THE PHILIPPINES

Salvador P. Catelo, Dean, College of Economics and Management University of the Philippines, Los Baños

Macroeconomic Situation and Outlook.

n 2003, the Philippine economy managed to exhibit a performance that was well within the government's official target of 4.2-5.2 percent. Notwithstanding the various deterrents to growth such as the global impacts of the Iraq war and the Severe Acute Respiratory Syndrome (SARS) virus outbreak, as well as the Oakwood mutiny and the El Niño drought, real gross domestic product (GDP) grew by 4.5 percent, almost replicating the 2002 performance. The main contributor to this overall economic growth was still the services sector, which expanded at a rate of 5.9 percent in 2003. This sectoral increase, which was about 0.45 percentage points higher than that in 2002, was propelled to a large extent by a sustained 8.6-percent growth rate in transportation, communication, and storage services and a much improved performance of the financial sector (6.9 percent) and ownership of dwellings and real estate (3.8 percent). These latter two subsectors manifested very strong growths at twice their respective rates a year ago.

On the other hand, both the industry and agriculture, fishery, and forestry sectors also posted positive growths in 2003. The slide in industry growth from 3.73 percent in 2002 to only 3.01 percent in 2003 was mainly due to the overall deceleration in the growth of its subsectors. Manufacturing, whose output growth was spurred mainly by the increase in food manufactures, was the only subsector that surpassed the previous year's growth, increasing from 3.5 percent to 4.2 percent between 2002 and 2003. All the rest registered lower year-on-year rates and even negative growth. In particular, the double-digit growth in the mining and quarrying subsector at 17.5 percent actually dropped to one-third of its 2002 level. Moreover, construction output further contracted to 5.9 percent from negative 3.3 percent the year before owing to the government's bid of curtailing the ballooning budget deficit that resulted in the tremendous drop in public expenditures on construction (NSCB, 2004).

As for the agriculture sector, the 3.94 percent growth in 2003 was up from 3.32 percent the previous year and slightly below the high 4.3 percent expansion for the farm sector in 2003. The Department of Agriculture (2004) has attributed this performance to the tail-end of an EI Niño drought in the first half of the year and two destructive typhoons in the third quarter that had been reported to cap farm output growth. Notwithstanding, the agriculture sector continues to be one of the key contributors to the Philippine economy as it consistently constituted about a fifth of the country's GDP from 2000 to 2003.

The crops subsector grew at 2.98 percent in 2003 with corn production growing at 6.9 percent and reaching 4.62 million metric tons but still lagging behind the domestic requirement of 5.5 million metric tons (Secretary Lorenzo as cited in the *Philippine Daily Inquirer*, January 22, 2004). The other prime mover was sugarcane production, which grew at 13.0 percent in the same year. Such remarkable growths were attributed to sustained improvement in yields and increased harvest areas. The slower 3.0 percent expansion in livestock subsector out-

put was mainly accounted for by the 3.98 percent increase in hog production (DA). Higher input prices generally served as a deterrent for municipal livestock growers. The poultry subsector experienced the highest decline in growth, falling from 6.1 percent in 2002 to only 1.8 percent in 2003. This was brought about by the drastic fall in chicken production toward the latter part of the year. In contrast, robust growth occurred in the fishery subsector, which was up by 7.4 percent from 6.4 percent in 2002. Aquaculture was at the forefront, growing at 8.69 percent (NSCB, 2004).

The 2003 Gross National Product adjusted for inflation grew by 5.5 percent, which was up by 1 percentage point from the previous year's level and surpassed the high-end official government target of 5.4 percent. This growth was supported by the tremendous increase in net factor income from abroad (NFIA) of 18.89 percent, which more than tripled over the past year.

For 2004, NEDA has projected that the country's GDP will grow by 4.9-5.8 percent, with agricultural output expected to pick up further and investment expected to strengthen as the global economic environment improves further. Furthermore, this 2004 forecast continues to hinge on a stable macroeconomic environment underpinned by a sustained reduction in the fiscal deficit. Both exports and imports are projected to grow by 10 percent and 11 percent, respectively. Sustained improvements in private consumption are expected to occur as employment opportunities in industries and healthy inflows from overseas remittances boost real incomes. There will also be increases in public expenditures as programmed by the national government. The agriculture, fishery, and forestry sector is projected to expand within the range of 3.7-4.7 percent. The reasons behind this optimism are the expected favorable weather conditions and sustained support from government to enhance agricultural productivity. Such support includes the continued use of modern rice varieties (for example, "Gloria rice"), the establishment and rehabilitation of irrigation facilities, and improved agricultural marketing via Roll-On Roll-Off (RORO) ports and vessels The industry sector is expected to rebound with a 5.0-5.8 percent growth for 2004. The prime drivers for this projection are the export-led recovery of the manufacturing subsector and growth in the mining subsector. Public construction is also forecast to make an upturn, and the increased spending for industrial activities arising from the recent national elections will certainly induce growth. The services sector will remain at the forefront of economic growth owing to the sustained expansion of the telecommunications subsector and the proliferation of call centers (BSP, 2003).

It should be pointed out, however, that the positive outlook for the Philippines in 2004 could be complicated by the outcome of the May 2004 national election as it has a bearing on the ability of the government to fast-track the rate of progress in key economic legislation and policy reforms and to contain civil strife in the large southern island of Mindanao.

Food Prices and Consumption

The average headline or CPI inflation for 2003 using 1994 base data was 3.1 percent, a level that was much lower than the government target of 4.5-5.5 percent for the year and that maintained the 2002 average. The perceived factors that cushioned this inflation rate are the absence of demand-pull and cost-push pressures. Despite robust consumption spending, the subdued pressures on the demand side can be traced to the unused productive capacity as reflected by an unemployment rate of 10.2 percent (as of October 2003) and moderate capacity utilization in core areas such as in the manufacturing subsector (78.9 percent as of October 2003). On the other hand, pressures from the supply side have also leveled off with the mitigation of the effects of the El Niño drought and the slowdown of world oil price increases from the high levels in March.

The CPI inflation rate for major food items in the last quarter of 2003 was posted at 2.3 percent, higher than the 1.7-percent mark in the previous quarter and the 2.0-percent level in 2002. Various factors contributed to soaring food prices. In the case of fish, fruits, and vegetables, there had been a shortage in supply due to unfavorable weather conditions. For livestock, the higher input prices deterred increased production. Seasonal increases in demand had triggered increases in meat prices. In contrast, rice prices were down by 0.3 percent in the fourth quarter of 2003 as compared to 3.6 percent in the previous year. This was brought about by sustained sufficient supply of palay owing to the harvest season in many provinces (BSP, 2003).

The non-food inflation rate was one percentage point lower at 4.2 percent for the fourth quarter of 2003 as compared to a year ago. Higher prices for non-food items in the previous year were observed mainly for fuel, light, and water as well as services that included gasoline and diesel.

While the NEDA (2004) projects CPI inflation rate and food inflation rate to increase to 3.4 percent and non-food inflation to grow to 3.5 percent in 2004, there is a favorable outlook for food production and prices in 2004, assuming weather conditions normalize and imports are available to stabilize prices. By the first quarter of 2004, agricultural output had expanded by a phenomenal 8.16 percent, a gain largely attributed to good harvests of rice and corn. The rest of the subsectors also registered positive growths in the first quarter. However, the benefits accruing from increased agricultural production may be threatened by the recent instability of world oil prices, which could translate into much higher local pump prices for fuel products that are important production inputs. The average international spot price of Asian Dubai crude oil had been on an upswing from US\$26.58 per barrel in the third quarter of 2003 to US\$31.68 a barrel in April 2004. Meanwhile, diesel and unleaded gasoline based on the Mean of Platts Singapore (MOPS) bellwether averaged US\$45.18 a barrel and US\$48.75 a barrel, respectively, as of May 13, 2004. The huge increase in international oil prices stems from the continuing crisis in Iraq, the global economic recovery, and perceived low reserves in the United States (Philippine Daily Inquirer, May 15, 2004).

Exchange Rate

During the first quarter of 2004, the peso has been relatively volatile closing at PhP 55.53 in January and hitting a record low of P56.30 to the U.S. dollar in March. Three days after the May 10, 2004, elections, the peso's value was PhP 55.86 to the U.S. dollar. Investment analysts attribute the volatility to a number of factors. Foremost is the country's political instability. Worried about political and economic uncertainties, foreign investors bought the dollars at the start of the year. Additionally, the prospect of having another actor run the country is said to be keeping the peso down. With the threats by certain groups to scuttle the elections and instead name a transition head of state, a peaceful transfer of political power come June 30 looks less certain. The NEDA's projection of the peso-dollar exchange rate for 2004 is Php 56.36:US\$1.00.

With a weak peso, Filipinos will have to face higher costs of utilities, fuel, food, and the like. However, with the elections finally over, economic fundamentals can be expected to catalyze a more stable peso as it has survived numerous challenges in the past.

Export and Import

The growth rate in exports for 2003 slowed down to only 1.5 percent as compared to 9.5 percent in 2002. This downtrend is an aftermath of the contraction in demand from particular trading partners for goods such as electronics, machinery, chemicals, garments, and textiles. Exports of semiconductors and electronic microcircuits decelerated to 6 percent. What cushioned the otherwise huge contraction in the export of major commodities were increased exports of coconut, fruits and vegetables, and other agro-based commodities as well as mineral and petroleum products. Nevertheless, exports are expected to rebound in 2004 with a growth rate of 4.1 percent as global economies improve, enhancing demand for information technology (IT). Projected improvements in exports should prop up the peso.

On a cumulative basis, imports grew by 5.7 percent in 2003, but this was much lower than the 7.2 percent rate of 2002. While imports of capital goods, particularly in the telecommunications industry, went up by 5.5 percent in the third quarter of 2003, the slump was seen in chemical compounds, iron and steel, textile yarns and fabrics, and materials for electronic equipment because of the easing up of inventories following the panic stockpiling of import requirements during the Iraq war outbreak (BSP, 2003). For 2004, however, imports are projected to rise again to 9.0 percent (NEDA, 2004).

Food Processing and Manufacturing

The manufacturing subsector, which grew from 3.5 percent in 2002 to 4.2 percent in 2003, was the sole contributor of accelerated growth among the industries. This growth was spurred mainly by a consistent increase in food manufactures from 7.1 percent to 7.2 percent between 2002 and 2003.

Status of Infrastructure

As far as infrastructure is concerned, the Philippine government continues to concentrate on core infrastructure project identification and prioritization, enhancement of the framework for private sector participation, economic and technical regulation, and reengineering of the government bureaucracy to perform in a market-led environment (MTDP, 2001-2204). For one, the government intervenes in the direct provision of basic infrastructure especially in the rural areas such as farm-to-market roads, feeder ports, irrigation, rural water supply, and missionary electrification, in support of the overall objective of alleviating poverty. In the transport subsector, the priorities are improving the quality of existing infrastructure through proper maintenance, rehabilitation, and upgrading. Under the energy subsector, it is the government's aim to provide all the barangays with adequate, reliable, efficient, and reasonably priced energy with an emphasis on the use of indigenous and renewable energy sources. Wider services for water supply are being extended through private sector participation with the end goal of enhancing service efficiency while shifting substantial public investment to other important government concerns. Infrastructure development in the country is usually linked with agriindustrial development, tourism enhancement, and environmental management and is premised on the policy of national dispersion to stimulate countryside development.

TRANSPORTATION INFRASTRUCTURE. Given the archipelagic feature of the Philippines, transportation policy plays a crucial role. Its importance is further emphasized by globalization, as it makes reliability, quality, timeliness, and efficiency imperative under the pressures of competition.

In the Philippine shipping industry, however, there are implicit indications of the absence of a contestable market. The industry is highly vulnerable to price and capacity fluctuations that are surmised to lead to ruinous competition. The industry remains characterized by relatively higher cargo and passenger tariffs. Furthermore, substantial competition is said to exist only in a small percentage of the routes while cartel-like arrangements have been observed elsewhere.

To address inefficiency and its consequent adverse impacts on the economy, the Philippine government in the 1990s instituted reforms through liberalization and deregulation. However, the policy reforms have been slow, leaving much to be desired. While the reforms are said to have scored a certain degree of improvements in the level of competition, the complementary factors to competition, particularly the physical and administrative infrastructures, are inadequate. Domestic shipping costs such as fuel, interest rates, insurance, and income and freight taxes as well as handling costs in the country are reported to remain higher than other countries in the region (Lorenzo 1997; PISA 2001 as cited in Austria, 2003). This is further aggravated by the great number of ports nationwide that are undeveloped or below world-class standards.

Moreover, past regulations on the domestic shipping industry had an adverse impact on the economy (Presidential Task Force (PTF) on Interisland Shipping Industry, 1989; Interisland Liner Shipping Rate Rationalization Study, 1991; and Liner Shipping Route Study, 1994).

These were summarized in Austria (2003). Accordingly, overtonnaging due to defective route franchising and the cap on the return on investment has persisted. Also, the early tariff structure was reckoned to be flawed, which, in turn, catalyzed the following: (a) the rate differentials between classes did not reflect differences in the cost of providing services for each commodity group; (b) rates for some commodities were set too low, thus failing to ensure the availability of sufficient services at all times; and (c) the application of a uniform rate formula for all routes was inappropriate as it did not consider both cargo inflow imbalances and cargo mixes.

To date, the government has continued its efforts to liberalize and privatize shipping transportation operations. This has resulted in a more competitive transport business environment as seen in the ongoing fleet modernization, upgrade and development of alternative services such as fast ferries and luxury liners, wider choices in airlines, modernization of taxi fleets, and the increase in bus and other public utility vehicle operators in many provinces.

For land transportation, the Department of Public Works and Highways (DPWH) has revised and updated its medium-term infrastructure program covering the period of 2001 to 2004. The mediumterm infrastructure program of the DPWH aims to improve the national roads system to international standards in order to facilitate the major flows of people, goods, and services among key production areas and urban-industrial growth centers nationwide. The length of paved national arterial roads is targeted to increase from 70% of the total (17,631 km) as of 2002 to 75% in 2003, and 80% by 2004. Infrastructure projects are being implemented that focus on food; jobs and livelihood; infrastructure; housing; education and other social services; peace, order, and security; business and economy; and governance. The department also focuses its infrastructure activities on the following: 1) Mindanao road development projects; 2) access roads to tourism hubs and spokes; 3) flood mitigation; 4) other priority projects in support of peace, order, and regional development; 5) decongestion of traffic in the National Capital Region; and 6) decongestion of traffic in adjacent regions (DPWH, 2003).

Unfortunately, much remains to be desired on the so-called trickle-down effects of infrastructure investments, particularly in rural areas. Production and marketing of agricultural commodities continues to be hammered by inefficiencies that, in one way or another, are traceable to insufficient or substandard infrastructure on transport networks. The agriculture sector suffers from the lack of market infrastructure on farm-to-market roads and transport facilities, on top of the failure of price information system (G.J. Bordado et al., 1996; A.R. Domingo et al., 1996; I.M. Pabuayon and L.P. Oliva, 1996; and L.M. Galang et al., 1996; E.G. Marzan, J.M. Yorobe, and G.J. Bordado, 1996; and Catelo et al., 1999). These translate to high marketing and distribution costs arising from pilferage during transit, post-harvest losses, and unnecessary costs due to excessive market channels.

TELECOMMUNICATIONS. In the past, a host of constraints has slowed down the expansion of the telecom industry in the Philippines. First,

there was ambiguity in the competition policy as the telecom industry was segmented/fragmented with operators' exclusive regional franchises. Second, there was difficulty in enforcing the mandatory compulsory interconnection, as the Philippine Long Distance Telephone Company (PLDT) gave limited interconnections and charged prohibitive rates on access. Third, the present policy on foreign ownership is seen as an impediment to reform. As provided in the 1987 Philippine Constitution, the Foreign Investment Act of 1991, and the Omnibus Investment Code of 1987, foreign ownership in any public utility is restricted to a maximum of 40 percent. Although this limit is the highest allowed in East Asia's telecommunications sector, investors wanted higher levels to facilitate inflow of more foreign capital, skills, and technology.

The liberalization of the telecommunications industry in the 1990s has paved the way for competition and the sudden surge in demand for cellular phones in the 2000s. According to the National Telecommunications Company (NTC), more robust growth in the telecom industry can be anticipated in 2004 even with the May elections, and continued expansion of the sector by the second half of the year is expected to create more opportunities for the economy.

By the end of 2003, there were more than 22 million cellular phone subscribers. Of this, about 13 million came from the biggest player, Smart Communications, Inc., and its affiliate, Talk N'Text of Pilipino Telephone Corp., followed by almost 9 million subscribers from Globe Telecom, Inc. The third-largest player, Sun Cellular of Digital Telecommunications, Inc., accounted for about 550,000 subscribers by the end of last year (Clarissa S. Batino as cited in *Philippine Daily Inquirer*, April 24, 2004). Foreign analysts projected that cellular phone subscribers in the Philippines would hit about 30 million this year and grow to 35 million in 2005. The NTC said that the surge in mobile phone subscribers would continue to outstrip the owners of fixed lines and that continued growth in the wireless telecom sector would surpass the 36 percent cellular phone penetration rate worldwide.

The liberalization of the telecommunications industry has allowed the integration of information and communication technology (ICT) into the economy and society. Information technology (IT) is credited for lessening geographical barriers among the Philippine's remotest islands and places, reducing price information asymmetries, increasing effectivity and efficiency in the delivery of public services, enhancing government administration, and facilitating businesses networks and transactions.

To date, many agencies function as resource hubs, with capabilities in electronic information networking and occasionally organizing special activities for technology transfer projects. These are envisioned to be the state-of-the-art information delivery facilities that enable endusers to have 24-hour quick access to relevant and updated information such as business opportunities, prices, and industry profiles. Aside from the expected timely, reliable, and relevant information they make available online, they are looked upon to ultimately contribute to narrowing of digital divide separating small and medium enterprises and big businesses.

For instance, the Development Communication Division of

PhilRice, with its slogan "improving access to rice Science and Technology information," is tasked to establish databases and develop knowledge and campaign products in various formats, which are disseminated to clients through appropriate media/strategies. Thus far, the division's major accomplishments include producing and improving new/important publications for extension workers, raising public awareness on PhilRice technologies as well as the importance of rice by developing materials for outdoor promotion and conducting special events, raising public awareness on PhilRice technologies as well as the importance of rice through the mass media, producing and co-publishing important scientific publications, and constructing databases for easy access to information that is needed for research and multimedia presentations.

B2bpricenow.com is a company engaged in electronic trading using the Internet, WAP, and/or regular GSM phones for free. It is the Philippines' first-ever business-to-business (b2b) marketplace where members can actually trade and pay online. This initiative has allowed farmers to use their mobile phones to check prices of agricultural products while being shielded from cheating by unscrupulous buyers and middlemen. Mobile phones have become more popular than wireline phones in remote areas.

The emergence of the Bureau of Agricultural Statistics (BAS) was spurred by government efforts to improve the country's agricultural database. It was established to take charge of the production of statistics on agriculture, fishery, and related fields. It is mandated to serve as the agency of the Republic of the Philippines responsible for the collection, compilation, and official release of agricultural statistics; exercise of technical supervision over all data collection centers; and coordination of all agricultural statistics and economic research activities of all bureaus, corporations, and offices under the Department of Agriculture.

In response to the growing need for utilizing information technology in different agencies and bureaus of the Philippines, BAS has formulated a website (www.bas.gov.ph) that provides online access to its programs, reports on performance of Philippine agriculture, up-to-date prices of basic commodities, online statistics, and so forth. It has also created the Information and Communication Technology Division (ICTD), which shall perform these functions: a) undertake overall planning, implementation, and supervision of all technical and administrative activities relative to the Bureau's IT strategic plans and directions; b) provide IT services to all BAS units to efficiently facilitate the processing, analysis, and access of technical and administrative data adopting appropriate ICTs; c) administer and maintain ICT services and facilities including the local area network, e-mail, hardware, software, and website; d) develop and maintain the agriculture and fisheries data bank in support of BAS' National Information Network mandate; e) develop and maintain effective information programs and services; and f) undertake continuing research to keep the Bureau abreast of current trends on information and communications technologies.

On the other hand, the Department of Agriculture—Agribusiness and Marketing Assistance Service (DA—AMAS) has the mandate to

THE PHILIPPINES

facilitate and coordinate the efforts of DA in all matters pertaining to agribusiness development and marketing activities, and to collaborate and provide assistance to the private sector, including concerned nongovernment organizations (NGOs) and private organizations (POs), farmers and fisherfolk, in marketing and agribusiness investment ventures. Its programs include market access and development, industry support and development, enterprise development, agribusiness information generation and dissemination, and investment promotion. Under the program, electronic trade and commerce is revolutionized to fast- track the flow of information to the agribusiness sector to spur industry development and growth.

Satellite and computer-based messaging systems have become an integral part of the communication options in the country. However, the agriculture sector fails, in general, to participate in the evolving electronic community and, in turn, is left with limited and late access to updated information. Information has been universally considered a powerful factor of production, which suggests that poor access to information would inevitably put the industry players in a disadvantaged position.

Conventional communication systems (that is, mails, telephone calls, telexes, and facsimiles) have become inefficient and less cost-effective while the need for information for business transactions is growing steadily. Text messaging increases productivity in the following ways: enhanced ability to send and receive computer-readable text, faster dissemination of information to multiple locations, reduced telephone bills and courier service charges, elimination of "telephone tag," and savings from travel to collect information. Most of these advantages are being recognized now by farmers, traders, and consumers. The cost is based more on the quantity of information transferred than on time or distance, which are significant determinants in the cost for telephone and facsimile messages.

With more satellite nodes in operation in the future, dissemination of important information on production, price quotations, and order placements in virtually any part of the country can be transmitted and received. The challenge, however, is sensitizing production and market stakeholders, particularly small farmers and middlemen in rural areas. Even with awareness, their ability to take advantage of the potential gains from ICT remains questionable. It may take enormous effort and energy to enhance their knowledge and skills. Otherwise, the benefits will trickle only to big and highly commercialized players, a situation that will add further to the inequity problem in the country.

Way Forward

Several courses of action have been proposed to promote vibrant and competitive infrastructure development in the country (Halcrow Fox, no date; Serafica, 1998). Candidates for further improvement, along with the overall policy environment for infrastructure growth and development in the Philippines, include:

- **COMPETITION POLICY.** A more proactive stance must be taken to ensure a level playing field. Infrastructure industries are asymmetrical in nature, thus simply allowing the entry of new players is not sufficient to ensure a competitive environment.
- REGULATION OF INFRASTRUCTURE. It is recommended that the technical capabilities of the regulatory institutions in the country be strengthened to deal effectively with the complex demands of a market-oriented policy regime. The paradox of deregulation is such that the rules of the game must first be in place before the market can be expected to function efficiently.
- INFRASTRUCTURE BUREAUCRACY. This recommendation borrows the structure-conduct- performance paradigm of the industrial organization literature. Government performance must be improved and restructuring the bureaucracy is one of the better alternatives.
- FINANCING OF INFRASTRUCTURE. This involves fiscal policy as applied to infrastructure financing. The government's role in assuming and managing the contingent liabilities must not be neglected even if a bigger role in infrastructure development is assumed by the private sector.
- **RURAL INFRASTRUCTURE.** The perennial problem of inadequate rural infrastructure could be addressed by working within the context of the current governance mechanism by properly delineating national-local government roles. The government is responsible for creating the policy and regulatory frameworks that will safeguard the public's interest while at the same time enhance the new alliance with the private sector.
- ¹ The author wishes to acknowledge the support provided by PECC-Manila in the preparation of this article and for making possible his participation in the PECC Pacific Food System Meeting in Hanoi, Vietnam possible. The views expressed herein and the remaining errors are those of the author.

References

- Austria, M.S. 2003. Philippine Domestic Shipping Transport Industry: State of Competition and Marketing Structure. PIDS, Makati City, Philippines.
- Bangko Sentral ng Pilipinas. 2004. Inflation Report. Fourth Quarter 2003.
- Bangko Sentral ng Pilipinas (http://www.bsp.gov.ph)
- BAS Online and BAS Online Statistics. (http://www.bas.gov.ph).
- Bordado, G.J., M.E.M Orden, L.P. Oliva, and A. R. Domingo. 1996. Marketing of Rice by Small Producer Groups in Selected Regions of the Philippines. Marketing of Agricultural Commodities by Producer Groups in the Philippines. PCARRD, Los Baños, Laguna.
- Business World (IT Ed.). (http://itmatters.com.ph/news/news_06052001c.html)
- Costales, A.C. December 12, 1996. "The State of Rural Road Infrastructure in the Philippines." SEARCA Professorial Chair Lecture. CEM, University of the Philippines at Los Baños, College, Laguna.
- Department of Agriculture. (http://www.da.gov.ph)
- Domingo, A.R., I.M. Pabuayon, and L.P. Oliva. 1996. Marketing of Corn by Small Producer Groups in Selected Regions of the Philippines. Marketing of Agricultural Commodities by Producer Groups in the Philippines. PCARRD, Los Baños, Laguna.
- Galang, L.M., E.G. Marzan, J.M. Yorobe, and G.J.
 Bordado. 1996. Marketing of Swine by Small Producer
 Groups in Central Luzon, Southern Tagalog, and Bicol.
 Marketing of Agricultural Commodities by Producer
 Groups in the Philippines. PCARRD, Los Baños, Laguna.
- Halcrow Fox. no date. Philippine Transport Strategy Study. Commissioned Study for the Philippine Government.

- Isidro, M.C.A. 2004. Patterns of Regional Growth and Transportation Infrastructure Development in the Philippines. Unpublished Undergraduate Thesis. CEM, UPLB, College, Laguna.
- Librero, A. G. and A. G. Tidon, eds. 1996. Marketing of Agricultural Commodities by Producer Groups in the Philippines. PCARRD. Los Baños. Laguna.
- Medium-Term Philippine Development Plan 2001-2004.
- National Economic Development Authority (http://www.neda.gov.ph)
- National Statistics Coordination Board. (http://www.nscb.gov.ph)
- Oliva, L.P., A.R. Domingo, and L.G. Valdez. 1996.
 Marketing of Fruits by Small Producer Groups in
 Cagayan Valey, and Central and Southern Mindanao.
 Marketing of Agricultural Commodities by Producer
 Groups in the Philippines. PCARRD, Los Baños, Laguna.
- Philippine Daily Inquirer. Several issues.
- Serafica, R.B. 1998. Beyond 2000: An Assessment of Infrastructure Policies. Philippine Institute for Development Studies, Makati City, Philippines.
- Silva, V.C. 2001. "Lack of Central ITC Body Slows Internet Uptake in the Government."
- Victoria-Banas, G.J. October 22, 2003. "The Supporting Role of the MARINA in the Strong Republic Nautical Highway-Roll On Roll Off Transport System." Hotel Intercontinental Manila, Philippines.
- Yorobe, J.M., M.E.S. Piadozo, and D.M. Musa. 1996. Marketing of Cattle by Small Producer Groups in Southern Tagalog. Marketing of Agricultural Commodities by Producer Groups in the Philippines. PCARRD, Los Baños, Laguna.