as exemption from the payment of taxes, duties fees, and other charges as well as unconditional guarantees to the payment of all the principal and interest,

¹⁵ Code-sharing allows new and existing carriers to access markets or expand networks without incurring expenses associated with actually operating an aircraft. It promotes competition among carriers on thin markets which cannot support many carriers. For the operating carrier, operating costs can be reduced since the non-operating carrier shares in marketing and selling seats resulting in revenues increases (Forsyth et al, 2004).

fees, and other charges on its foreign loans and other evidences of indebtedness. PAL has used PD 1590 as justification for its non-payment of these fees.

PAL has exclusive use of an airport originally intended to serve as the country's domestic terminal. PAL is the only airline that uses the airport facility while other airlines are excluded and this is viewed as providing an advantage to PAL. PAL's non-payment of take-off and landing fees is also discriminatory. Other domestic competitors of PAL like Cebu Pacific have been diligently paying their dues to the Air Transportation Office (ATO). In the case of payment of franchise tax, an uneven structure in favor of PAL also exists. While PAL pays a franchise tax of 2 percent of gross revenues, new domestic players such as Cebu Pacific must pay a higher rate of 5 percent. Moreover, while PAL has an option to pay either the basic corporate income tax on its annual net taxable income or a franchise tax of 2 percent, all the other firms must pay both taxes.

The Civil Aeronautics Board (CAB) is the government agency mandated to promote adequate, economic and efficient service at reasonable charges without unjust discrimination, undue preferences or advantages, or unfair or destructive competitive practices. However, the absence of clear competition law and policy in the sector (and in the country in general) and the prevailing institutional weaknesses in enforcing rules and regulations have left competition, particularly in international aviation wanting while the agency has remained susceptible to regulatory capture. One of the CAB commissioners, who is a known advocate of open skies policy, was removed from office and replaced by a person with close personal links to PAL's owner billionaire Lucio Tan.

21. Shipping

The reforms have led to increases in the number of ship operators and investments in modern facilities, however, the shipping industry is still dominated by WG& A, the biggest shipping company in the country in terms of both passenger and cargo businesses. It operates 23 vessels nationwide. It was formed in 1995 after the three shipping giants, William Lines, Gothong Shipping Lines, and Aboitiz Transport merged their operations in response to the market deregulation implemented by the government. In 1998, WG&A posted an increase in sales and landed in the top 500 corporations on sales performance in the Philippines.

Aside from WG&A, there are four other players in the industry consisting of Negros Navigation, Sulpicio Lines, Philippine Fast Ferry Corporation, and Cebu Ferries Corporation. These five corporations control around 90 percent of the total number of passengers (Austria, 2003). Negros Navigation and Sulpicio Lines are incumbent players while Philippine Fast Ferry Corporation and Cebu Ferries Corporation were established after the 1995 reforms. Philippine Fast Ferry is a product of the merger of

Universal Aboitiz and Sea Angels Ferry Corporation (a subsidiary of Negros Navigation) in 1998. Cebu Ferries is a new firm established in 1996 as a subsidiary of WG&A.

Austria (2003) noted the weak competition in the industry with only the five players controlling most of the primary routes. Austria also observed that the major players seemed to have divided the market among themselves. As Table 11 shows, about 50 percent of the primary routes only have one operator. Although there are at least two operators in the remaining 50 percent, this has not resulted in effective competition. Out of 26 routes with at least two operators, substantial competition exists only in seven routes, five routes are monopolized and mild competition in the remaining routes. For the secondary and the tertiary routes, almost 59 percent and 78 percent of the routes has been monopolized, respectively.

Table11: Competition in Passenger Travel, 1998

Route Classification	Primary		Secondary		Tertiary	
	No.	%	No.	%	No.	%
Routes with only 1 operator	26	50	27	58.7	166	77.6
Routes with at least 2 operators	26	50	19	41.3	48	22.4
- Routes with effectively 1 operator	5	9.6	7	15.2	10	4.7
- Routes with substantial competition	7	13.5	6	13	18	8.4
- Routes with mild competition	14	26.9	6	13	20	9.3
Total Number of Routes	52		46		214	

Source: Austria (2003)

WG&A, Sulpicio Lines, and Negros Navigation are also top players in the cargo service sub-sector. Together with Lorenzo Shipping and Solid Shipping (purely engaged in cargo services), they account for about 91 percent of the total revenue of the cargo service sub-sector. As in passenger services, Austria (2003) indicated that these five firms control the cargo services market in both the primary and secondary routes. The Distribution Management of the Philippines complains that these liners operate in a cartel-like fashion (Llanto et al). As Table 12 shows, in routes with atleast two operators, substantial competition existed only in 15% of primary routes, 13% in secondary routes and 7% in tertiary routes.

Table 12: Competition in Cargo, 1998

Route Classification	Primary		Secondary		Tertiary	
	No.	%	No.	%	No.	%
Routes with only 1 operator	25	36.2	16	34.8	444	76.7
Routes with at least 2 operators	44	63.8	30	65.2	135	23.3
- Routes with effectively 1 operator	7	10.1	9	19.6	39	6.7
- Routes with substantial competition	10	14.5	6	13	38	6.5
- Routes with mild competition	27	39.1	15	32.6	58	10
Total Number of Routes	69		46		579	

Source: Austria (2003)

22. Ports

The Philippine Ports Authority is the main developer, operator, and regulator of ports in the country. It supervises 115-owned ports and regulates over 500 private ports. The main common-user ports in the Philippines are all located in Manila. These are the MICT, South Harbor, and North Harbor which are privately operated under long-term concessions. The most important private port is the HCPTI in Manila which operates both as domestic and foreign port. It competes with PPA-owned ports South Harbor and North Harbor.

The current policy, regulatory, and institutional framework of the ports sector seems to hamper competition and make regulation difficult. Its multiple roles as developer, operator, and regulator as well as the highly centralized port ownership and administration have resulted in conflict of functions and interest issues (Llanto et al, 2005). In regulating public ports, PPA performs the following functions:

- develops, owns, maintains, and regulates its ports
- sets and collects port charges such as wharfage dues, berthing/usage fees, and terminal handling costs
- approves increases in cargo handling rates and receives 10% and 20% from cargo handling revenues on domestic and foreign cargo respectively.
- awards contracts to private terminal operators and cargo handling operators. Under such concessions, port charges and cargo handling rates are set by the PPA.

For private ports, PPA's regulatory functions include the issuance of permit to construct and operate the port and approval of increases in cargo handling rates and port charges such as berthing/usage fees and wharfage dues. PPA collects a 50% share from port charges.

Llanto et al (2005) indicated that this set-up has limited competition in the sector and little private participation. It has used its regulatory powers to prevent competition in foreign containerized cargoes between Harbor Centre, a private port and its own ports, MICT and South Harbor. PPA's charter must be amended to separate its regulatory responsibilities from its development and operations functions. There is also a need to provide transparent rules and guidelines for the grant or extension of cargo handling contracts. The authors also suggested that PPA should lease its port facilities to operators instead of collecting a percentage of revenues and to encourage competition in cargo handling by allowing more than one operator.

In a separate study on ports by the PDP Australia/Meyrick and Associates (2005), it was noted that the main terminals in Manila have always been competitive. However, with facilities being developed in an ad hoc fashion, there is a tendency for industry fragmentation which might be potentially damaging. The development of the Harbor Centre Terminal just north of Manila's main terminals seems to be making one of the existing terminals less than profitable. While it is undeniably increasing competition in the short-term, this may not be sustainable in the longer term.

23. Telecommunications

For more than half a century, the country's telecommunications sector was dominated by a private monopoly, the Philippine Long Distance Company (PLDT). During this period, the sector was in a dismal state as indicated by the long waiting time to own a telephone which at worst took more than ten years. There was a huge telephone backlog and underinvestment in the sector. Service was generally not available and where it was, the quality of service was unreliable.

Since 1987, the Philippines has implemented a series of policy reforms aimed at deregulating the industry. Competition was delayed as PLDT strongly opposed the entry of new players and engaged in legal battles against them. The reform process was slow and accelerated only with the issuance of more substantial policy changes in 1993. These reforms defined the administrative and regulatory framework governing the liberalization of the industry. The National Telecommunications Commission (NTC) was designated as the government agency responsible for regulating the industry and ensuring that carriers do not engage in unfair trade practices. The reforms also mandated the compulsory interconnection of authorized public telecommunications carriers and designed the SAS (Service Area Scheme) which required international gateway facility (IGF) operators and CMTS (cellular mobile telephone service) licensees to provide local exchange carrier service in unserved or underserved areas in return for the authorizations granted. However, the geographical divisions that SAS imposed ignored the economies of scale characterizing the industry and has led to the wasteful duplication of networks. SAS also maintained a large number of the advantages enjoyed by the incumbent. The high access charge also limited the capability of new players to compete against PLDT.

After more than ten years of opening up the telecommunications sector, our experience shows that liberalization has provided significant benefits to the economy. It allowed the entry of new players resulting in rapid growth of the network, increases in foreign investment, access to technology and opportunities for companies to improve efficiency, and the emergence of new services. There are 73 local exchange carriers, 11 international gateway facilities, 7 cellular mobile telephone service carriers, 14 inter-carriers, and 388 value-added service providers. Teledensity increased from less than 1 per 100 persons in 1990 to 7.8 in 2005 while mobile subscription went up from 500,000 in 1995 to 40 million in 2006. While the cost of mobile services has declined, the cost of fixed line whether for residential or business actually increased (Salazar, 2007). Computer and internet penetration still remains low.

The market has remained highly concentrated, PLDT continues to control 60% of the total fixed line subscribers. Digitel follows with a share of 12%, next is Innove (Globe and Islacom) with a share of 9.8%, and Bayantel with 6.7%. PLDT's Smart and Piltel dominate the cellular market with their share of 59%. Globe has a market share of 36% while newcomer Sun has 5%. Salazar's HHI calculations showed

that in the fixed line market, HHI declined from 4300 in 2000 to 4000 in 2005. In the cellular market, it went up from 3660 in 1980 to 4760 in 1985.

Due to its ownership of the backbone network and its dominant position in the sector as it accounts for the largest share in the total number of fixed lines and mobile phone subscribers, PLDT has retained its market power. As Abrenica (2000) noted, the biggest challenge for NTC is how to prevent PLDT, which owns and controls the bottleneck facility (the local loop), from discriminating in favor of itself.

The combination of a weak regulatory authority, vague interconnection or access rules and pricing, and a large, dominant carrier capable of exercising monopoly power over access to its network has prevented true competition from taking place. As PLDT has the most extensive network, it was able to influence not only the speed and the terms and conditions for interconnection but the terms and conditions for revenue-sharing arrangements as well. This resulted in the slow progress of interconnection, difficulties of new entrants in getting interconnection and problems in drawing up satisfactory revenue sharing arrangements with PLDT.

Aside from the interconnection problem, another issue was the reconcentration that took place in the industry. The government-backed PLDT-First Pacific merger has bolstered PLDT's control of the industry. Note that First Pacific's cellular phone company Smart is the leader in the cellular phone market. With the merger of the dominant firms in the fixed and mobile markets, the dangers of the return to monopoly abuse and reduction in competition have been raised. While the existing legislation has defined the provisions on anti-competitive behavior, its implementing rules and regulations is mute on mergers and vertical integration.

Though NTC has been criticized as weak and lacking independence and capacity, its decision to allow Sun Cellular to continue its 24/7 promo and its ruling in 2005 on VOIP as a value-added service showed that the regulator can act to protect public interest and the competition process. After the VOIP ruling, telephone companies responded by bringing down the cost of IDD calls as a pre-emptive move against VOIP providers. After the NTC ruling in favor of Sun, Smart and Globe also offered the same service (see Salazar, 2007). The NTC is presently working on an interconnection template to hasten the interconnection process.

24. Wholesale and Retail Trade

Wholesale and retail trade is the biggest services sub-sector in terms of output. The largest number of retailers are found in drugs and pharmaceuticals, textiles, clothing, household appliances, groceries, supermarkets, and department stores. Among wholesalers, the largest number of establishments are in the resale of auto fuel for motor vehicles and motorcycles. In terms of revenue, the share of retailers

in food, beverage, tobacco, as well as in textiles and garments accounted for around 60% of total retail sales. Wholesalers engaged in commodity and auction, sale of agricultural raw materials, live animals, food and beverages, and non-agricultural inputs comprised the bulk of total sales.

Duenas-Caparas (2005) analyzed the state of competition in two retail sub-sectors: supermarkets, groceries and department stores and pharmaceutical drugs. She found low concentration ratios in supermarkets, groceries and department stores. The four-firm concentration ratio calculations showed that for supermarkets, the ratio declined from 10.3% in 1998 to 9.4% in 1999 due to the increase in the number of players. Price cost margins also fell from 21% in 1988 to 12% in 1994. For department stores, the four firm concentration ratio also declined from 10.5% in 1998 to 8.4% in 1999. Note that the calculated concentration ratios do not seem to reflect the dominant shares of the two large players, SM and Robinson's. It would be useful here to calculate concentration ratios based on geographic markets. The author indicated that while the two dominate the sector, they seemed to behave competitively. Interviews with industry participants reveal that SM does not allow Mercury Drug in its malls because of it would compete with Watson's which SM owns.

However, in the case of pharmaceutical drugs, the four-firm concentration ratio was high although there was a slight reduction from 96% in 1998 to 91% in 1999. More than 80% of the market was accounted for by only one firm, Mercury Drug. Mercury Drug has enjoyed strategic advantages such as economies of scale and scope, goodwill and loyalty of customers, untainted image of updated products and hygiene, and an efficient network with suppliers. It would also be useful to calculate concentration ratios here based on geographic markets. In Cebu, for instance, Rose Pharmacy is apparently the leader.

V. Interplay of Market Structure, Competition, and Barriers to Entry

The foregoing review of studies on the impact of reforms on competition and market structure has covered twenty-four manufacturing, industry, and services sectors. Table 13 presents a summary of the findings on the prevailing market structure, existing barriers to entry, and the impact of these barriers on competition particularly on prices. Barriers to entry are divided into three categories: regulatory, structural, and behavioral.

Agriculture

In agriculture, import trading is a monopoly of the NFA while domestic trading is highly oligopolistic. Regulatory barriers and traditional government regulations and price controls are prevalent. Government-induced barriers to imports such as import restrictions and tariff quotas in rice and other agriculture crops like corn, sugar, coffee, poultry and swine and related food manufactures such as processed meat products continue to be significant. The presence of import barriers in agriculture

Table 13: Market Structure, Barriers to Entry, and Competition

Economic Sectors	Market Structure	Government Regulator	Barriers to entry		Impact on competition, input/output prices	Studies
			Structural & regulatory	Behavioral		
Agriculture						
Rice	Importation: Monopoly	NFA	Import license			AGILE (2000); Intal and Garcia (2005); Reeder (2000); Mendoza and Rosegrant (1995)
	Trading: Oligopoly			Cartel	High prices	
Corn	Importation: Monopoly Trading: Oligopoly	NFA	Import license	Cartel	High prices	
Sugar	Oligopoly	SRA	Tariff quota	Cartel	High prices	Borrel et al (1994), Philexport (1998), Tolentino (1999)
Poultry & chicken			Tariff quota			
Bananas (for export)	Oligopsony			Abuse of market power	Low prices Low lease rentals	Digal (2007)
Pineapples (for export)	Oligopsony			Abuse of market power	Low prices Low lease rentals	
Manufacturing						Aldaba (2007, 2005, 2003 and 2002a); L. de Dios (1993); Imbat & Tanlapco (1993), E. de Dios (1986); Lindsey (1977)
Motorcycles & parts	Oligopoly		Large capital requirements Economies of scale			Pineda (1994)

Table 13: Market Structure, Barriers to Entry, and Competition

Meat & dairy processing	Oligopoly		Tariff quotas: live swine Large capital requirements Product differentiation Sunk costs			L. de Dios (1994a)
Appliance	Oligopoly		Large capital requirements Product differentiation Economies of scale Technology acquisition Access to distribution channels			Lapid (1994)
Packaging (glass-based)	Oligopoly		Large capital requirements Economies of scale			Medillo (1994)
Flat glass	Monopoly		Safeguard measure; Large capital requirements Skill intensive Economies of scale			Medillo (1994)
Synthetic resin	Oligopoly		Large capital requirements Economies of scale			Banzon (1994)
Agricultural machinery	Competitive					Trabajo (1994)
Shipbuilding & repair	Oligopoly		Large capital requirements Technology acquisition			Mendoza (1994)
Automotive	Oligopoly		Large capital requirements Economies of scale Strong parts supply base			Aldaba (1997, 2000b, 2008b)

Table 13: Market Structure, Barriers to Entry, and Competition

Downstream oil	Oligopoly	DOJ-DOE task force to oversee competition	Large capital requirements Extensive retail network	Cartel	High prices	Salas (2002); Galang & Solleza (2001); Cabalu et al (2001); Fabella & Aldaba (2004)
Pharmaceutical drugs	Oligopoly Monopoly for patent holders	BFAD regulates entry	License & registration Patents Intellectual Property Law Intensive advertising	Cartel Gift giving practices by drug firms to promote expensive drugs to physicians & pharmacists	High prices	Lecciones (2004) Lao (1999)
Cement	Oligopoly		Large capital requirements	Cartel	High prices	Aldaba (2007, 2002b), Lamberte, E. de Dios et al (1992)
Services						
Electricity	Generation: NPC, IPPs	ERC	regulatory capacity & independence of ERC			Llanto & Patalinghug (2004); Fabella & Aldaba (2004); Tuano (2001)
	Transmission: TRANSCO Monopoly	ERC	Same			
	Distribution: MERALCO Monopoly	ERC	Same	Abuse of market Power, cross-ownership of distribution and generation firms	High prices	
Water	Monopoly	MWSS-RO	Independence of RO			Fabella (2006); Santos (2003); Llanto (2002); Solon & Pamintuan (2000)
Wholesale & Retail						Duenas-Caparas (2005)

Table 13: Market Structure, Barriers to Entry, and Competition

Department stores & Supermarkets	Competitive: SM & Robinson's are the 2 biggest players					
Drug stores	Oligopoly: Mercury Drug is the dominant player		Economies of scale & scope Customer goodwill & loyalty Supplier network		High prices	
Telecommunications	Oligopoly	NTC	Congressional Franchise Network industry Regulatory capacity & independence of NTC	PLDT delaying interconnection PLDT & Smart merger	High prices in fixed line	Llanto & Patalinghug (2004); Salazar (2007); Abrenica (2000); Aldaba (2000a); Serafica (1998a & b)
Ports	Monopoly	PPA	Complex policy, regulatory, & institutional framework Conflicting roles of PPA		High shipping costs	Llanto, E. Basilio, & L. Basilio (2005); PDP Australia/Meyrick and Associates (2005)
Water Transport	Oligopoly	MARINA	Cabotage law Regulatory capacity & independence of MARINA	Mergers; cartel & market sharing	High shipping costs	Austria (2003); Llanto, E. Basilio and L. Basilio (2005)
Air Transport	Oligopoly Major routes: Duopoly Minor routes: Monopoly	CAB	Congressional Franchise Cabotage law Subsidies given only to PAL Regulatory capacity & independence of CAB	Mergers; regulatory capture		Austria (2002); Forsyth et al (2004); Aldaba (2005c); Lim (2004)

Table 13: Market Structure, Barriers to Entry, and Competition

Banking Institutions	Oligopoly: competitive behavior	BSP				Pasadilla & Milo (2004); Milo (2001); Manzano & Neri (2001); Montinola & Moreno (2001) Lamberte, M. & C. Manlangit (2005)
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continues to adversely affect the competitiveness of food manufactures that use agriculture inputs such as sugar and other crops including livestock products.

To encourage competition, the government should contemplate the removal of these trade and regulatory barriers. This would entail the removal of quantitative restrictions on rice and replacing these with high tariffs as well as the removal of tariff quotas under the Minimum Access Volumes and replacing these with single tariffs. A reassessment of the roles of the National Food Authority and Sugar Regulatory Administration is also needed in the light of new market realities.

With respect to behavioral barriers to competition, cartels among rice and corn traders are often cited as the source of low farm and high retail prices. However, the econometric studies carried out by Reeder (2000) and Mendoza and Rosegrant (1995) in rice and corn, respectively failed to confirm the presence of market power and price manipulations by traders in these sectors. The authors pointed out to the need to create the necessary transportation and infrastructures in order to address the imperfect nature of markets in these sectors, improve farmers' access to market information, and enhance competition.

In sugar, an oligopolistic market structure has also evolved. A cartel operated by the "integrated sugar magnates" which controlled milling, refining, and marketing is believed to exist. In banana and pineapple exports, the market has been characterized as oligopsonistic. Dominant multinational corporations Dole and Del Monte are perceived to exercise their market power as indicated by the low prices and low lease rentals that they pay. More rigorous studies are needed to substantiate claims of anti-competitive behavior in these sectors.

Manufacturing

In manufacturing, the market structure is also largely oligopolistic. Table 14 presents the four-firm concentration ratios (CR4) in the manufacturing sector for the years 1988, 1994, 1995 and 1998. On the average, the Philippine manufacturing industry has remained highly concentrated increasing from 71 percent in 1988 to around 74 percent in 1994 and 1995 and further to 81 percent in 1998. The CR4 estimates also show that around 65 percent of the manufacturing industry has concentration ratios ranging from 70 to 100 percent. In 1998, this went up to almost 90 percent.

Table 14: Four-firm Concentration Ratios in the Philippine Manufacturing Industry

Sectors	Concentration Ratios				Number of Establishments			
	1988	1994	1995	1998	1988	1994	1995	1998
High (above 70%)								
Petroleum Refineries	100	100	100	99.93	4	4	4	5
Professional and Scientific	100	100	99.97	97.41	14	13	20	80
Tobacco	96.64	99.56	99.41	99.50	25	21	22	21

Nonferrous Metal Products	99.67	99.28	98.57	97.76	35	34	40	35
Glass and Glass Products	96.33	90.58	92.05	95.43	35	53	46	66
Industrial Chemicals	90.14	87.52	84.65	86.49	112	171	197	375
Transport Equipment	80.98	86.2	84.4	77.67	230	264	265	364
Pottery, China and Earthen	92.82	86.05	93.74	d	59	68	61	-
Food Processing	79.51	81.37	81.74	a	915	751	717	-
Iron and Steel	84.18	80.64	70.55	79.43	128	191	201	505
Machinery except Electrical	63.59	77.47	79.43	94.90	556	464	460	888
Petroleum and Coal Products	81.1	77.0	87.4	100	16	14	16	13
Fabricated Metal Products	73.45	74.48	74.32	78.24	469	555	550	975
Other Chemicals	66.37	75.64	69.09	80.92	300	288	295	397
Rubber Products	79.15	73.5	73.66	90.33	137	187	181	136
Other Nonmetallic Mineral	68.92	71.31	74.54	90.03 ^d	353	304	253	701
Paper and Paper Products	78.97	71.23	70.4	78.14	167	215	206	335
Miscellaneous Manufacture	70.87	70.62	76.76	92.77	342	312	309	310
Textiles	64.12	64.14	72.37	72.84	549	537	508	586
Food Manufacturing	63.48	69.74	77.92	86.94 ^a	2003	1879	1798	3919
Beverages	48.19	70.08	63.43	73.51	91	86	88	129
Electrical Machinery	64.8	69.36	63.73	72.42	217	271	310	448
Leather and Leather Products	57.7	63.89	64.02	73.47 ^c	120	84	85	595
Wood and Cork Products	40.5	55.47	65.35	76.32	683	401	354	584
Printing and Publishing	42.13	47.26	51.08	82.08	636	637	636	988
Plastic Products	49.41	40.75	50.87	70.09	300	377	365	490
Moderate (40 to 69%)								
Metal Furniture	80.88	79.49	62.67	b	36	34	35	-
Cement	45.3	48.3	45.37	68.22	17	18	18	20
Leather Footwear	30.33	41.7	55.0	c	425	384	373	-
Furniture	19.51	40.91	41.64	62.54 ^b	678	497	439	68
Low (below 39%)								
Wearing Apparel ex Footwear	34.7	31.69	26.52	23.57	1556	1512	1521	2025
Total Manufacturing	70.88	73.63	73.64	80.55	11208	10726	10373	15674

Source of basic data: National Statistics Office, 1988 and 1994 Census of Establishments and 1995 and 1998 Annual Survey of Establishments. The concentration ratios refer to the ratio of census value added by four largest firms to total in each five-digit PSIC sector. The concentration ratios given above are weighted averages for 3-digit PSIC.

^acombined food manufacturing and food processing; ^bcombined metal furniture and furniture; ^ccombined leather footwear and leather products ; ^dcombined pottery,china and other nonmetallic products See: Aldaba (2007).

Manufacturing sub-sectors with high level of concentration are mostly those producing intermediate and capital goods. In 1995, these included sectors such as petroleum refineries, glass, industrial chemicals, petroleum and coal, rubber, and other nonmetallic mineral. These also included paper and paper products, professional and scientific equipment, nonferrous metal products, transport equipment, iron and steel, machinery except electrical, textiles, other chemicals and fabricated metal products. Consumer goods like tobacco and those of food manufacturing, and food processing firms also belong to the high concentration group.

In 1995, the moderate concentration group (sectors with CR4 ranging from 40 to 69 percent) included beverages, electrical machinery, metal furniture, wood and cork products, cement, printing and

publishing, leather footwear, furniture except metal, plastic products, and leather and leather products. In 1998, only furniture and cement remained in the moderately concentrated group as the other sectors experienced increases in their concentration ratios. In 1995 and 1998, only one sector wearing apparel except footwear fell under the low concentration group.

Table 15: Simple Price Cost Margins in the Philippine Manufacturing Industry

Industry sector	1972-98	1972-75	1976-80	1981-85	1986-90	1991-95	1996-98
High (50 to 69%)							
Cement	0.65		0.59	0.66	0.67	0.65	0.65
Beverages	0.53	0.56	0.46	0.51	0.56	0.57	0.55
Glass and Glass Products	0.52	0.48	0.48	0.51	0.55	0.54	0.58
Moderate (20 to 49%)							
Tobacco	0.47	0.44	0.40	0.31	0.50	0.57	0.66
Other Non-metallic mineral	0.43	0.64	0.42	0.33	0.42	0.43	0.36
Other Chemicals	0.37	0.37	0.35	0.30	0.35	0.46	0.44
Paper and Paper Products	0.36	0.35	0.38	0.36	0.36	0.34	0.36
Industrial Chemicals	0.35	0.40	0.33	0.37	0.32	0.38	0.32
Rubber Products	0.28	0.25	0.26	0.30	0.26	0.31	0.29
Food manufacturing	0.28	0.34	0.24	0.23	0.29	0.28	0.37
Textiles	0.27	0.25	0.23	0.30	0.25	0.27	0.30
Iron and Steel	0.26	0.26	0.22	0.35	0.21	0.26	0.25
Plastic Products	0.25	0.25	0.22	0.26	0.20	0.29	0.32
Electrical Machinery	0.25	0.29	0.21	0.25	0.21	0.24	0.34
Wood and Cork Products	0.26	0.33	0.22	0.30	0.24	0.25	0.22
Furniture except Metal	0.22	0.21	0.18	0.24	0.21	0.23	0.27
Nonferrous Metal Products	0.21	0.37	0.29	0.17	0.11	0.14	0.19
Petroleum and Coal Products	0.21	0.32	0.17	0.22	0.20	0.24	0.13
Miscellaneous Manufacture	0.20	0.22	0.12	0.30	0.12	0.22	0.27
Low (19 % and below)							
Fabricated Metal Products	0.17	0.23	0.12	0.16	0.12	0.21	0.21
Printing and Publishing	0.16	0.26	0.08	0.07	0.13	0.17	0.36
Leather and Leather Products	0.16	0.14	0.16	0.22	0.10	0.15	0.20
Transport Equipment	0.14	0.11	0.17	0.12	0.05	0.16	0.28
Machinery except Electrical	0.11	0.20	-0.14	0.18	0.13	0.17	0.17
Average	0.30	0.31	0.18	0.26	0.23	0.29	0.34
Standard deviation	0.14	0.14	0.32	0.17	0.20	0.15	0.14

Source: Aldaba (2007)

Table 15 presents estimates of average PCMs¹⁶ in the manufacturing sector from the seventies to the late 1990s. On the average, the PCMs for the manufacturing sector remained quite high, slightly increasing from 31 percent in the seventies to 34 percent in the late nineties with some fluctuations in between. In general, the dispersion of the PCMs about the mean declined between the mid-seventies and

¹⁶ $PCM = \frac{\text{value of output sold} - \text{raw materials costs} - \text{total compensation}}{\text{value of output sold}}$

the nineties. There was a significant widening in the dispersion of PCMs in the mid-seventies but this narrowed down in the succeeding decades particularly toward the mid-nineties.

The PCM estimates suggest sizeable and persistent margins in sectors such as beverages, glass and glass products, and cement whose margins ranged from 55 percent to 66 percent. The estimates were ranked and classified into three major groups: high, moderate, and low. In a span of over twenty years, the margins seemed to remain quite stable. Significant reductions were observed in only three manufacturing sectors: other non-metallic mineral products whose margin declined from 64 percent in the seventies to 36 percent in the nineties, nonferrous metals whose margin dropped from 37 percent to 19 percent, respectively, and petroleum and coal products whose margin decreased from 32 percent to 13 percent during the same period. A substantial increase in margin was observed in tobacco as it went up from 44 percent in the seventies to 50 percent in the late eighties to 64 percent in the nineties.

Cement, beverages, glass and glass products, and tobacco (from 1986 onwards) are the sectors found to have the highest price cost margins that ranged from 50 to 67% during the period 1986-1998. The same sectors are also among the most highly concentrated sectors in the manufacturing industry with tobacco's CR4 of 99.5% in 1998, glass and glass products: 95%, beverages: 74% and cement: 68%. Other highly concentrated sectors with high PCMs include other chemicals and food manufacturing which had PCMs of 44% and 37%, respectively in 1998 while paper and paper products, printing and publishing, and other non-metallic products had 36%. Electrical machinery had 34% while industrial products and plastic products had 32% during the same year.

Does this combination of high CR4 and high PCM indicate lack of competition in these manufacturing sectors? In theory, price cost margin, which is defined as price minus marginal cost over price (or the Lerner index), reflects the degree of monopoly power. In the ideal case of perfect competition, there would be no market power to raise price above marginal cost and PCM would be zero. In oligopolistic and monopolistic markets, one or few dominant players could use their market power and earn extra profits by pricing above marginal cost. However, high PCMs are not necessarily an indication of bad market performance or that a firm is less competitive. While high PCM implies market power, it could also indicate high firm efficiency. If these high mark-ups or margins are the result of internal efficiency improving measures or if they represent gains from product innovation or techniques that a firm employs; then, the firm is considered competitive. Similarly, high concentration does not necessarily imply lack of competition particularly when there are scale economies present or when firms differ in size and productivity.

Note also that the positive correlation between industry concentration and profitability is not a sufficient condition to establish the lack of competition and the exercise of market power. High concentration can lead to high profitability when there are large efficient firms and when there are scale

economies present. Thus, industrial concentration is an imperfect measure of competition particularly when firms differ in sizes and productivity. Similarly, high PCM does not necessarily imply the absence of competition if high profits are due to efficient business practices or product innovation. In these cases, high PCMs serve as a reward for successful innovation. Hence, if these are taken into account a positive relationship between PCM and concentration can be interpreted to indicate the presence of competition. This should not last forever since these margins are expected to be eroded by competition.

While the average concentration of domestic firms increased between 1988 and 1998 and PCMs rose during the same period, data on price comparisons show substantial reduction in the price differences between domestic and imported goods indicating competition in the domestic market. Table 16 presents price ratios¹⁷ between domestic and foreign prices of some liberalized manufactured products. The results indicate that after substantial trade reform from the eighties to the early nineties, the price differences between domestic and imported goods were significantly reduced. This implies that imports are providing a sufficient competitive threat to domestic producers.

Table 16: Price Comparisons of Some Liberalized Manufactured Commodities

Commodity	Pd/Pb		Commodity	Pd/Pb	
	1985	1995		1985	1995
Bacon	1.33	1.61	Caustic soda	2.98	1.71
Ham	2.16	1.30	Primer paint	1.18	0.44
Powdered milk	2.04	0.82	Toilet soap	3.61	1.37
Butter	1.21	1.05	Detergent	1.49	0.41
Catsup	4.17	1.67	Rubber tire, car	1.27	0.39
Tomato sauce	4.17	1.17	Mattress	31.55 (1988)	6.55
Butter cookies	3.04	0.63	Cement	1.92 (1990)	1.10
Margarine	2.77 (1988)	1.77	Onion skin (paper)	2.52	1.55
Macaroni	3.25	1.64	Steel bars	0.96	0.82
Ground cocoa	7.06	4.29	Aircon	1.88 (1988)	1.69
Instant coffee	2.85	0.76	Radio phono	1.21 (1990)	0.71
Kerosene	1.40 (1990)	0.71	Fluorescent tube	10.08 (1987)	6.50
Diesel oil	1.24	0.78	Electric fan	5.57 (1986)	2.22
Sodium hydroxide	20.09	16.47	Dry cell battery	24.52 (1989)	2.83

Sources: De Dios, L. [1994] and [1998].

Given the reductions in domestic prices, the only way for PCMs to go up is for the cost reductions to be greater than the price reductions. Cost reductions are clear indications of efficiency

¹⁷ The domestic wholesale domestic price used was given by the sum of the producer or import price, wholesale trade margin, tax, and distribution costs of the wholesaler. The author used Hong Kong import unit values because of the large magnitude and wide range of goods that consistently enter this port. The data sources were the National Statistics Office and Hong Kong Import Trade Statistics for the wholesale domestic prices and world or border prices, respectively. While there were a number of commodities where there was a lack of one-to-one correspondence (mainly because of the higher level of aggregation in the Hong Kong data compared to the NSO data), De Dios [1998] noted that majority of the Philippine commodities were directly comparable with Hong Kong data.

improvements as seen from efficiency measures such as domestic resource costs¹⁸ (DRCs). For the years 1983, 1988, and 1992; the ratios of domestic resource costs to shadow exchange rates or (DRC/SER) declined from 1.7 to 1.5 to 1.2 in the manufacturing industry (Medalla, 2002; Medalla et al, 1996; and Pineda, 1997). This along with the earlier finding on the general decline in the price gaps between domestically manufactured goods and imports indicates that the manufacturing industry has become more efficient in resource use.

Table 17 shows that the share of establishments whose DRC/SER ratio falls within the range from zero to one increased significantly during the three years under review, both in terms of value of production and number of establishments. The share of efficient firms in terms of production value went up from around 19 percent in 1983 to almost 40 percent in 1988 and to 44 percent in 1992. Across sectors, a leveling of DRC/SER ratios is observed indicating a better allocation of resources.

Table 17: DRC/SER as a Measure of Resource Allocation and Efficiency

DRC/SER range	Efficiency classification	Share in production value (in percent)			Share in number of establishments (percent)		
		1983	1988	1992	1983	1988	1992
0<DRC/SER<1	Highly efficient	18.84	39.51	43.95	19.6	30.25	33.22
1<DRC/SER<1.5	Efficient/Mildly	28.75	22.76	29.48	17.16	27.73	31.17
1.51<DRC/SER<2.0	Inefficient	12.30	14.68	8.36	14.20	13.0	12.69
DRC/SER>2.0	Highly	39.58	21.77	18.07	46.01	26.61	21.87

Sources: Medalla, E. [1998], Medalla et al [1996], and Pineda [1997].

The efficiency increases indicated above generate increases in PCMs of highly concentrated domestic firms and drive the positive relationship between PCM and concentration [see Salinger et al, 1990:328]. The presence of imports provides market contestability and limits the potential abuse of market power. In a two stage least squares approach that examined the determinants of profitability and concentration in a simultaneous two equation model applied in the manufacturing industry, Aldaba (2007) showed that the positive relationship between profitability and concentration may not be solely attributed to increasing market power due to strategic behavior as would be implied by the traditional structure-conduct-performance paradigm. The results indicated that in the manufacturing industry, high concentration is largely influenced by the superior efficiency of big firms. The results also showed that imports have a positive impact on concentration, which implies that increasing imports led to the high concentration of the four largest domestic firms. This is attributed to the exit of inefficient domestic firms

¹⁸ A DRC/SER ratio that is less (greater) than 1.2 indicates comparative advantage (disadvantage) in the production of the tradable good. A DRC/SER ratio that is less (greater) than 1.2 also implies efficiency (inefficiency) in the allocation of resources. The latter indicates inefficiency because if the tradable good is not produced, resources could be moved in other activities yielding maximum benefits to society.

that are unable to survive competition against more efficient domestic rival firms and imports. With respect to the relationship between imports and profitability, the results imply that the presence of imports would restrain domestic manufacturers from exercising their market power. The highly significant negative coefficient on import penetration indicates that imports have a disciplining effect on domestic manufacturers.

In general, the manufacturing industry is already contestable, given the low tariff rates and removal of constraints to foreign investment in the industry. However, competition has been weakened by the presence of structural and behavioral barriers and the absence of a dynamic core of medium size firms. The lack of economies of scale and large capital requirements were reported as structural barriers to entry in motorcycles and parts, meat and dairy processing, appliance, packaging, flat glass, synthetic resin, automotive, and shipbuilding and repair. Cartel behavior was reported in cement as well as in downstream oil industries, which are both characterized by the presence of international cartels. The studies by Aldaba (2007) and Salas (2002) tend to imply strategic behavior in these industries. In pharmaceutical drugs, the firms' behavior of giving gifts to doctors and pharmacists in promoting expensive drugs needs to be examined closely since this seems to constitute anti-competitive behavior. At the same time, the country's intellectual property rights law and patents law may need to be evaluated in view of their implications on competition.

As already indicated earlier, medium size companies constitute a very tiny portion of the SME segment itself and of the overall manufacturing structure. Hence, the country's industrial structure has remained "hollow" or "missing" in the middle. The lack of new entrants from middle-size companies implies that large incumbent firms are not facing credible threat of entry or challengers from the ranks of domestic middle size firms. The absence of this dynamic core of medium size companies tends to limit domestic competition. As earlier shown, the performance of SMEs in the last decade has not been vigorous enough to boost the manufacturing industry. Due to this weakness to generate higher value added and employment, the presence of SMEs has not increased market contestability and improved industrial structure.

The country's underdeveloped financial markets represent a formidable barrier not just to the entry of new enterprises but also to the growth prospects of small and medium sized firms (see Box 1). The absence of a liquid and deep peso financial market contributes to the high cost of investment and makes it more difficult for enterprises to expand. Note, however, that financing constraints do not affect all firms equally, with access to financial credit being a particular problem affecting SMEs (Maxwell Stamp PLC, 2001). Based on a survey of SMEs, Hapitan (2005) concluded that SMEs still face difficulties in credit access, particularly from foreign banks. This, the study found, is the result of

accessibility problems in terms of branch location and the absence of information on the availability of credit facilities.

Box 1: Obstacles to SME Growth and Development

Philippine SME studies have continued to highlight the same major constraints that affect SME development everywhere such as access to finance, technology, and skills along with information gaps and difficulties with product quality and marketing. The lack of access to financing is the most difficult constraint to SME growth. The problem seems not to lie in the supply of funds potentially available for SME lending but the difficulty of access to these funds. In theory, there should be sufficient funds for SME financing since banks are required by law to allocate 8 percent of their loan portfolios to SME financing. At the same time, government financial institutions have their own SME financing programs. Nevertheless, private banks are reluctant to lend to SMEs because of their general aversion to dealing with a larger number of smaller accounts (FINEX and ACERD). Moreover, many banks are still not aware of lending to small businesses. Many SMEs cannot access available funds due to their limited track record, limited acceptable collateral, and inadequate financial statements and business plans.

Note that the experience of Plantersbank shows that these challenges can be overcome. In lending to SMEs, Planters went beyond banking by providing non-financial services to help its SME clients strengthen their operations which include assistance in preparing accounting records, business advice, and networking. Planters customized and designed its products and services to suit the needs of SMEs. It simplified its loan documentation and tailor fitted loans to match borrowers' cash flow.

Although banks appear to be generally complying with the mandatory lending to SMEs with total compliance rate reaching almost 29 percent in 2002. However, anecdotal evidence shows that much of these funds do not actually go to SMEs but to some large firms that deliberately understate their assets to be classified as medium enterprises. As the FINEX and ACERD study reported, these loan funds particularly from large banks and financial institutions hardly benefited small firms. On the other hand, much of the funds from government sponsored lending programs are directed not to real SMEs but more toward livelihood and micro-enterprise projects, many of which fail to grow.

With respect to technology, many firms are not knowledgeable on technology with most SMEs employing poor or low level of technology. Most small enterprises are labor-intensive, while the medium-sized ones are relatively more technology-intensive. With low level of technology, the production methods are generally inefficient which leads to inconsistent product quality, low level of productivity and lack of competitiveness. This is also manifested in high materials wastage, high rates of reworks, and inability to meet deadlines.

Regarding product quality and quality assurance of raw materials, this is better addressed if more firms will follow certified methods and undergo performance or quality tests. However, there is a lack of common support facilities like testing centers and standardization agencies, whether government or private-sector led. With respect to quality management systems standards such as ISO series, SMEs do not invest in these business standards due to the high costs involved along with the high degree of formalization and documentation required.

SMEs are also confronted with supply chain management problems from the sourcing of their raw materials to problems in processing, packaging, and distribution. They also find it hard and more costly to access raw materials and inputs primarily due to the general problem of sourcing and transporting raw materials which can be attributed to infrastructure and communication problems. Government tariff policy also raises the costs of their key intermediate inputs.

Source: Aldaba (2008)

The linkages between SMEs and large domestic and multinational corporations have also been weak as indicated by the declining number of subcontractors and subcontracted work as percentage of the total value of output. The number of SME subcontractors declined from 1,551 in 1994 to only 278 firms in 2003 while their subcontracted work dropped from 3.7 percent in 1994 to 0.7 percent in 2003 (Aldaba, 2008). This tends to imply that the creation of backward linkages within the manufacturing industry has remained weak. As such local content and manufacturing value added have remained low as manufacturing activities seem to be more dependent on imported inputs.

Our top exports consisting of electronics and automotive have limited backward linkages and hence, their value added is low. In the automotive industry, very little parts and components are locally sourced with the domestic parts sector accounting for only 10 to 15 percent of the total number of parts and components needed by local assemblers. In contrast, the Thai auto industry sources close to 90-95 percent of their parts domestically (Aldaba, 2008). In the electronics industry, backward linkages remain weak because local suppliers are few and immature (Austria, 2006). Santiago (2005) attributed this to the unavailability of raw materials, difficulty of finding local suppliers, unreliability of local suppliers, high cost of local raw materials, and failure to meet required quality standards. Given these limited linkages, large enterprises' growth fail to spill over among small and medium enterprises. This partly explains why the growth experience in the last eight years has failed to generate employment.

Services

In retail trade services, low concentration ratios were found in supermarkets, groceries and department stores. Though the department stores sub-sector is dominated by two large players, SM and Robinson's, they seemed to behave competitively. But, in the case of pharmaceutical drugs, high concentration was found with more than 80% of the market dominated by only one firm. This firm has enjoyed strategic advantages such as economies of scale and scope, goodwill and loyalty of customers, and an efficient network with suppliers.

In other services sectors such as banking, shipping, airlines, and telecommunications; the market structures are oligopolistic. In banking, most studies show that market power declined and that banks behaved competitively. Bank concentration is expected to go up given the Central Bank's policy of progressive increases in minimum capitalization and encouragement of mergers and consolidations to promote financially strong and well-managed banking institutions.

In ports, competition is limited due to the conflict of interests arising from PPA's multiple roles of being regulator, operator, and developer of the ports sector. In shipping, cartel issues are being raised with only five firms controlling most of the primary routes and the apparent division of the market among

the players. In the cargo services, five firms controlled the cargo services market in both the primary and secondary routes. The top players in cargo are the same ones in passenger services.

In airlines, the domestic market is characterized by duopolists in major routes and monopolies in minor routes. The subsidies that the dominant player continues to enjoy may distort competition because the same benefits are not granted to rival domestic firms. Though deregulation and liberalization were carried out in domestic air services, the international air services sector has remained heavily regulated and restricted (except in Subic and DMIA to some extent) and the government has yet to adopt deeper reforms through open skies policy.

In telecommunications, the interconnection between the incumbent and the new entrants must be guaranteed to achieve effective competition. Clear rules on interconnection and terms of access along with carefully designed competition laws and regulation that could be efficiently implemented.

In electricity, the structure is still a monopoly given the delays in the implementation of the EPIRA: NPC in generation, Transco in transmission and Meralco in distribution. With the entry of IPPs, NPC became a virtual monopsonist in the market for capacity and energy. In water, the market structure is also characterized as monopoly by the operator in each service area.

VI. Conclusions and Policy Implications

The Philippines has made considerable progress in opening-up the economy to competition by removing tariff and non-tariff barriers in the manufacturing and agriculture sectors as well as in deregulating and liberalizing infrastructure utilities like telecommunications, water, power, shipping and airlines. At the same time, foreign investment rules were relaxed in almost all sectors particularly in areas that were reserved only for Filipinos such as banking and retail trade. As a result, the current regime is substantially more open.

Despite the breadth and depth of market-oriented reforms, the impact on the growth of output, employment, and productivity has been limited. Though growth in more recent years has been encouraging, its limited impact on employment has been disappointing leading many to characterize it as “jobless growth”. One fundamental reason may be the low degree of competition in many sectors of the economy.

In assessing competition, it is important to note that, first, competition is affected not only by regulatory and behavioral factors but also by structural factors. Regulatory factors refer to government regulations & restrictions like tariffs, import licensing, and permits to operate. Behavioral factors include abuse of dominant position, cartels, bid rigging & other anti-competitive practices. Structural factors are those that are outside the control of market participants such as economies of scale and large capital

requirements. Second, competition is affected by the external environment within which firms operate. This is what Carlin and Seabright (2000) called “competitive infrastructure” which includes transport, communication, effectiveness of financial system in matching investment resources with entrepreneurial opportunities, framework of laws and regulations, as well as information available to consumers. When the competitive infrastructure is inadequate, competition becomes weak.

The manufacturing industry is generally contestable; a lot of the barriers to imports and foreign investment have already been removed. Though industrial concentration has remained high, this is not necessarily harmful to competition because this is accompanied by the domestic firms’ adoption of efficiency-improving measures in reaction to import competition. Faced with competition from imports, a general reduction in domestic prices and firm-level efficiency improvement have been observed. Competition in manufacturing, however, has been weakened by the following structural characteristics:

- Many of our industries require large capital and economies of scale;
- The industrial structure has remained “hollow” or “missing” in the middle and medium enterprises have never seriously challenge the large entrenched incumbents;
- The linkages of small and medium enterprises with large domestic and multinational corporations has remained weak; hence growth experienced by large enterprises has failed to spillover to the SME sector, and
- Compared with large enterprises, SMEs continue to face difficulties not only for market entry but for growth such as underdeveloped financial markets, overly complex administrative arrangements, and poor infrastructure.

The market structure and competition studies reviewed in this paper highlighted the following factors that tend to limit competition:

- Regulatory barriers still exist in agriculture with import trading in rice and corn still monopolized by NFA. Sugar is also heavily regulated by the SRA. Tariff quotas also affect a wide range of agriculture and related food manufactures like sugar milling and refining, rice and corn milling, vegetables, preserved fruits and vegetables, hog, cattle and other livestock, chicken and poultry products, meat packing and processing, among others. Contingent protection measures have also been given to manufacturing sectors cement, ceramic tiles, and glass.
- In infrastructure services, the capacity and independence of our regulators are still evolving and need to be strengthened. To maintain a competitive environment, liberalization must be accompanied by effective competition and regulation.

Our experience has shown that competition is not an automatic outcome of liberalization; by itself, liberalization is not sufficient to foster effective competition. The success of market reforms such as trade liberalization, deregulation, and privatization depends on the creation of a competitive domestic

market environment. This, in turn, is determined by the interplay of behavioral, regulatory and structural constraints along with the broader aspects of competitive infrastructure that includes communication, transport, financial, and fiscal systems.

Maintaining a competitive environment requires coordinated policies to implement continued liberalization and deregulation in tandem with necessary support measures that will address the obstacles to the entry and growth of domestic firms, particularly small and medium enterprises. These efforts should be pursued combined with well-functioning competition and regulatory agencies. Government regulation is required to protect consumers from monopoly abuse in cases where privatization results in the creation of private monopolies. In cases of oligopolistic or even competitive markets, government regulation through effective competition laws is still necessary to protect consumers from the possible abuse of dominant position and creation of cartels.

The strong institutional foundations on which successful developed countries' competition and regulation system rests is absent and cannot be readily constructed in the Philippines. We still do not have a competition agency while the regulatory capacity and role of government agencies in infrastructure utilities are still evolving. Much work remains to be done with respect to establishing an effective regulatory institution and adequate regulatory laws towards the goal of ensuring competition. Effective regulation is a complex activity that requires a learning process. Despite our feeble institutional foundation, the government has continued to liberalize many sectors of the economy and enacted regulatory laws, though inadequate, to accompany its liberalization policy. Mistakes have been committed along the way and are still expected to be made in the future, however, these should not discourage us from adopting liberalization and competition policies.

Many of the studies included in the review looked at the impact of the degree of competition on the prices of the firms' final products but have not explicitly examined the effect on labor as well as on intermediate inputs. The relationship and linkage between competition and labor has not yet been thoroughly studied in the Philippine context. Moreover, there are very few studies on the current state of competition in the wholesale and retail trade sector. Concentration ratios calculated based on geographic rather than national market would seem useful in assessing competition in this sector. Industry studies are also needed to examine competition particularly firm behavior. Productivity and efficiency measures along with scale economies and advertising costs should also be taken into consideration. Policymakers would benefit from future research work in these areas.