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# INDONESIA'S COMPETITIVE ENVIRONMENT

CURRENT CONDITIONS



MARCH 2006

This publication was produced for review by the United States Agency for International Development. It was prepared by Development Alternatives, Inc.



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The authors' views expressed in this publication do not necessarily reflect the views of the United States Agency for International Development or the United States Government.

## **ACKNOWLEDGMENTS**

This publication was made possible through support provided by the U.S. Agency for International Development under the terms of Contract No. GSA FSS MOBIS SIN 8784-1 GS-10F-0359M, Order No. 497-M-00-05-00043-00.

The team thanks the Ceramics Industry Club of ASEAN, the Indonesian Textile Association, and the Indonesian Footwear Service Center for their valuable contributions.

## **CONTRIBUTORS**

Bryanna Millis (Assessment Team Leader, DAI); SENADA Team: Ron Ashkin, (Chief of Party), Ilyas Saad (Senior Economic Advisor), Wigatiningsih Partosedono (Senior Legal Advisor), Marc Sutton (Senior Competitiveness Advisor), Aris Darujo (Industry Expert), Ferry Dzulkifli (Cluster Facilitator), and Harun Wiranto (Public Awareness and Communication Manager).

Consultants: Arianto A. Patunru, Suahasil Nazara, and Nuzul Achjar (Institute for Economics and Social Research–Faculty of Economics University of Indonesia), Fadhil Hasan (Institute for Development of Economics and Finance), and Idris Sulaiman (Indonesian Information Technology Federation).

Cover and inside photos provided by Campbell Bridge.

## ACRONYMS

ADB	Asian Development Bank
AFTA	Asian Free Trade Agreement
APEC	Asia-Pacific Economic Cooperation
ASEAN	Association of Southeast Asian Nations
BKPM	Investment Coordinating Board (Badan Koordinasi Penanaman Modal)
BPS	Central Bureau of Statistics (Biro Pusat Statistik)
CAR	capital adequacy ratio
CD	compact disc
CEIC	Committee on Electronic Information Communication
CII	Confederation of Indian Industry
CPI	Corruption Perception Index
DVD	digital video disc
EU	European Union
EMSA	Electricity Supervisory Agency
FDI	foreign direct investment
FEUI	Faculty of Economics of the University of Indonesia (Fakultas Ekonomi Universitas Indonesia)
FTA	free trade agreement
GDP	gross domestic product.
GR	Government Regulation
HS	Harmonized System
ICT	information and communications technology
IFC	International Finance Corporation
IIPA	International Intellectual Property Alliance
ILO	International Labour Organization
IPP	International Property Portals
ITRA	Indonesian Toll Road Agency
JSE	Jakarta Stock Exchange
KADIN	Indonesian Chamber of Commerce (Kamar Dagang dan Industri Indonesia)
KKN	corruption, collusion, and nepotism (Korupsi, Kolusi dan Nepotisme)
KPEN	National Economic Recovery Committee (Komite Pemulihan Ekonomi Nasional)
LDR	loan to deposit ratio
LIPI	Indonesian Institute of Sciences (Lembaga Ilmu Pengetahuan Indonesia)
LOR	loan to output ratio
LPEM	The Institute for Economic and Social Research (Lembaga Penelitian Ekonomi dan Masyarakat)
MDC	Multimedia Development Corporation

MFN	Most-Favored-Nation
NPL	nonperforming loan
OECD	Organisation for Economic Co-operation and Development
PT	Limited Liability Company (Perseroan Terbatas)
QoQ	quarter on quarter
R&D	research and development
RCA	Revealed Comparative Advantage
REDI	Regional Economic Development Institute
ROA	return of assets ratio
Rp	rupiah
SBI	Bank Indonesia Certificate (Sertifikat Bank Indonesia)
SEDC	State Economic Development Committee
SME	small and medium-sized enterprise
SPT	Notification Letter on tax (Surat Pemberitahuan)
TI	Transparency International
TRA	Telecommunication Regulatory Agency
USAID	United States Agency for International Development
VAT	value-added tax
YoY	year on year
WTO	World Trade Organization

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## EXECUTIVE SUMMARY

Indonesia was once one of the high-performing East Asian economies<sup>1</sup> that created the “East Asian economic miracle,” a 30-year period of sustained high economic growth coupled with declining rates of inequality. Even among this elite group of countries, the Indonesian economy stood out as particularly impressive for its small current account deficit and low amount of short-term debt. Indonesia was also rare among oil-producing countries for its ability to avoid the “resource curse,” by developing and maintaining strong agricultural and manufacturing sectors. During the 1980s and 1990s, the country became a leading player in a wide variety of industries, from palm oil to apparel to electronics.

There is some evidence that growth was slowing by 1993, but in 1997–1998 it came to an abrupt halt with the advent of the Asian economic crisis. This crisis began with the collapse of the Thai baht and ultimately impacted several countries in the region. While initial expectations were that the impact of the crisis on the Indonesian economy would be mild, Indonesia wound up being one of the hardest hit by massive investment flight, currency devaluation, and ultimately economic collapse (Smith 2003). In part because of the depth and breadth of the crisis, Indonesia has in many ways taken the longest to recover, with stagnant growth rates and the steady erosion of export competitiveness. Thailand, on the other hand, is already back on a solid growth track, and the other high-performing economies have largely regained their competitive standing.

There are several key factors that explain Indonesia’s poor post-crisis economic performance, including the lack of political stability, the lack of macroeconomic stability, and the implementation of policies that have impeded private-sector activities. This combination has created a negative investment climate in Indonesia, holding back capital improvements at the firm, industry, and national levels and limiting job creation. In addition, the December 2004 tsunami had an enormous impact on Indonesia, particularly in the Aceh territory on the island of Sumatra; however, at this stage it is not possible to distinguish any tsunami-related effects on national-level competitiveness.

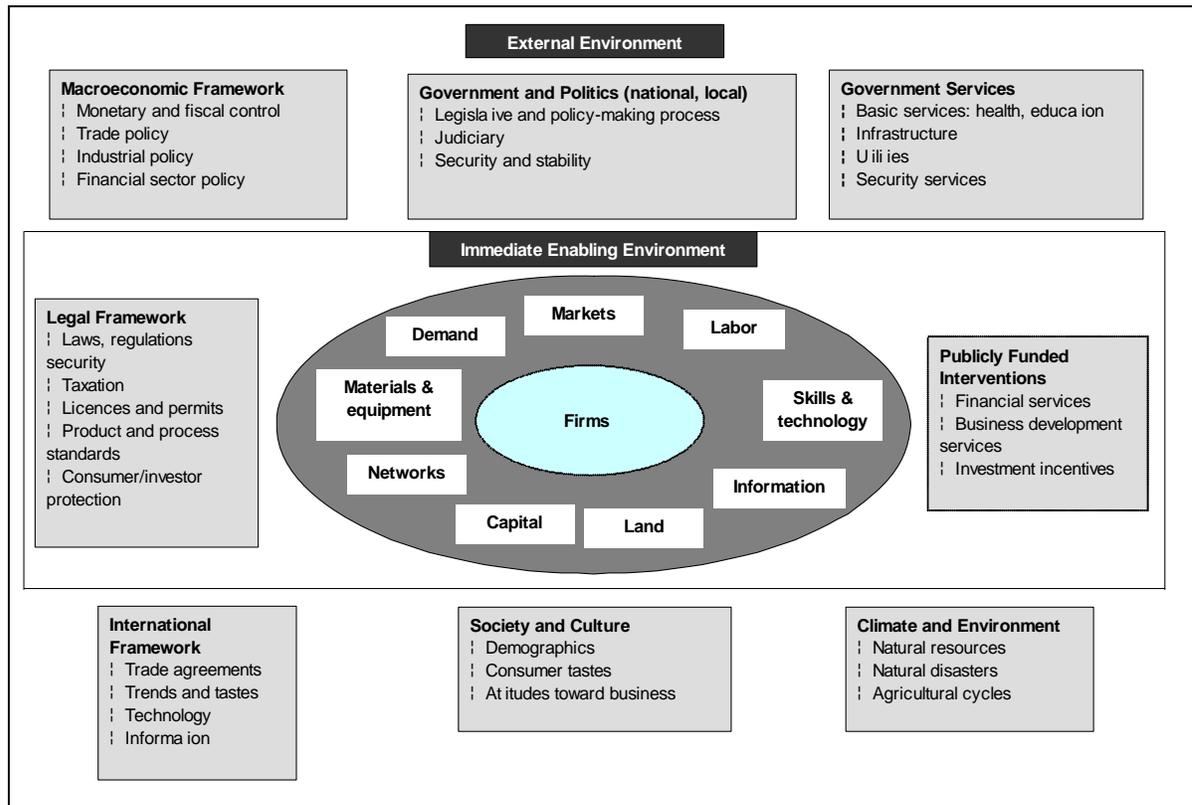
Extensive literature exists on the competitive challenges faced by businesses operating in Indonesia today. Domestic and international research institutions and donor organizations have examined the macroeconomic factors and formulated recommendations for improving policies, drawing investment, and creating employment and growth. For the first half of this paper, the SENADA – Indonesia Competitiveness Program team worked with these domestic and international experts to draw together the latest information and provide additional analysis within the context of the enabling environment for doing business.

The enabling environment refers specifically to how a country’s laws and regulations support or impede the ability of businesses to react efficiently and effectively to market forces. In Figure I-1, the inner box contains the elements of the immediate enabling environment. On the left side, the legal framework includes laws and regulations, taxes and tax administration, licensing and permits, standards, and protection for consumers and investors. On the right side, publicly funded interventions include the provision and maintenance of financial services, business development services, and investment incentives. The center oval highlights the areas over which the above items govern—the factors of production, necessary skills, equipment, information, and technology needed to competitively meet demand.

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<sup>1</sup> The high-performing East Asian economies were Hong Kong, Indonesia, Japan, Malaysia, the Republic of Korea, Singapore, Taiwan (China), and Thailand.

**Figure I-1: The Business Environment**



The outer box of this diagram describes the wider external environment—areas of national and international governance, society, and nature that impact firms’ ability to conduct business from a somewhat greater distance. Among these topics, those in the top row will be addressed in this assessment.

The macroeconomic framework refers to the economic and policy environment necessary to pursue national goals of growth in industry, exports, and gross domestic product (GDP). Government and politics focuses on the existence of a functioning judiciary and the implications of decentralization for coordinating national and local-level policies toward a common goal. Government services include the provision of health and education services, the existence of sufficient infrastructure for producers to get their goods to market, and the utilities and security necessary for firms to function.

The first section of this paper begins with a review of Indonesia’s recent macroeconomic performance. While an important measure of stability has been reached in recent years, maintenance of this stability continues to be a priority. The past year, 2005, saw fuel price increases and exchange rate depreciation that led to higher prices for both domestic and imported staple goods. As inflation spiked in the last quarter of the year, the private consumption that has been the primary engine of growth in the Indonesian economy suffered. These conditions are believed to be temporary but could be managed more carefully by the government in the future to avoid inflationary expectations that accompany increases in fuel and natural gas prices.

This section is followed by an overview of the conditions surrounding, and regulations governing, the factors of production in Indonesia. Access to land does not pose significant problems to domestic or foreign businesses because registration for businesses is a relatively simple process. However, this

market is heavily regulated, with overlapping and conflicting laws that create confusion and instability. A proposed revision to the current law on land ownership may simplify conditions somewhat, but it is unknown if and when full implementation of the revision will take place.

The labor market, in contrast, suffered enormous setbacks as a result of the 1997 crisis. In contrast to the pre-crisis era, Indonesia is seeing flat trends in employment in the manufacturing and services sector, after dramatic increases in agricultural employment from 1998 forward. Informal employment has also been on the increase for the last decade—the agriculture and informal sectors have served to support much of the population through the crisis years. Migration has also served as a stop-gap measure for Indonesians unable to find work at home. Migration is taking place at both the low- and high-skill levels; low-skill “irregular” workers are moving to Malaysia, Singapore, and Hong Kong, and those with more extensive educations leave for better opportunities abroad.

Even with these measures to absorb the workforce in Indonesia, unemployment remains high and growing, particularly among women and the young. Economic growth in Indonesia is currently driven by private and government consumption, rather than by the investment that would increase production and create new job opportunities. Unemployment is exacerbated by inflexible labor regulations. A high minimum wage—driven up by political considerations rather than increases in productivity—severance pay of over two years for long-term employees, and the inflexibility of contract and part-time work all constrain business growth.

The banking system in Indonesia has seen enormous improvements since the early years of the crisis, but banks remain extremely risk averse and have not yet recovered effective intermediation services. Struck by high rates of nonperforming loans in the late 1990s, banks continue to focus on improving asset quality rather than expanding credit portfolios, a situation exacerbated by incomplete information on creditworthiness. Where banks do invest, they are more likely to provide short-term credit rather than investment credit or working capital to firms. This focus on consumption credit may come full circle to again increase the incidence of nonperforming loans if it continues unchecked. Finally, banks are undervaluing corporate clients in favor of Bank Indonesia Certificate (SBI) and government bonds, portfolios with minimal risk and lower costs, even if returns are lower than they might find elsewhere.

In terms of science and technology, one of Indonesia’s primary constraints is a lack of qualified personnel. As described in more detail in the section on labor, “brain drain” is a serious problem for Indonesia. Particularly with regard to research and development organizations, the qualifications of researchers in Indonesia are very low, with low rates of workers who have earned advanced degrees of any kind and a particular dearth of Ph.D.s. Of equal importance for the future of Indonesian firms, an official strategy for widespread technological upgrading in industry has not yet been developed.

One of the constraints to an effective policy on information communications and technology (ICT) is the poor state of infrastructure in Indonesia. Penetration of mobile phones is increasing rapidly around the country, but fixed lines and broadband remain rare outside of large cities. In addition to communications services, lack of capacity of roads to adequately serve transport needs and insufficient energy infrastructure are additional constraints to businesses. Equally important are the administrative or logistic hurdles that manufacturers face, particularly in terms of imports and exports. With Indonesia’s long and relatively insecure border, effective management of ports and customs procedures is all the more essential for companies to compete.

The Indonesian legal system is bogged down by long delays and difficulty in getting a fair trial due to corruption and lack of sufficient training and education in the courts. Complications and overlapping laws and regulations are also abundant, such that even laws designed to simplify proceedings often complicate them further through poor design. Starting and operating a business is a lengthy,

expensive, and complicated affair in Indonesia. Problems with law enforcement, corruption, burdensome taxes, and inconsistent regulations are listed as among the most serious for entrepreneurs.

Avoiding the use of courts through arbitration and mediation is popular among businesses and conditions to do so in Indonesia are improving, albeit slowly. In late 1999, court intervention to enforce arbitration decisions were finally eliminated. A regulation passed in 2003 also supports mediation by requiring that parties in a civil suit attempt mediation for a month before taking their case to court. For a number of reasons this regulation is not always enforced, but conditions can be expected to improve in this area.

One of the most important legal frameworks for the enabling environment is tax administration. Tax revenue as a percentage of government income in Indonesia has been increasing steadily in recent years, although it is not yet as high as before the crisis. More importantly, the tax ratio in Indonesia is the lowest in Southeast Asia because of problems in the tax administration system, including an uncompetitive tax rate, excessively complicated administration procedures, and the high rate of corruption among tax officials. Investment law faces similar constraints: it is not unified for all investments, nor does it treat all investors equally. Furthermore, investors face a lack of legal certainty, both due to problems in the law itself and as a result of corruption.

Decentralization, an important part of the national development strategy, has been under way since 1999. However, the objectives of improving public services and furthering public participation in political and economic decision making have largely gone unmet. Instead, decentralization has been used as a tool by local governments to pass additional laws and regulations intended to keep revenue under their control. This has played out through restrictions on exports of raw materials (a procedure also used at the national level to retain value added), tolls on transportation through cities and towns, and multiple levies on economic activities. These regulations lead to further instability in the investment climate and seriously hinder growth in industries that use resources from different parts of the country.

Intellectual property rights are weak in Indonesia, which has among the highest optical disc piracy rates in the world. While inventors, small and medium-sized enterprises (SMEs), large firms, research centers, and universities would benefit from better implementation of intellectual property regimes, the problems with law enforcement and corruption in general affect this industry as well.

All of the above legal areas are subject to corruption. Smuggling, inconsistent application of the law, and informal payments are all common activities. It is estimated that the largest economic impact of corruption comes from informal activities in the Customs and Excise and Tax Administration offices, where underinvoicing and bribes to support false documents are relatively easy to get away with. Levies paid to individuals rather than to the government have a direct impact on national revenue. Furthermore, the impact of corruption on investment levels is significant—by some estimates Indonesia's GDP growth rate could increase by 2 percent if corruption were eliminated.

Following the discussion on the enabling environment, the paper presents analyses of export and investment trends. General trends in both areas have been downward in recent years, but a closer look reveals differences in specific sectors and industries. For example, Indonesia appears to be returning to an output structure based on natural resource abundance, with continuing competitiveness in agricultural products such as palm oil and growth in the mining sector. Revealed Comparative Advantage analysis illustrates that concentrations in apparel and footwear manufacturing are giving way to rubber and tin. This is due in no small part to Indonesia's limited market access in many developed and developing markets. Products exported from Indonesia that receive most-favored nation status in developed economies are nearly all raw commodities—through tariff escalation, each layer of added processing increases tariffs on Indonesian exports. Meanwhile, large developing countries such as China, India, and Brazil place tariffs on all agricultural exports from Indonesia.

Indonesia's trade with Association of Southeast Asian Nations (ASEAN) countries and other countries of East and Southeast Asia has been increasing in recent years, while exports to the United States and Western Europe have seen a small decline. The competitive environment within the ASEAN region has also intensified; countries such as Malaysia, Thailand, and China mirror much of Indonesia's traditional production and export structure, but produce and export at lower cost, at higher quality, and in greater volume.

Investment in Indonesia actually saw an upturn in 2005 after several years of decline. In the manufacturing sector, foreign direct investment was focused on the chemical and pharmaceutical industries, while the services sector received the bulk of investment in transport, storage, and communication. Domestic investment, meanwhile, was focused in the paper and printing industry.

Even with this upturn, investment is not yet an important engine of growth in the economy. The ratio of capital formation to GDP is still small compared to pre-crisis levels, and investment growth, particularly in terms of foreign investment, is limited to a few very capital-intensive sectors that do not have a large impact on job creation.

All businesses working in Indonesia face the conditions described in Part I. However, the focus of SENADA activities will be at the industry and firm levels, where businesses make decisions about how to maximize their resources and structure their production within existing constraints. The industries selected for intervention are ICT, automotive parts, footwear, textile and apparel, ceramics, and rattan.<sup>2</sup> These selections were made based on economic importance and potential for growth through a methodology described in more detail at the beginning of Part II.

The case studies contained in Part II of this report offer snapshots of each industry that can be filled out as the project begins to work with selected firms to better understand their competitive challenges. At this stage, an understanding of the role these industries play in the economy is a helpful point from which to move forward.

## ICT

- The ICT industry is in the early stages of development in Indonesia. Lack of infrastructure ensures that technological diffusion remains limited in large part to cities such as Jakarta and Surabaya; many smaller towns and villages still lack fixed-line phone service. However, SMEs are increasingly recognizing the benefits of ICT and making use of it to overcome other constraints such as access to information, transportation, and marketing capabilities.
- Reforms in ICT legislation have been ongoing since the late 1990s, opening the industry up to a greater degree of competition and attempting to draw investment from abroad. Thus, while prices for ICT products and services remain high in Indonesia relative to neighboring countries, conditions are improving and ICT adoption is increasing each year. This is played out in demand for products and services in each of the four primary areas along the ICT supply chain: hardware, software, infrastructure and networking, and service providers.
- Industry strengths include the huge untapped market in Indonesia, which has great potential for growth as the economy picks up and incomes rise. Challenges for the near future include insufficient infrastructure and the need for a more highly trained workforce to fill the demand for technicians and programmers that will arise as the industry expands.

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<sup>2</sup> SENADA will work with the first three industries in years one and two of the project. The second three industries have not been finalized but are expected to be footwear, ceramics, and rattan.

## **AUTOMOTIVE PARTS**

- The automotive parts industry is growing rapidly in Indonesia as the market for cars, and particularly motorcycles, takes off. Huge investments have been made in manufacturing plants by a number of the largest automobile manufacturers in the world, including Honda, Yamaha, and Peugeot. The greatly increased volume of production, and the large number of inputs into the motor vehicle industry in both new and aftermarket sales, suggest that there will be a continuing role for specialized SMEs if they can effectively meet demand.
- This industry is extremely competitive and Indonesia's place has gone from one of two main suppliers to the Japanese automotive industry to one of six. Countries like Thailand, Korea, Malaysia, China, and Taiwan are now major players. To compete in this industry, Indonesia will have to address weaknesses in technology, productivity, and supplier capability.

## **FOOTWEAR**

- The Government of Indonesia places great importance on the footwear industry because it is a huge employer, with production in many regions of the country, and an important earner of foreign exchange. Thus, while Indonesia has lost investment in this industry in recent years, renewed efforts to improve competitiveness are being made across the country.
- Indonesia's production is strongest in the area of casual shoes, or shoes made with leather uppers, that are exported primarily to the United States and Europe. Exports continue to be a major focus of the footwear industry in Indonesia because of rapidly growing world demand, particularly in the sports shoe segment.

## **TEXTILES AND APPAREL**

- Indonesia remains a major player in the textile and apparel industry, at number 11 in the world for exports of textiles and number 9 for exports of apparel. However, its role has changed in the new competitive environment, as low-cost producers such as China, Vietnam, and Cambodia increasingly gain investment and market share. Therefore, Indonesian firms will need to take a more strategic approach to carving out niche markets for their goods.
- The supply chain for textiles and apparel is long and Indonesia has a number of comparative and competitive advantages in inputs to this industry. The manmade fiber industry is a natural strength for Indonesia because of its petro-chemical supply, and Indonesia has a reputation for high quality and a tradition of specialized patterns. However, additional research is needed to learn what steps Indonesian firms can take to produce higher-value goods for the world market.

## **CERAMICS**

- The Indonesian ceramics industry is composed of floor and wall tiles, tableware, sanitary ware, and art ware, which is still a small segment of the industry made up of primarily of SMEs. The first three segments of the industry are distinguished by their volume, where wall tiles dominate, and sales margin, where tableware and sanitary ware lead.
- In addition to being a major producer of floor and wall tile, Indonesia imports a large amount of ceramics, particularly in the category of tableware, in which imports more than doubled between 2001 and 2005. Indonesian ceramics producers lack the sophistication of competitors such as Japan, as well as the reputation for quality held by countries such as Spain and Italy. However, the

domestic market for ceramics products is booming due to high rates of construction in cities and towns.

## **RATTAN**

- Indonesia is the world leader in rattan production, which grows naturally in the rainforests of Sulawesi and is farmed in gardens on Kalimantan. Increasingly, the plant is also being grown in plantations on Java, so that production of the raw material is taking place closer to the site of processing. Rattan furniture is produced almost entirely in West Java, although a certain amount of processing takes place elsewhere around the country.
- Demand for rattan and rattan furniture is strong, with China leading the world in terms of raw rattan imports, followed by Hong Kong and Singapore. These countries are major through-points for Indonesian rattan, which is further processed into furniture or exported to Europe and the United States. In 2004, the United States was the world leader in rattan furniture imports, followed by France, the United Kingdom, and Germany.
- The rattan production and processing industry remains very traditional in Indonesia and the country faces significant competition from countries such as the Philippines in terms of quality and design capability to meet demand for higher-end products. This suggests a clear path for development of the Indonesian rattan furniture industry if the necessary technology and skills can be acquired.

PART I

# THE COMPETITIVE ENVIRONMENT

The Pasola is a ritual war fought by up to 100 spear-wielding traditional warriors on horseback. It is held on the island of Sumba in the far east of Indonesia each February and March for 2 days each month just after the full moon. The island is known for its strong native traditions, horses and its weaving.



## **THE ENABLING ENVIRONMENT**

At the level of implementation, competitiveness is created by private-sector innovation, flexibility, and responsiveness to market signals. However, the ability of the private sector to function effectively can be significantly enhanced or constrained by government policies. The government is responsible for maintaining macroeconomic stability in the face of fluctuating internal and external conditions, thereby increasing or minimizing risk to the private sector. Beyond stability, the wide range of laws and regulations that govern business activities play an equally important role in ensuring that markets function effectively. The enabling environment is broadly defined to encompass macroeconomic policy, factors of production, and the laws and regulations governing businesses activities.

### **MACROECONOMIC TRENDS AND POLICY**

In recent years Indonesia has reached a healthy degree of macroeconomic stability, although the later months of 2005 saw some fragility in this area. The reduction in government fuel subsidies in October led to a fuel price increase of more than 100 percent, sparking a huge spike in the inflation rate.

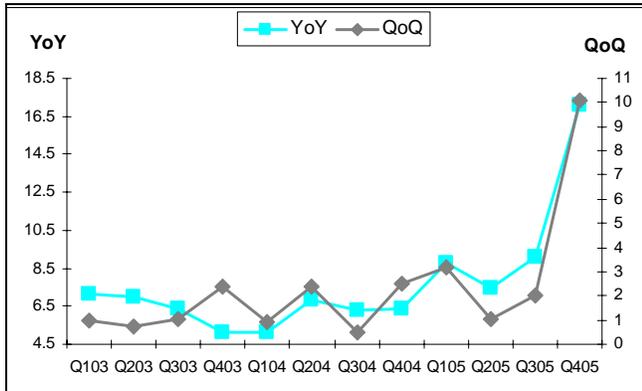
Before the Asian economic crisis of 1997, Indonesia pursued an export-led growth strategy; in the post-economic crisis era, growth has been driven primarily by private consumption, with public consumption contributing to a lesser degree. The low contribution to growth from exports resulted from the deterioration of a variety of competitive conditions, including the cost of doing business, increasing competitiveness of other countries in the region, and a low rate of investment. As a result, nearly 10 years later, Indonesia's competitiveness has not fully recovered from the 1997 crisis. A recent turnaround in investment trends bodes well for the future, however—investment is expected to be an important driver of growth in the next years, with a beneficial impact on export industries. The Institute for Economic and Social Research—Faculty of Economics University of Indonesia (LPEM-FEUI) estimates economic growth of 4.24 percent in the last quarter of 2005, between 5.4 percent and 5.7 percent in 2006, and between 5.8 percent and 6.2 percent for growth in 2007.

### **INFLATION**

The Central Bureau of Statistics (BPS) reported 17.11 percent inflation (year on year [yoy]) in the third quarter of 2005, compared with 7.42 percent at the end of the previous quarter (Figure I-2). Dramatic increases in the price of food, administered commodities (for example, cigarette retail prices, toll road charges, and water billing rates), and transportation contributed significantly to this change (Figure I-3). The decline of rice production in 2004, accompanied by bottlenecks in the distribution of staple goods in some areas, pushed the food inflation up by 13.91 percent in the last quarter. Meanwhile, the weakening of the rupiah during the second and the third quarters of 2005 led to higher import costs for some prepared foods, beverages, and tobacco as well as in the clothing and health sectors. Improvements in the exchange rate seen in the last quarter (following a fuel price increase) did not help the situation as had been expected.

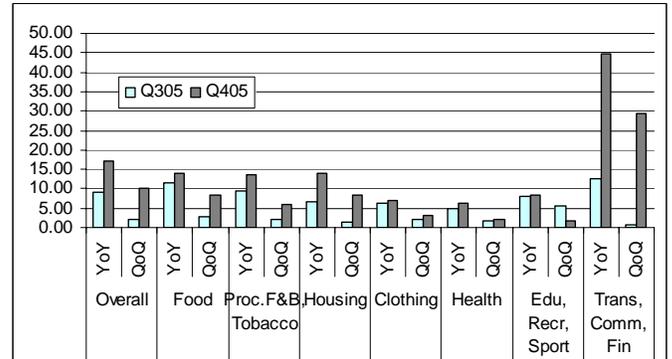
To a large extent, the inflationary pressure seen at the end of 2005 was driven by political forces. Primary among them was the lack of a clear plan to address the results of the increase in the fuel price. Fortunately, the inflation rates that followed the fuel hikes were not long-lasting (Figure I-4).

**FIGURE I-2: INFLATION RATE**



Source: CEIC Data Company Ltd. (CEIC), Asian Database.

**FIGURE I-3: SECTORAL INFLATION IN THE THIRD AND FOURTH QUARTERS OF 2005**

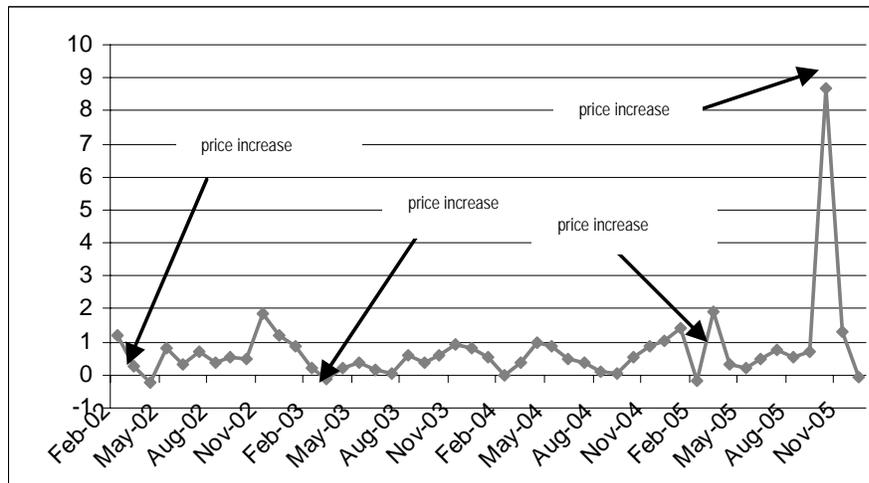


Source: CEIC Data Company Ltd. (CEIC), Asian Database.

**EXCHANGE RATE**

During the third quarter of 2005, the rupiah depreciated against the U.S. dollar by 5.5 percent compared to the previous quarter, closing at Rp 10,310/US\$. The decrease in fuel subsidies in early October, along with the long-awaited cabinet reshuffle in early December, seems to have helped the recovery of the rupiah however and the year closed at Rp 9,830/US\$.

**FIGURE I-4: CPI'S RESPONSE TO FUEL PRICE INCREASE**



Source: CEIC, Asian Database.

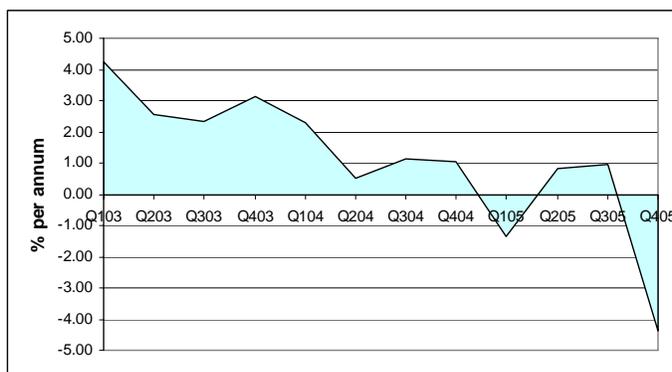
The downward pressure on rupiah came from two sources. Internally, the increasing deficit in the balance of payments, triggered by the mounting domestic demand for U.S. dollars to serve imports and foreign debt, played a key role. The demand for dollars far exceeded supply earned through exports and foreign direct investment, and was further exacerbated by inflationary expectations. Externally, the pressure came mainly from the upward trend in international interest rates, continued tight monetary policy in the United States, and soaring oil prices in the world market.

## INTEREST RATE

In an effort to curb inflation and rupiah depreciation, Bank Indonesia maintained a tight biased monetary policy. The Bank Indonesia Certificates (SBI) rate was raised by 8.49 percent in July 2005 to 12.75 percent at the end of the fourth quarter of that year. The rise in SBI rate was in line with an increase in the U.S. Federal Reserve Board Rate, which encouraged the demand for dollar-denominated assets, applying downward pressure to the rupiah. The monetary authority was correct to increase the SBI rate to discourage capital outflow, but this policy could have been taken earlier to stem the fall of the real interest rate.

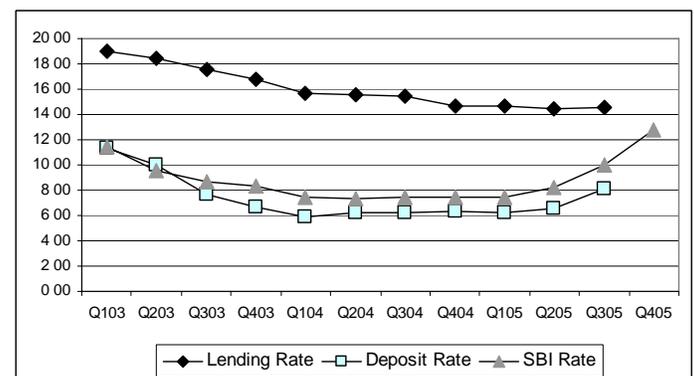
Figure I-5 shows the real interest rates as the difference between the nominal SBI rate and the inflation rate. The real interest rate was negative in March–April 2005, but moved to a positive range from May until the last quarter of the year. As the SBI rate increased, the deposit rate quickly adjusted (Figure I-6). Increasing competition among banks forced them to start focusing on small sized credits and fee-based income. As Table I-1 shows, tight monetary policy did not significantly affect banking performance and credit expansion continued to increase in the third quarter of 2005. However, the loan to deposit ratio (LDR) rose to 67.1 percent from 65.7 percent in the previous quarter while the weakening rupiah made deposits in other currencies more attractive. Another consequence was the deterioration in credit quality, as indicated by a higher percentage of nonperforming loans (NPL).

**FIGURE I-5: REAL INTEREST RATES**



Source: CEIC, Daily Database.

**FIGURE I-6: INTEREST RATES DIFFERENTIAL**



Source: CEIC, Daily Database.

**TABLE I-1: BANKING INDICATORS**

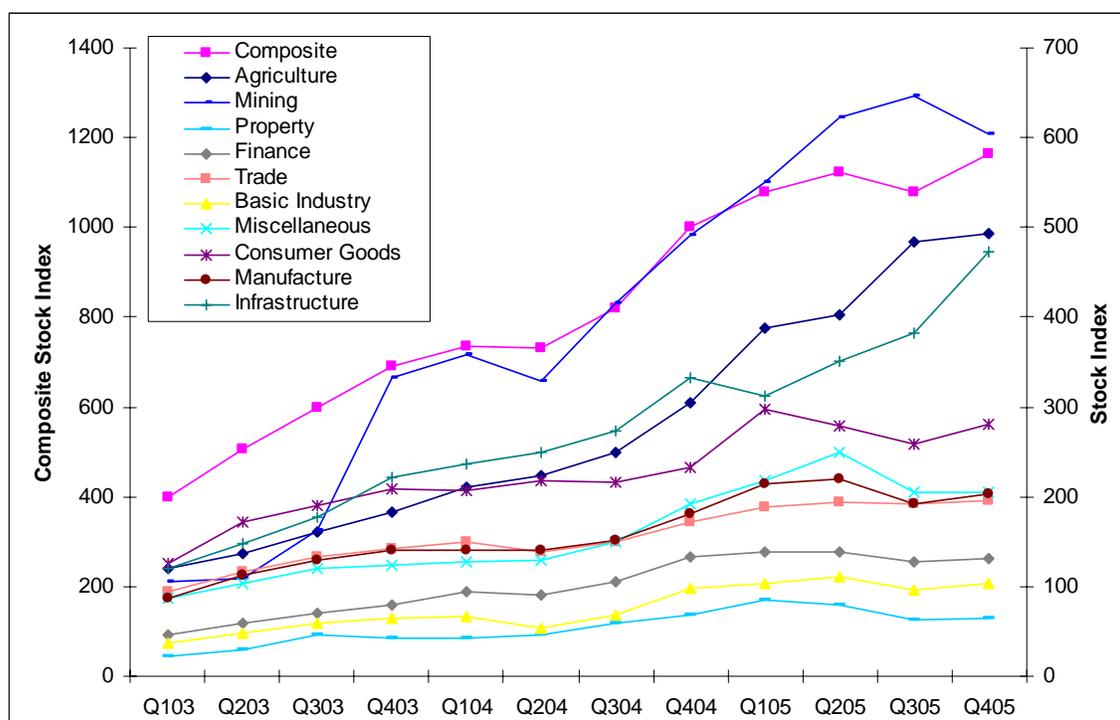
	2002	2003	2004	Q105	Q205	Q305
Asset (Rp Trillion)	1,112.2	1,196.2	1,272.3	1,280.6	1,344.6	1,346.6
Credit (Rp Trillion)	410.3	477.2	595.1	617.8	664.4	702.2
LDR (%)	49.1	53.7	61.8	64.4	65.7	67.1
Gross NPL (%)	8.1	8.2	5.8	5.6	7.9	8.9
Net NPL (%)	2.1	3.0	1.7	1.9	3.7	5.0
CAR (%)	22.5	19.4	19.4	21.7	19.5	18.9

Source: Bank Indonesia.

## STOCK MARKET

The Jakarta Stock Exchange (JSE) Index has shown promising, if variable, performance over the last several years. After passing the psychological level of 1,000 in August 2004, it fell back below this level before again rising to 1,100 in December 2005. Figure I-7 shows that the composite index pickup in the fourth quarter of 2005 was mainly driven by the infrastructure sector, consumer goods, and, to a lesser extent, basic industry. Mining, on the other hand, slowed down after serving as the main driver from the second quarter of 2004 until the third quarter of 2005.

**FIGURE I-7: JAKARTA STOCK INDEX PERFORMANCE**



Source: CEIC Daily Database.

## DRIVERS OF ECONOMIC GROWTH

The third quarter of 2005 experienced slightly slower growth than the second—5.34 percent down from 5.84 percent (Table I-2). Compared with the second quarter, all demand components of the gross domestic product (GDP), except private consumption and government expenditure, experienced lower growth. On the supply side, the manufacturing sector continued to be the biggest contributor to the GDP despite a decrease in growth compared with the previous quarter (Table I-3). Key manufacturing subsectors were transport equipment, machinery, and apparatus, with the highest sectoral growth in the transportation and communication sector, as was the case for the preceding two quarters. This growth was mainly driven by development in telecommunication products such as cellular phones and the internet. Of particular interest is the remarkable increase in government expenditure, which was driven by the 2005 disbursement started in July. The total government expenditure amounted to more than 34 trillion rupiah. Because the disbursement is still ongoing, the role of government expenditure will likely continue in the first half of 2006.

Despite its slight increase as compared with the second quarter, private consumption experienced a slower growth rate than in the same quarter of 2004. This decline was due primarily to the high inflation expectations and rupiah depreciation that put downward pressure on disposable income,

weakening purchasing power. The government plan to increase the cost of electricity in 2006 will put additional pressure on consumers, although a moderate increase should not have a big impact on the economy—a 30 percent increase, for example, would likely contribute less than 0.8 percent to inflation. Nonetheless, such a plan should be clearly articulated to avoid the spiraling inflation expectations that were seen in 2005.

Investment saw low growth in the third quarter of 2005, caused primarily by the unsound investment climate and the lack of improvement in industrial policies. The high inflation rate put additional pressure on businesses, who then deferred their investment plans. The slowdown in production activities led to sluggish growth in imports as well. As consumption picks up in the second quarter of 2006 the production side can be expected to respond accordingly, with increases in investment and imports. The increase in imports, which are dominated by raw materials and capital goods should have a beneficial impact on production and exports as well.

**TABLE I-2: GDP GROWTH (% , YOY)**

	Q105	Q205	Q305	Q405 (*)
Private Consumption	3.22	3.59	4.43	3.61
Government Expenditure	-8.63	-5.70	16.15	9.53
Investment	13.68	14.54	9.18	6.00
Export	13.30	12.69	3.39	3.71
Import	15.58	17.86	9.29	7.12
GDP	6.12	5.84	5.34	4.24

(\*) Staff Estimate

Source: CEIC, LPEM-FEUI.

**TABLE I-3: GDP GROWTH BY INDUSTRIAL ORIGIN (% , YOY)**

Industry Origin	Q105	Q205	Q305	% Share of Q305/GDP
Agriculture, Livestock, Forestry, and Fisheries	1.63	-0.96	1.64	15.57
Mining and Quarrying	1.04	-2.87	-2.32	8.95
Manufacturing Industries	7.05	6.65	5.59	27.90
Electricity, Gas, and Water Supply	7.81	7.59	9.78	0.68
Construction	7.32	7.44	6.31	5.91
Trade, Hotel, and Restaurant	9.96	9.48	7.88	16.66
Transport and Communication	13.12	13.91	12.87	6.17
Financial, Ownership, and Business	6.51	9.97	9.07	9.22
Services	4.90	4.36	5.36	8.93
GDP	6.12	5.84	5.34	100.00

Source: CEIC, Asian Database.

## FACTORS OF PRODUCTION

The factors of production—land, labor, and capital/technology—are the fundamental resources in production, and the ability to access the optimal amount of each at market value is extremely important for doing business cost-effectively. This section provides an overview of the regulations surrounding these factors, including the ability of firms to register or own land, issues of labor costs and unemployment, and the framework surrounding access to finance. Technology is discussed briefly in the context of a highly educated workforce capable of supporting research and development initiatives.

## LAND REGISTRATION AND OWNERSHIP

Land ownership in Indonesia is governed by Law No. 5 of 1960 on Basic Principles of Agrarian Law. This law is expected to be revised in the near future to clarify overlapping regulations and remove constraints in dispute settlement; in general, however, purchasing land for business purposes is quite a bit easier than doing so for individual use, and is facilitated in industrial areas. In addition, the Presidential Regulation No. 36 of 2005 concerning the Land Providence for the Development of Public Needs is under revision, with changes expected to lead to improved public infrastructure, including the creation and upkeep of roads. Table I-4 on land ownership regulations in the Association of Southeast Asian Nations (ASEAN) shows that land ownership for business purposes is a key exception to the rule in countries that otherwise restrict foreign ownership. Anecdotal evidence suggests, however, that foreign ownership in Indonesia also takes place through informal relationships that list Indonesians as the landholders.

**TABLE I-4: SELECTED ASEAN COUNTRY RULES ON LAND OWNERSHIP**

	Acquisition of Land and Building (for business and residential purposes)	Restrictions
INDONESIA	Under the 1960 Basic Agrarian Law and the Presidential Decree No. 34/1993 concerning the land, cultivation right and the right to build on land are given to legal entities domiciled in Indonesia, including foreign companies, and can be used as a collateral or transferred to a third party until government approval.	Right to use state-owned land for purposes of agriculture, including plantation, etc. The title is normally granted for 35 years but may be extended to 60 years and it can be renewed for a maximum period of 35 years if the land is properly maintained and managed. This right is given to Indonesian partner(s) or legal entities domiciled in Indonesia, including foreign capital investment companies, and can be used as collateral.  Right to construct and own buildings. The title is usually granted for 30 years which can be extended for a maximum of 20 years and can be renewed at the discretion of the National Agency for Land Affairs for a maximum 30 years. It can be used as collateral.
MALAYSIA	Foreigners are allowed to acquire land and buildings for business and residential purposes. Foreigners can also buy industrial land. Industrial estates are mostly developed by the State Economic Development Corporations (SEDC). Industrial estates are also developed by other government authorities and by the private sector.	Ownership of industrial land developed by SEDCs is usually on a leasehold basis, ranging from 30 to 99 years.

	Acquisition of Land and Building (for business and residential purposes)	Restrictions
PHILIPPINES	In principle, only Filipinos and/or companies with domestic equity ratio of 60% and over can own public land.  A foreign company establishing a joint venture with the National Development Corporation can own land.	With the approval of the Department of Agriculture and the Department of Environment and Natural Resources, foreign companies may enter into service agreements with the Energy Development Board for the exploration, development, and exploitation of energy resources; or with the government or local shareholders for the exploration, development, and exploitation of other mineral resources.
SINGAPORE	In principle, foreign companies use land in the form of lease from the government. The lease term, initially 30 years, can be extended to 60 years. Lease rates vary with respect to the locations. It is possible to buy factory buildings.	N.A.
THAILAND	Under the Land Code, non-Thai individuals and companies are generally not allowed to own land. However, foreign companies promoted by the Board of Investment and oil concessionaires are entitled to land ownership. Moreover, the Land Code provides for non-Thai individuals or companies to own land by the virtue of treaty provisions or by ministerial permission.  The Condominium Act allows foreign individuals and companies to own condominium units provided that the total condominium units owned by foreign entities do not exceed 40% of the total floor area of each condominium.	N.A.
VIETNAM	Foreign individuals and enterprises are not entitled to land ownership.  However, enterprises with foreign-owned capital are allowed to lease land to implement their investment projects. Foreigners also are allowed to rent houses for residential purposes.	The land lease duration depends on the duration of a project and shall not exceed 50 years. However, pursuant to regulations made by the Standing Committee of the National Assembly, the government may, on a project-by-project basis, grant a longer duration but the maximum duration shall not exceed 70 years.

Source: ASEAN: Land Ownership.

## THE INDONESIAN LABOR MARKET

### *Structural transformation*

In 2004 the population of Indonesia was approximately 218 million, with a labor force of 104 million. Population growth in the last decade has declined to around 1.4 percent per year as a result of the successful family planning program launched by the government in the early 1970s, but the labor force has continued to grow at an annual rate of about 2 percent. The labor force participation rate, which measures the percentage of the working-age population that is employed, has been relatively stable since 1997, fluctuating between 66.3 percent and 68.6 percent. Table I-5 provides several macro indicators of the Indonesian labor market.

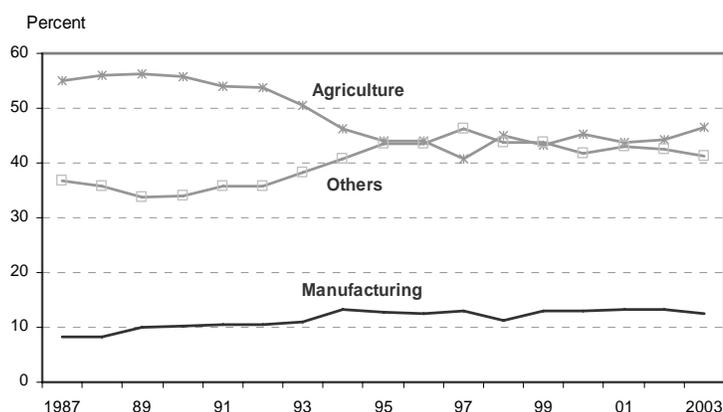
**TABLE I-5: POPULATION, LABOR FORCE AND LABOR FORCE PARTICIPATION**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Population (million)	194.76	198.32	201.35	204.39	206.52	206.30	209.39	212.53	215.28	218.52
Labor force (million)	86.4	90.1	91.3	92.7	94.8	95.7	98.8	100.8	102.6	104.0
Labor force participation (%)	—	—	66.3	66.9	67.2	67.8	68.6	67.8	67.8	67.5

Sources: BPS Statistics Indonesia, various publications.

The tendency of sectoral distribution in the labor market to change over time is described by Chenery and Syrquin (1975) as part of the theory of structural transformation. This theory asserts that the labor market will follow a transition similar to that of the national income, with agricultural sectors declining in importance while the manufacturing sector, followed by the services sector, increasing. Figure I-8 shows the sectoral composition of Indonesian labor.

There is a marked difference between pre- and post-crisis trends. Prior to the 1997 crisis, Indonesia followed the predicted course, with a downward tendency in the share of agricultural employment. In 1987, about 55 percent of total workers were in agricultural sectors; in 1997 the share was only 41 percent. For manufacturing, the share in 1987 was only 8 percent, while in 1997 it was 13 percent. The share in services was also increasing, although many workers were engaged in the traditional and informal services sectors. Following the crisis, the share of agricultural workers returned to early 1990s levels, illustrating the role of the agricultural sector as a coping mechanism—this sector can accommodate surplus labor to an extent that manufacturing and (especially formal) services sectors cannot. Many workers returned to agricultural activities as formal manufacturing and services shrank due to the nationwide economic contraction. The post-2000 economic recovery period shows that the Indonesian labor market has not yet regained the characteristics of structural transformation. Employment in agriculture and services does not show a clear trend in either direction; the share of manufacturing employment has remained constant at early 1990s levels.

**FIGURE I-8: SECTORAL COMPOSITION OF INDONESIAN WORKERS, 1987–2003**

### *International migration*

International migration is an important part of the Indonesian labor market; workers migrating away from Indonesia have eased domestic labor market pressures somewhat. Another way to analyze the impact of migration is to calculate the increase in the unemployment rate had these workers stayed in Indonesia and become unemployed. As can be seen in Table I-6, the existence of migrant workers has reduced the unemployment rate by as much as half a percentage point.

**TABLE I-6: NUMBER OF MIGRANT WORKERS AND% OF THE LABOR FORCE**

Year	Migrant Workers (thousands)	Labor Force (millions)	Contribution to the Unemployment Rate If Domestically Unemployed
1995	121	86.4	0.14
1996	220	90.1	0.25
1997	503	91.3	0.56
1998	368	92.7	0.39
1999	428	94.8	0.45
2000	435	95.7	0.45
2001	339	98.8	0.34
2002	480	100.8	0.48
2003	294	100.2	0.29

### *Irregular workers*

The issue of Indonesian irregular<sup>3</sup> migrant workers has been a source of heated discussion in Indonesia and has affected Indonesia's relationships with neighboring countries. Recent estimates of Indonesians working abroad are about 2.1 million in Hong Kong, Malaysia, Singapore, Korea, and the Middle East combined, sending home nearly US\$3 billion in remittances.

Migrant workers typically have irregular status as a result of the difficult and complicated procedures involved in obtaining work permits. Middlemen in both countries also play a role in facilitating irregular trafficking. Simplified procedures and additional media attention to the problems irregular workers face are needed, in addition to a higher degree of supervision to prevent trafficking. The government must develop an effective policy to facilitate the process in order to take better advantage of international labor demand.

### *Positive and negative implications of migration*

Indonesian migrant remittances play an important role in both the national and regional economies. In 2000, East Java received approximately Rp 1.4 trillion, Central Java about Rp 850 billion, and West Nusa Tenggara about Rp 360 billion. For the two Java provinces, that amounted to about 2.5 percent of regional GDP. For West Nusa Tenggara, that amount of remittances was no less than 11 percent of the regional GDP.

Although remittances have a positive economic impact, Indonesia also suffers from "brain drain" through the loss of educated and skilled workers who choose to work abroad. These workers may be recruited through vacancy announcements, students may remain abroad after obtaining a degree from a foreign university, and multinational corporations often hire skilled local workers for positions abroad. All of these opportunities are highly valued by Indonesian workers, both for the recognition that their skills and experiences are on par with those required internationally and for the financial opportunities they afford. Data on these workers are scant, however, because these workers do not need to register with the government to work abroad.

India provides an interesting example of the potential long-term impacts of brain drain: the loss of skilled and educated workers that took place there beginning at the end of World War II has reversed

<sup>3</sup> The term "irregular" was proposed by the International Labour Organization (ILO) to replace the commonly used "illegal" workers.

course and became a “brain gain.” This takes the form of individuals returning to India to set up businesses or work in high-tech industries and the targeted influxes of remittances, ideas, and investments from the diaspora. Much of India’s recent development as a center of technology has been facilitated by capital investments made in this way. According to the Confederation of Indian Industry (CII), remittances brought in by Indians working in the United States amounted to about US\$4.5 billion in 2003, or approximately 7.5 percent of Indian exports that year. Indian remittances from the United States and Europe increase annually by more than 25 percent each.

### *Unemployment in Indonesia*

Unemployment in Indonesia is increasing, in terms of both the number of people and the percentage of unemployed in the total labor force. In 2005, the official unemployment rate was recorded at an all-time high of 10.3 percent. This negates the flattening trend shown in 2003–2004 that led to an expectation that 2005 would show an improvement in the unemployment rate. Unemployment in rural areas is slightly higher than in urban areas and, from 2000 onward, there has been a tendency toward increasing unemployment among females and young people. Youth unemployment grew from 72 percent in 1997 to 78 percent in 2002, indicating that it is increasingly difficult for new entrants into the labor market to find work, particularly for those with only a junior high school-level education.

From the macroeconomic point of view, there are two important factors in reducing the unemployment rate. First, employment-friendly economic growth must be supported by investment rather than private or government consumption, because the latter will not push the domestic production capacity. Consumption may even have a negative effect on employment if it is driven primarily by imports, a tendency seen in Indonesia due to appreciation of the exchange rate. Investment, on the other hand, has a positive effect on employment absorption by improving production capacity.

**TABLE I-7: LABOR FORCE AND UNEMPLOYMENT**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
Labor force (millions)	86.4	90.1	91.3	92.7	94.8	95.7	98.8	100.8	102.6	104.0
Unemployment (millions)	6.25	4.41	4.28	5.06	6.03	5.81	5.33	8.46	9.53	9.76
Unemployment rate (%)	7.24	4.89	4.68	5.46	3.36	6.08	5.39	8.45	9.50	9.50

Sources: BPS Statistics Indonesia, various publications.

The second feature affecting the unemployment rate is the sensitivity of labor absorption, or employment elasticity, in the economy. In the pre-economic crisis period (early to mid-1990s), each percentage point of Indonesian economic growth absorbed approximately 400,000–500,000 workers (Islam and Nazara 2000). At that time, the economy needed to grow at 4–5 percent to absorb two million new entrants to the labor force annually. Because pre-crisis economic growth was generally higher than 5 percent, the Indonesian unemployment rate was decreasing, particularly in 1995–1996. The picture is quite different for the post-crisis and recovery periods. Since 2000, only approximately 250,000 workers are absorbed for every 1 percent of economic growth, a direct result of the fact that economic growth up to 2004 was driven by private and public consumption rather than by investment. Only in the last few years has investment increased, although the rate is still not high enough to create sufficient employment opportunities.

Table I-8 shows a simple calculation of how much the economy needs to grow if the government wants to reduce the unemployment rate. Assume, for ease of calculation, that the Indonesian labor force in 2005 was 105 million, growing at 1.7 percent annually, with a backlog of 10.8 million unemployed. This implies a labor force of 114.2 million in 2010—an increase of 9.2 million people within a five-year period. Given alternative unemployment rates, we can calculate the number of

“allowed” unemployment in 2010. The number of jobs needed in the next five years is simply the additional labor force (9.2 million) plus the backlog of 2005 unemployment (10.8 million) less the allowed unemployment. Assuming that this number can be evenly spread over a five-year period, one can compute the annual economic growth required to achieve the target unemployment rate at various employment elasticities.

	<b>Unemployment Rates (%)</b>		
<b>Employment elasticity</b>	<b>5</b>	<b>6</b>	<b>7</b>
250,000	10.0	9.1	8.2
300,000	8.3	7.6	6.8
400,000	6.3	5.7	5.1

With the current employment elasticity of 250,000d, the Indonesian economy will need to grow at an average annual rate of 8.2 percent to reach a target of 7 percent unemployment by 2010. Assuming an employment elasticity of 300,000, Indonesia can reach 7 percent unemployment by 2010 if average annual growth is 6.8 percent over the next five years. However, Indonesia has not enjoyed this level of employment elasticity since 2000.

### *Informality*

Another important distinction in the labor market is the role of informal employment. Prior to the crisis, the informal sector was clearly in decline, a pattern that was completely reversed post-crisis. Current trends show some improvement in this area, with a decrease from 37.2 percent in the informal sector in 1997 to 29.2 percent in 2003, the same share found in 1990. A large informal sector is another coping mechanism during crises because it can absorb surplus labor when the formal sector shrinks. However, workers in the informal sector are not protected by rules and regulations and have no labor and job security. It is very hard to apply minimum wage regulations in the informal sector and workers typically have neither exact working hours nor income security.

### *The high cost of labor regulations*

There is evidence that the Indonesian labor market contributes in important ways to Indonesia’s high-cost economy. There is a growing concern that wage increases in the formal sector are outpacing productivity growth—in several provinces the minimum wage doubled between 1998 and 2003, profoundly impacting the formal-sector wage as a whole. As the minimum wage increases (sometimes significantly), the wage of workers at higher pay scales also rises. While the increase is less at higher ranks, it increases the overall average. In contrast, between 1997 and 2003, the index of value added per worker in GDP terms actually diminished by 3.8 percent, with the financial and construction sectors recording reductions of as much as 57 percent and 22 percent, respectively. The utilities sector, meanwhile, recorded an increase of 119 percent.

Another factor of great concern to the business sector is the high level of severance pay. Legislation passed in 1998 set the severance pay for a worker with 20 years of service at 15 months of salary and in 2003 that number was raised to 25 months. It is even higher for workers who are laid off for reasons of efficiency. A flexible labor market is often described in contrast to job security, as though adopting a flexible labor market necessarily means abandoning workers’ rights. However, restricting the business sector’s ability to maintain the optimum number of workers at different phases of the business cycle, or to expand into new business opportunities, has enormous implications for the two-thirds of the labor force that is not already formally employed. A number of frameworks exist to promote flexibility while protecting basic rights. For example, the ILO proposes a continuous training scheme for employees that prepares them to change jobs if need be. A strategic alliance among

workers, firms, and the private sector is recommended to finance such a scheme. Many in the Indonesian government have recognized the negative impacts of the current labor regulations, and the Medium Term Development Planning document has adopted a flexible labor market.

## **FINANCIAL MARKET INTERMEDIATION**

### ***Post-Crisis Improvements***

The 1997 economic crisis in Indonesia caused distortions in bank intermediation. Deep depreciation in the exchange rate led to huge foreign exchange losses and put a heavy burden on the banking system because many foreign exchange liabilities were not hedged to protect banks from exchange rate fluctuation. In response, the monetary authority raised interest rates, causing negative spreads in the banking sector, which worsened as interest rates continued to increase. As the crisis impacted the real sector, NPLs increased as well.

During 1998–2000, policies on blanket guarantees and bank recapitalization enacted by the government and Bank Indonesia improved the performance of the banking system considerably. NPLs reflecting the quality of the banking system declined from 53.8 percent in 1998 to 4.5 percent in 2004. The completion of the bank recapitalization program improved bank balance sheets and expanded their capacities to provide loans. Outstanding credit increased from Rp 225 trillion in 1999 to Rp 560 trillion in 2004. The loan to deposit ratio also increased from only 26 percent in 1999 to 49.95 percent in 2004. The profitability of the banking system also improved, as shown by an increase in the return of assets ratio (ROA). In 1998, banks suffered losses of nearly 18.80 percent of their assets, but by the end of 2004, the ROA had increased to 3.46 percent. That the lending interest rate is persistently higher than other earning assets such as the SBI and Government Bond offers support to banks to expand lending. The margin for the working capital credit rate, for example, has spread to 5.89 percent of the three-month SBI rate on average during 2002–2004. In addition, improvements in macroeconomic indicators such as the exchange rate and inflation should reduce the cost of funds in the banking system.

The improvement in performance of banking indicators, however, does not translate into the return of banks' intermediary functions in supporting growth in the real sector. The capacity to provide funds for credit inarguably increased, but the improvement has not reached the optimal level to stimulate business activities. The fact that bank intermediary functions are not yet fully functioning is reflected by the following indicators:

1. High capital adequacy ratio (CAR), which reflects over-liquidity. At the end of 2004, the CAR reached 19.42 percent. This ratio far surpasses the limit of 8 percent set by the central bank. A high CAR means higher costs to the banks and, therefore, higher interest rates.
2. Low LDR reflects undercapacity used in realizing credit. At the end of 2004, the LDR of the banks was about 49.95 percent. At this level, banks were under capacity compared with the pre-crisis period when the LDR reached about 78.30 percent. The LDR in 2004 indicated the over-liquidity of the Indonesian banking system.

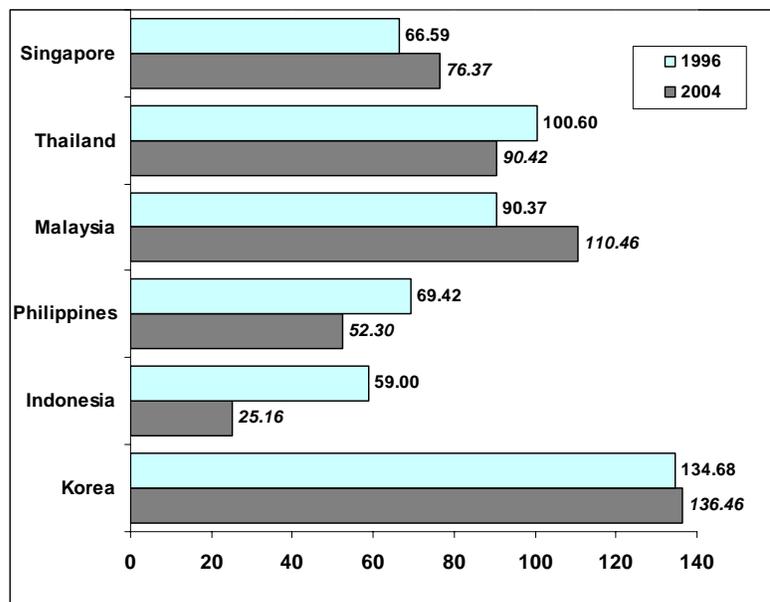
The high CAR and low LDR show that there is much room for loan expansion, so problems in intermediation are not on the supply side. Table I-9 shows the development of the various indicators of the Indonesian monetary and banking system in the period 1996–2005.

**TABLE I-9: MONETARY AND BANKING INDICATORS**

Indicator	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
SBI 3 Month Rate	14.1	12.3	50	12.6	14.3	17.6	13.12	8.34	7.29	12.83
Total Assets (Trillions Rp)	506.87	715.21	895.49	1,006.66	1,048.21	1,099.70	1,059.82	1,167.89	1,215.69	1,410.34
Credit (Trillions Rp)	292.92	378.13	487.43	225.13	283.1	316.06	371.06	440.51	559.47	695.65
LDR	78.3	82.6	72.4	26	33.7	33.1	38.4	43.2	49.95	55.02
CAR	11.8	9.2	-15.7	-8.1	2.3	19.3	23.1	19.3	19.42	19.3
NPL	9.5	8.1	53.8	36.9	19.4	11.7	7.6	6.78	4.5	7.56
ROA	1.2	1.4	-18.8	-6.1	1	1.4	2	2.5	3.46	2.55

Source: Bank Indonesia, 2006.

3. The low loan to output ratio (LOR) reflects the role of bank loans in stimulating output. The LOR in 2004 was 25.16 percent, which was much lower than the pre-crisis period (50.05 percent in 1996). This comparison shows that the Indonesian banking system's current loans have not yet optimally stimulated output in the economy. Comparison among countries further confirms this condition. Thailand, which experienced the same crisis, has higher LOR performance than Indonesia, while Singapore, Malaysia, and even Korea have managed to improve their LOR performances to higher than the pre-crisis period, as shown in Figure I-9.

**FIGURE I-9: TREND OF LOR IN SELECTED COUNTRIES**

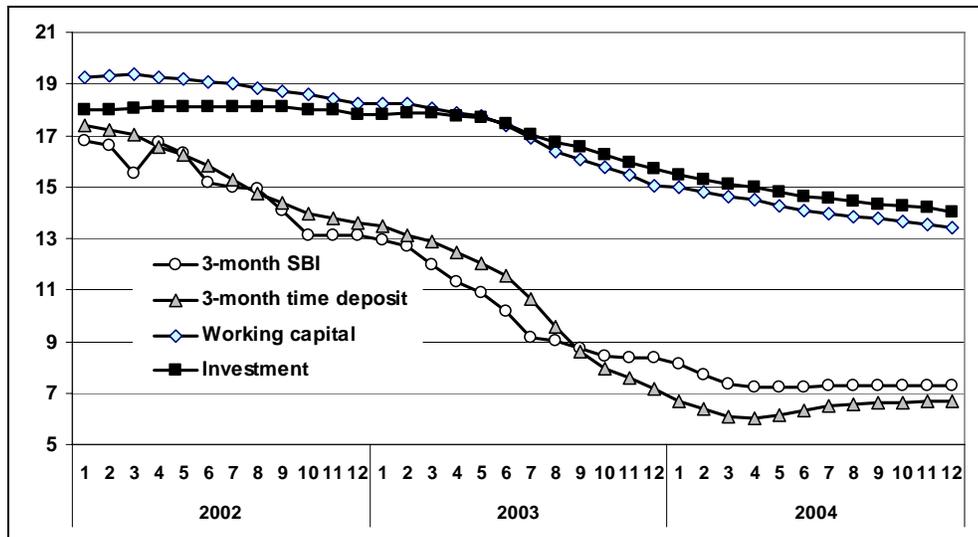
Source: Asian Development Bank (ADB) Key Indicators 2005.

At the micro level, banks tend to behave very conservatively and are more risk-averse in selecting their portfolio composition. The problem of NPL escalation during the crisis period led banks focus on internal consolidation to improve their asset quality rather than on expanding their credit portfolios. In addition to the focus on bank consolidation, the risk of the real sector and incomplete

information on debtor creditworthiness were rationale for banks to set the lending interest rate high enough to compensate for the risk.

The risk-averse attitude of the banks is illustrated in their business decisions as well. The wider spread between the lending interest rate set up by the banks and the SBI rate is a benchmark of the financial market, shown in Figure I-10. The spread between the credit interest rate, especially the investment and working capital credit rate, and the SBI rate has been widening at least since early 2002. The spread is an important part of the term structure of the lending rate since it reflects the cost of funds in the banking system, the operational cost in the banking business, and the risk of the real sector expected by the bank. Based on this, banks are still doubtful about real sector prospects.

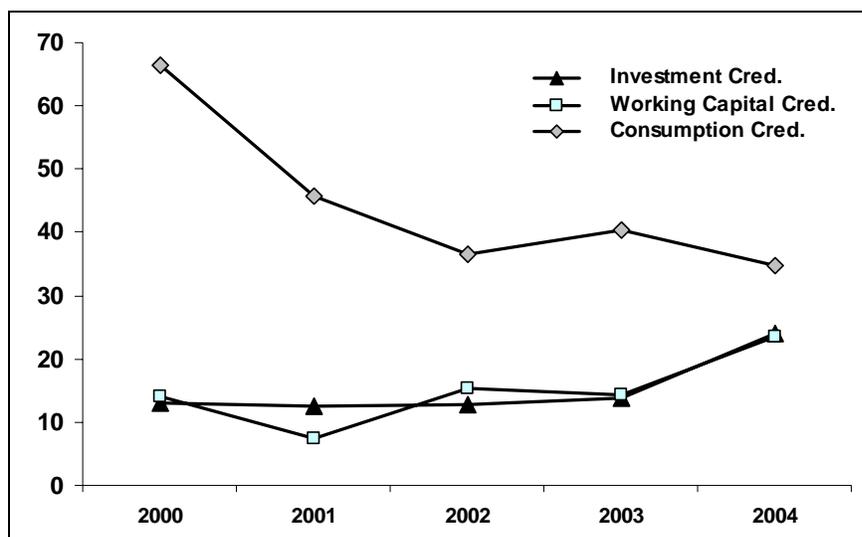
**FIGURE I-10: TREND OF INTEREST RATE IN THE INDONESIAN FINANCIAL SYSTEM**



Source: Indonesian Economic and Financial Statistic (SEKI), Bank Indonesia, various editions.

Banks have also changed their preferences with respect to their investment portfolios, tending to expand short-term consumption credit rather than investment credit or working capital. This takes place even when the debtor is willing to pay a higher interest rate and provide more collateral for investment credit. As shown in Figure I-11, consumption credit tended to grow an average of 30 percent higher than the investment credit or working capital. Credit for vehicles, property, and credit cards, the variants of consumption credit, has been intensively promoted to the public in recent years and banks offer prizes to attract demand for consumption credit. In fact, increasing consumption credit to the public will potentially create many problems, both for the economy and for the banking system itself. The imbalance of consumption credit growth and the real income of the public may create a consumption boom and consequent moral hazard problem. In the end, banks may again be dealing with NPLs.

**FIGURE I-11: TREND OF INDONESIAN BANKS CREDIT PORTFOLIO GROWTH (BILLIONS RP)**



Source: Indonesian Economic and Financial Statistic (SEKI), Bank Indonesia, various editions.

There is also an increase in risk-free and passive portfolio placement. In addition to increasing consumption credit, banks also prefer to place their funds in other earning assets such as SBI and government bonds since these portfolios have nearly zero risk, relatively good returns, and lower administrative cost. The share of government bonds in bank portfolios is still significant, although the trend is declining. In this sense, public borrowing is not “crowding out” private borrowing, but it is lowering the cost of a banking sector portfolio that undervalues corporate clients. The share of SBI and government bonds as a percentage of total credit is currently declining, but was still higher than 60 percent until the end of 2004, as shown in Figure I-12.

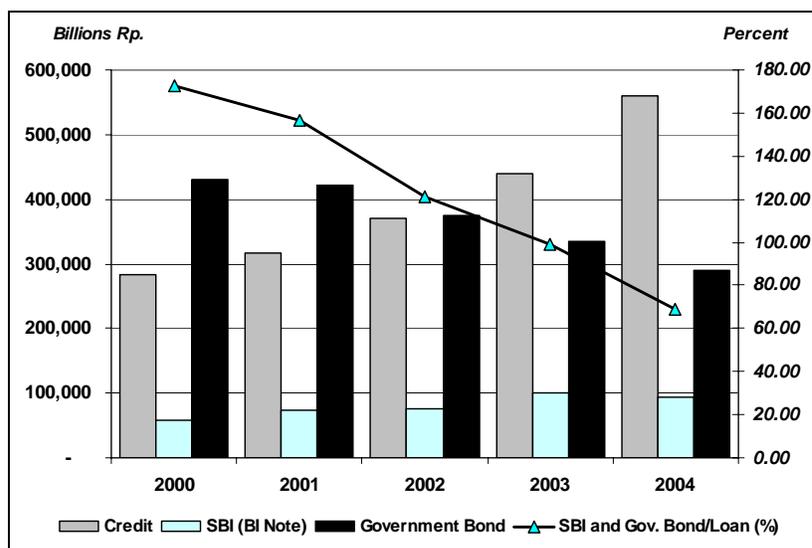
Concentrating credit with a particular group of debtors or debtors with well-known creditworthiness is another banking trend. This behavior arises because information about debtor creditworthiness is a costly activity and still does not guarantee the selected debtors will perform as expected—the result of a condition in the credit market called asymmetric information.

***The Real Sector Perspective: The Fact from the Demand Side***

The disintermediation problem comes not only from banks but also from the real sector—the demand side of credit. The government has enacted several policies to recover the real sector performance, but there continue to be several problems.

First, there is a great deal of uncertainty in the business climate. Banks approved many credit applications, but the rate of undisbursed loans was still high, reflecting that the real sector has taken a “wait and see” approach. This uncertainty was caused by constraints in the real sector such as infrastructure problems, complicated business license procedures, macroeconomic and political instability, and poor law enforcement, which in turn caused a low rate of return on businesses from the perspective of the banks. At the end of 2004, the disbursed rate was only about 37.10 percent, and it continued to deteriorate to 20.12 percent at the end of 2005.

**FIGURE I-12: TREND OF INDONESIA BANK PORTFOLIO COMPOSITION**



Source: Indonesian Economic and Financial Statistic (SEKI), Bank Indonesia, various editions.

**TABLE I-10: TREND OF INDONESIAN BANK CREDIT DISBURSEMENT**

Items	2000	2001	2002	2003	2004	2005
<b>New Credit Approval</b>						
Investment Credit	5,553	24,293	38,589	44,301	55,081	211,942
Working Capital Credit	24,593	89,661	116,111	121,796	149,744	409,483
Consumption Credit	8,611	39,946	50,792	68,939	106,802	55,079
<b>Total</b>	<b>38,757</b>	<b>153,900</b>	<b>205,492</b>	<b>235,036</b>	<b>311,627</b>	<b>676,504</b>
<b>Outstanding Credit Differences</b>						
Investment Credit	7,585	8,190	9,458	11,392	22,548	15,599
Working Capital Credit	20,274	12,062	26,988	28,884	54,173	65,081
Consumption Credit	16,007	18,342	21,370	32,258	38,883	55,443
<b>Total</b>	<b>43,866</b>	<b>38,594</b>	<b>57,816</b>	<b>72,534</b>	<b>115,604</b>	<b>136,123</b>
<b>Credit Disbursement Rate</b>						
Investment Credit	136.59	33.71	24.51	25.71	40.94	7.36
Working Capital Credit	82.44	13.45	23.24	23.72	36.18	15.89
Consumption Credit	185.89	45.92	42.07	46.79	36.41	100.66
<b>Total</b>	<b>113.18</b>	<b>25.08</b>	<b>28.14</b>	<b>30.86</b>	<b>37.10</b>	<b>20.12</b>

Source: Indonesian Banking Statistic (SPI), Bank Indonesia, various editions.

The second problem is the high cost of financing. In a survey by the ADB, 48 percent of firms identified financing cost as an obstacle to investment and 38 percent of firms have difficulty accessing financing (see Table I-11).

**TABLE I-11: PERCENTAGE OF FIRMS IDENTIFYING THE FOLLOWING FACTORS AS VERY SEVERE OBSTACLES TO BUSINESS OPERATION AND GROWTH**

Investment Climate Factors and Component	Total	Medium	Large	Exporter	Non-Exporter
<b>Financing</b>					
Access to financing	38.6	32.2	44.5	44.4	32.9
Cost of financing	48.4	38.1	58.3	56.8	40.1
<b>Infrastructure</b>					
Telecommunication	22.0	17.7	26.2	26.0	18.1
Electricity	36.6	30.4	42.5	44.6	28.7
Transport	34.5	28.3	40.6	40.4	28.7
<b>Taxation</b>					
Tax rate	53.2	43.4	63.0	61.9	44.6
Tax administration	47.6	38.4	56.9	57.6	37.6
Customs and regulation-national	36.0	21.5	50.6	50.6	21.7
Customs and regulation-regional	36.6	25.1	47.5	49.2	24.2
<b>Labor</b>					
Labor regulation-national	45.4	35.1	55.5	54.5	36.5
Labor regulation-regional	46.6	37.8	55.5	55.7	37.6
Labor skill and education	43.9	33.9	53.3	51.1	36.8
<b>Business Operation and Corruption</b>					
Licensing and permits-national	36.9	30.1	43.7	43.5	30.4
Licensing and permits-regional	40.7	35.7	45.6	45.8	35.7
Anti-competitive	36.5	27.4	45.3	44.1	29.0
National corruption	53.2	44.0	62.7	63.8	42.6
Local corruption	54.4	46.3	62.2	63.0	46.0
<b>Stability</b>					
Economic policy uncertainty	69.1	59.0	79.0	78.0	60.5
Macroeconomic instability	68.9	58.7	79.0	77.7	60.2
Crimes	41.0	31.3	49.7	48.9	33.2
Legal and conflict resolution	45.0	35.1	54.1	54.5	35.7

Source: ADB-World Bank Investment Climate and Productivity Study, 2003.

Third, high business risk is reflected in the high NPL for sectors favored by the banks (see Table I-12). The industrial sector, for example, with an average of about 31 percent of the credit between 2001 and 2004, has NPLs of around 8.4 percent, far above Bank Indonesia regulations of 5 percent. This means that credit risk for this sector is still high, although it is lower compared with the previous years.

**TABLE I-12: TREND OF NPLS BY ECONOMIC SECTOR**

No.	Sector	2000	2001	2002	2003	2004
1	Agriculture, hunting, and agricultural facilities	22.21	18.52	13.55	8.89	4.82
2	Mining	13.73	17.66	7.95	5.66	1.92
3	Manufacturing	26.44	17.00	11.69	9.29	8.37
4	Water, gas and electricity	12.59	2.49	13.05	7.44	5.20
5	Construction	30.64	14.72	9.49	6.74	2.13
6	Trade, restaurants, and hotels	15.01	11.06	5.96	8.13	4.06
7	Transport, cargo storage, and communications	26.75	13.92	2.07	7.17	6.24
8	Business services	24.41	12.87	6.29	4.63	2.78
9	Social services	15.29	6.33	2.69	19.43	4.59
10	Others	7.32	3.29	2.51	2.68	1.93

Source: Indonesian Banking Statistic (SPI), Bank Indonesia, various editions.

Finally, production capacity remains extremely low, only about 48 percent, due to the problems and constraints in the investment climate. Recent improvements in macroeconomic stability are not enough to induce real sector recovery.

### ***Improving Financial Intermediation***

In the future, the banking system be challenged to increase intermediary functions while maintaining efficiency. There are at least five items that have to be carried out. First, banks must strengthen resources and infrastructure to expand credit based on risk management. The resources needed include human resources with the capacity and capability to manage risks associated with credit, a stronger capital structure, and improvements in banking infrastructure. In addition, improvements are needed in credit monitoring and supervision. Second, banks must increase access to information on the potential economic sectors, accompanied by the associated risks of credit expansion. With adequate information, banks can appropriately gauge the resources of business segments and minimize asymmetric information in credit system. Third, banks must increase firm access to credit through socialization and promotion of available credit. Fourth, they must create sustainable value added through product development and development of advanced information technology applications to improve efficiency. Fifth, banks must increase management of risk operation through good governance, internal controls, and implementation of information technology.

Therefore, a series of policies are needed to improve bank intermediary function and to recover the real sector:

1. Accelerate efforts to recover the real sector through investment incentives in the areas of tax, infrastructure, and labor regulation reform
2. Maintain and improve macroeconomic stability to increase public confidence and reduce business risk.
3. Facilitate and encourage the establishment and improvement of institutions needed to increase banking intermediary functions such as Credit Guarantee Agency, Bureau of Credit and Rating Agency for Business Prospect, and Supervising Body for Banking Competition.
4. Formulate and reform the operational and managerial policy framework as an instrument for inducing banking intermediary function. For example, the regulation on legal lending limit, NPL,

and LDR can be reviewed and reformulated to give greater room for credit expansion without losing its prudent principle.

- Facilitate regulations and institutions needed to encourage healthy competition in the finance and banking industries to mobilize funds and channel credit.

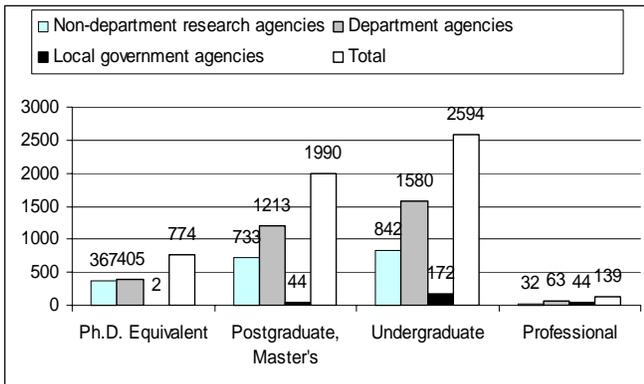
## SCIENCE AND TECHNOLOGY

Their technological capability is an important factor in the ability of Indonesian businesses to compete in domestic and global marketplaces. Proxies for overall technological capability include the number of research and development (R&D) personnel in the public and private sectors, the composition of graduates and students, and the number and rank of scientific publications.

### *Number of R&D personnel in the public and private sectors*

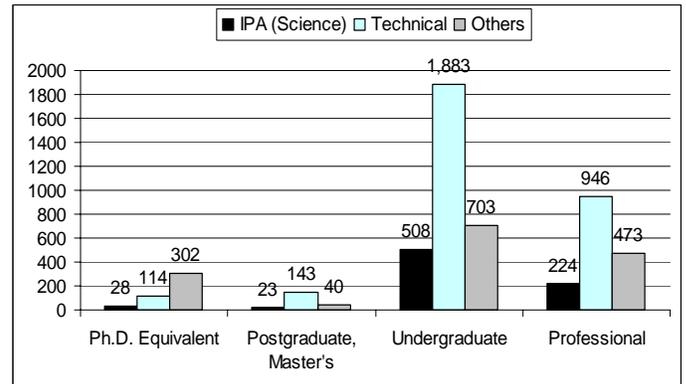
In both the public and private sectors in Indonesia, the majority of researchers have no more than undergraduate degrees. According to a document published by LIPI, in 2003 there were only two researchers with Ph.D.s working in local government agencies. Department and non-department research agencies fared somewhat better, with 405 and 367 PhD educated workers, respectively. There were even fewer Ph.D.s in private-sector science and technical jobs in 2003 and only 143 employees with master's degrees working in technical areas in that year.

**FIGURE I-13: NUMBER OF R&D PERSONNEL IN THE GOVERNMENT SECTOR, 2003**



Source: LIPI, 2004.

**FIGURE I-14: NUMBER OF R&D PERSONNEL IN THE PRIVATE SECTOR**



Source: LIPI, 2004.

These observations appear counterintuitive given the greater remuneration typically offered in the private sector, but, like other emerging economies, Indonesia suffers from “brain drain” and many privately trained scientists migrate elsewhere to work.

### *Composition of graduates and registered students*

Among students in tertiary institutions, the ratio of private to public educational institutions is quite large. The composition of government- and private-owned tertiary institutions in 2003 is shown in Table I-13; privately owned institutions produce a greater number of technical graduates, while public universities appear to produce more agriculture-related graduates. In both types of institutions, the vast majority of students are focused in social science and the humanities.

**TABLE I-13: COMPOSITION OF MAJORS IN PRIVATE AND STATE TERTIARY INSTITUTIONS, 2003**

Major	Government (%)	Private (%)
Social science and humanities	67	66
Technical	12	21
Mathematics and science	9	6
Agriculture	7	4
Medicine	5	3

Source: LIPI, 2004.

### *Number and rank of scientific publications*

The number of papers published in Indonesia in the fields of clinical medicine and plant/animal sciences are virtually equivalent, but articles in clinical medicine receive a greater number of citations. Indonesia performs about average in the international ranking of publications in all fields of science, although those in “core” scientific disciplines such as chemistry, physics, and space sciences are particularly low. (See Table I-14.)

**TABLE I-14: NUMBER, CITATION, AND RANK OF SCIENTIFIC PUBLICATIONS IN VARIOUS FIELDS OF SCIENCE, 1992–2002**

Fields of Science	Papers	Citations	Citations per Paper	Rank (Indo/All Countries)
Clinical medicine	550	4,246	7.72	55/104
Plant and animal science	558	1,565	2.80	57/103
Geosciences	304	1,557	5.12	42/93
Environment/ecology	280	1,373	4.90	45/96
Agricultural sciences	237	898	3.79	45/91
Immunology	77	894	11.61	52/87
Microbiology	99	826	8.34	53/86
Biology and biochemistry	131	653	4.98	66/96
Chemistry	181	589	3.25	81/87
Physics	148	444	3.00	79/83
Social sciences, general	155	401	2.59	45/97
Economics and business	83	383	4.61	37/76
Molecular biology and genetics	41	367	8.95	75/81
Engineering	192	336	1.75	68/94
Space science	52	251	4.83	57/59
Pharmacology and toxicology	51	217	4.25	67/79
Multidisciplinary	7	129	18.43	27/65
Psychiatry/psychology	16	111	6.94	67/79

Source: LIPI, 2004.

The above technology indicators illustrate the approximate capacity of the Indonesian workforce, and thereby Indonesian companies, to compete in the international marketplace. On the policy level, Indonesia lacks a coherent strategy in the area of science and technology, in spite of the various plans and agencies devoted to this area (Hill 1995). Habibie, the Minister of Research and Technology

under the Suharto government, developed a strategy of “technological leapfrogging” that relied upon state-owned companies and focused narrowly on activities such as aviation and ship-building, which are conducted in isolation from the bulk of private industry. Ignoring the importance of foreign direct investment (FDI) and focusing on industries with small multiplier effects throughout the economy resulted in the failure of this approach. In contrast to countries like Korea and Taiwan, Indonesia continues to lack policies for technological upgrading in electronics, telecommunications, or information technology industries.

## **INFRASTRUCTURE AND LOGISTICS**

The condition of infrastructure in Indonesia is considered a major constraint to business. Indonesia has a relatively low level of infrastructure service coverage. Statistics indicate that road density is only 1.6km/1,000 people, and the length of operating toll roads in Indonesia is about 562 km, half the length of operating toll roads in Malaysia (1,127 km) and only one-tenth of that in China (4,735 km). In terms of telecommunication service teledensity, Indonesia has 27 fixed lines for each 1,000 people, while Malaysia and Thailand have 195 and 84 fixed lines, respectively. Electricity consumption is 319 kwh/capita, with 45 percent of households not yet connected to electricity. Clean water is available for only 39 percent of the urban population, and the service rate of sanitation in urban areas of only 3 percent. The poor condition of infrastructure in Indonesia has a negative impact on productivity and provides a disincentive for investment, inhibiting economic growth. Insufficient and inefficient infrastructure and services are key sources of high cost in the manufacturing sector, further constraining the nation’s products from successfully competing in the world market.

### **TRANSPORTATION INFRASTRUCTURE**

The quantity and quality of transportation infrastructure and services are extremely low, with negative impacts on safety, mobility, accessibility, affordability, and integrated intermodal and networking services. Improving the quantity and quality of transportation infrastructure will require significant investment, much of which will have to come from private investors because government spending in this area remains limited.

### **ELECTRICITY SUPPLY**

The supply of electricity in Indonesia is not meeting the high, and growing, demand. The existing supply is 24 GW, with captive power of only 15 GW. This fulfills about 60 percent of demand, which has been increasing by 8 to 10 percent per year. Another key issue is the imbalanced distribution of electricity among regions. Java Island is almost fully on the grid, but regions outside Java experience frequent electricity crises and bring the national connectivity average down to 56 percent.

Government capacity to increase the power supply is limited, and the contribution of private investment has been low in this area as well. In addition to the lack of a long-term business plan for this activity, there is no clear investment policy or incentive plan, and no efforts have been made in energy diversification. These and other inefficiencies are the result of the lack of competitive conditions in this sector, which is monopolized by the state-owned electricity company, PLN.

### **TELECOMMUNICATIONS**

In 2003, there were only 8.5 million phone lines in service, with a teledensity of 3.5 percent. Approximately 86 percent of the existing infrastructure to support the lines is located in Western Indonesia (Sumatra and Java islands) with the remaining 14 percent located mainly in Sulawesi and Kalimantan islands. In Jakarta, teledensity has reached 35 percent, but in other big cities the rate is

only 11 percent to 25 percent. In the least-connected rural regions, teledensity can be as low as 0.2 percent.

About 76 percent of Indonesians, mostly those living in urban areas, have access to existing lines and telecommunication networks. Sixty-four percent of villages are not covered by the network. The telecommunication industry is still dominated by a few players—the deregulation intended to liberalize the market remains in progress and barriers to entry are quite high. PT Telkom, the state-owned enterprise, is still the biggest player both in fixed and non-fixed lines (mobile telecommunication). There are a few competitors in the mobile telecommunications business, however, and it is quite a bit more profitable than fixed lines and growing quickly. In 2003, the number of subscribers reached 18.6 million, compared with only 8.5 million for fixed lines (see Table I-15). However, since the market structure is still not fully competitive, the telephone rate is relatively expensive. This provides an incentive for private investors to enter the market, but adds to the costs of businesses using this service.

**TABLE I-15: GROWTH OF CELLULAR AND FIXED LINES, 1998–2005\***

Year	Cellular (millions)	Fixed Lines (millions)
1997	1.05	4.82
1998	1.06	5.35
1999	2.22	5.81
2000	3.66	6.32
2001	6.57	6.84
2002	11.45	7.35
2003	18.61	8.07
2004	26.00	9.17
2005	39.00	9.20

\* The cellular numbers are the total number of mobile numbers ever issued, not including the estimated 5–10 percent “churn rate” (numbers that are not used due to customer’s disuse and others) and the number of fixed line telephones are of the installed capacity.

Source: Compiled from PT Telkom and PT Indosat annual reports, 2005.

## **WATER SUPPLY**

Piped clean water is a luxury good for Indonesian people. Only 39 percent of the urban population and 6 percent of the rural population have access to piped clean water. The services provided by water pipe companies are poorly managed and ineffective, with the worst performance in large cities like Jakarta and Surabaya. Again, almost all water pipe companies are state-owned, with limited contribution from the private sector, primarily due to high government intervention in pricing.

The sources of water for the water pipe companies are primarily rivers that face poor management—accelerated degradation of catchment areas threatens the sustainability of water resources. As a result, there is a great deal of potential for conflict among users such as pipe water companies, electric power companies, farmers, and industries.

## **TRANSPORTATION LOGISTICS**

Logistics play a very important role in determining the competitiveness of manufactured products, in both the domestic and export markets. Even products produced by highly efficient factories may not

be able to compete in the world market due to high external costs created by a wide range of sources, from the inefficient transportation system to complicated procedures at container ports.

The process of importing to and exporting from Indonesia is estimated to take about a month, with delays largely driven by administrative hurdles. This length of time is seriously at odds with the focus on “next day delivery” that is more and more common among successful businesses in areas such as apparel and electronics. Customs procedures are also a huge problem given the long border with numerous entry points and the lack of coherent cross-country automation of customs. While costs of transportation and logistics of exports vary widely, up to 50 percent of these costs are estimated to accrue within Indonesia. Commodities such as plywood and coffee that rely on low-cost transport to be successful are among those with the highest costs. Problems in this area inhibit Indonesia’s ability to take advantage of other benefits, such as preferential trade in ASEAN and proximity to the rapidly growing Chinese market.

LPEM-FEUI conducted a study in five large industrial centers—Jabotabek (Jakarta, Bogor, Tangerang, and Bekasi), Surabaya (East Java), Medan (North Sumatra), and Makassar (South Sulawesi)—covering four large industries: food and beverage, textiles, electronics, and automotive products. The results showed that logistic costs are approximately 14.1 percent of total costs. This is nearly three times higher than such costs in Japan, in which logistics are 4.9 percent of the total.

Logistics costs consist of three components, based on stages of the production and marketing process: costs related to delivering inputs to factories, costs related to transporting output to ports, and costs related to handling materials at the factory site. Costs for getting outputs to ports and out of the country are estimated to be the highest, an average of 4.5 percent of total costs; costs of obtaining inputs are not much less, 3.2 to 4 percent if the source is domestic or foreign.

The regional comparison shows that Medan in North Sumatra has the highest logistics costs, 15.6 percent of the total, followed by Jabotabek with 15.3 percent and Surabaya with 13.7 percent. The lowest logistics costs are found in Makassar, with 11.7 percent. Output is the primary source of costs in Medan, while in Surabaya the logistics costs of imported inputs are highest.

## **RECOMMENDATIONS**

Promoting investment will require a significant increase in the coverage and quality of physical infrastructure. The government faces a serious budget constraint in this area—only about 17 percent of the US\$145 billion needed for infrastructure improvements over the period 2005–2009 will be available through the national budget. Another US\$30 billion will be provided by the National Commercial Bank, Mutual Fund, Pension Fund, and Insurance, and the remaining US\$90 billion, 62 percent of the total, will need to come from private investors and donor countries.

According to a 2004 World Bank survey of infrastructure investors, Indonesia has the second highest level of potential for infrastructure investment in Asia, following China. This is primarily due to the low penetration of telecommunications coupled with the huge potential for market growth, demand far exceeding supply in the energy sector, and a steadily growing middle class. However, Thailand is more likely to see investments actualized due to its reputation for political stability and a pro-business governance approach (World Bank Perception Survey 2004). The results of an Infrastructure Summit held in Jakarta in January 2005 reiterated these findings, and the government made a number of commitments to improve the investment climate.

First, the policy environment must be stabilized by:

- Ensuring predictability in rules and policies, including tariff and market arrangements (reducing perception of risks);

- Introducing enforceable contractual agreements, essential for mitigating noncommercial investors' risks (offering an agreement of international standard for a smooth closing deal with the private sector);
- Establishing policy certainty—not a blanket “comfort letter”—directly addressing the key issues of uncertainty demanded by potential investors such as predictable return and market size (neither government nor private investors are in favor of a short-term perspective of guarantee);
- Making a commitment to accelerate infrastructure development in concert with progress in other reforms; and
- Improving policy for the management and mitigation of noncommercial risks.

Second, entry policies must be improved by:

- Reducing regulatory obstacles for private participation (establishing fair competition); and
- Liberalizing infrastructure sectors, including access to infrastructure services (new laws on toll roads, telecommunication, and electricity have been approved and amended by the Parliament).

Third, pricing policy must be streamlined by:

- Implementing a simplified procedure of tariff setting (prices will be rationalized and depoliticized, prices will be established based on competition whenever possible, the tariff will be restored to cost-effective levels, and communications with the public on tariff changes will be improved); and
- Establishing a stronger regulatory body to oversee a fair process of tariff determination, such as the electricity supervisory agency (EMSA), the Indonesian Toll Road Agency (ITRA), and the telecommunication regulatory agency, TRA.

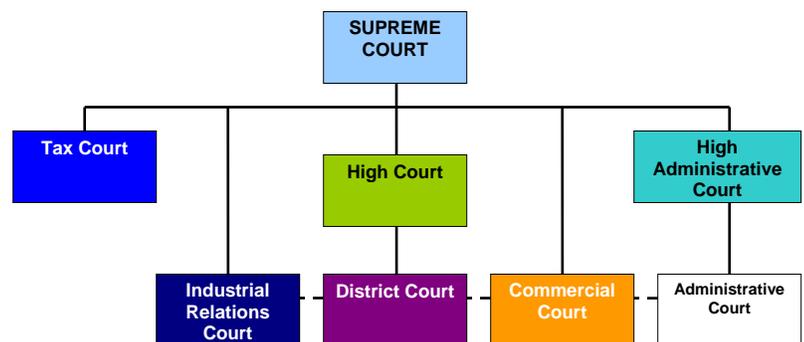
## THE LEGAL AND REGULATORY ENVIRONMENT

### COURT MOST RELEVAN TO INVESTORS

Legal delays and an inability to get a fair trial are the main constraints faced by those seeking to resolve issues through the law in Indonesia. Judgment at each level of court (District Court and High Court) takes approximately four to six months, followed by one to two years of cassation with the Supreme Court and another year for the ultimate legal action, re-review (Peninjauan Kembali), to be completed. Resolution may therefore take nearly four years, regardless of the size of the action or expected award amount. Minimizing this time could be achieved through the adoption of a system similar to a County Court, as found in the United States or United Kingdom, or a Summary Court for settlement of simple cases, as found in Japan. Such a court could function as the court of first instance as well as a final court that could provide legal certainty.

Moreover, court human resources must be developed by providing additional education to judges and court officers to improve their capacity to handle complicated cases.

The most relevant courts for investors are the District Court, Commercial Court, Administrative Court, and Corruption Court. The Commercial Court offers one way to resolve bad debts and enable



businesses to continue functioning even when faced with economic hardships. The recently amended bankruptcy law is a particularly important instrument in these proceedings. However, while bankruptcy proceedings are faster than other court processes, complications begin immediately after the debtor's assets have been repossessed by the appointed receiver for distribution to creditors. These complications include the selling of assets that are subject to mortgage or other legal burdens or conflicts over assets not in the receiver's possession. The transfer of such assets to any third parties may stir legal actions either by a third party, the debtor itself, or the creditors, creating a frightening picture of potential legal action.

### ***Starting and operating a business in Indonesia***

Indonesia is viewed by domestic and foreign investors alike as a "high-cost" economy. The World Bank report "Raising Investment in Indonesia" (World Bank 2004) cites two overarching categories inhibiting foreign investment in Indonesia: risks associated with political and social insecurity and the high cost of production. The breakdown of this high cost includes a wide range of areas in which costs are added to production, transportation, and domestic sales or exports. These include opening, registering, or closing a business; labor regulations; infrastructure; taxes and customs fees; legal and security issues; and obtaining financing. A 2004 business experience survey found that over 90 percent of Indonesian entrepreneurs had negative experiences with law enforcement 88 percent had problems with corruption, 84 percent with taxes, and 82 percent with burdensome or inconsistent regulations (Wanandi 2005). While these conditions make it harder for domestic businesspeople to grow their businesses, it may keep foreign investors out of the market altogether.

The time and cost involved with starting and running a business in Indonesia is high. While some of the numbers in the World Bank's *Doing Business 2006* have been disputed, there is little disagreement over the fact that it takes too long to start a business and that costs and minimum capital needed are prohibitive. The same is true in obtaining licenses, which reportedly costs over 350 percent of income per capita, and the inflexibility of labor laws. Firing a worker costs 145 weeks of salary, which limits the number of workers a firm is willing to hire, further limiting growth opportunities and exacerbating already high unemployment rates. Meanwhile, when closing a business, Indonesian businesspeople receive only 13 cents on the dollar and may spend years completing all of the necessary steps. This is in stark contrast to a country like Hong Kong, in which the recovery rate is 81 cents on the dollar and a business can be closed in one year.

### ***Arbitration***

Arbitration has been in existence in Indonesia since the Indonesian National Arbitration Board (BANI) was initiated in 1977 by the Indonesian Chamber of Commerce (KADIN). However, in the past it was an unpopular method for resolving disputes in Indonesia. Contrary to international arbitration models in the International Chamber of Commerce's Court of Arbitration and the United Nations Commission on International Trade Law, enforcement of arbitration awards in Indonesia required court intervention—the very thing arbitration was designed to avoid. The issuance of Law No. 30/1999 concerning Arbitration and Alternative Dispute Resolution removed courts from the process in an attempt to improve the investment climate following the 1997–1998 economic crisis.

In another attempt to relieve the courts of the caseload burden, the Supreme Court Regulation No. 2 of 2003 (PerMA 02/03) concerning the Procedure on Mediation in Court was recently introduced. This regulation requires parties in any civil suit to attempt to mediate their dispute over a 30-day period before the first hearing can be held in the court (Pryles 2002). In practice (based on legal practitioners' experiences), it does not work well for several reasons: the time limit of 22 working days is insufficient to complete mediation efforts; judges and advocates have not yet begun to support the legislation; and mediation facilities are insufficient. In addition to the above regulation, the government has issued Law No. 2/ 2004 concerning Settlement Dispute on Industrial Relations,

which came into force in January 2006. This law aims to establish a specific court for industrial relations in every District Court.

### ***The Negative List***

Government efforts to improve the investment climate in Indonesia include the opening of several sectors that were previously closed to foreign investment. The Presidential Decrees governing the Negative List outline sectors that are subject to special conditions.

Business fields absolutely closed for investment include those related to the production of illegal or dangerous substances as well as those related to environmentally sensitive products. Some restrictions continue to apply in the areas of transportation and communications, such as for taxi and bus services, trading services, and radio broadcasting services. In a number of strategic areas, foreign investment is allowed only under joint ventures with domestic capital. Infrastructure projects such as ports, energy generation and transmission, distribution of electricity for public use, telecommunications, shipping, airlines, potable water, public railways, and nuclear electric power generation must be in the form of a joint venture between foreign and Indonesian companies or state-owned enterprises (BKPM 2005).

Government regulation (GR) No. 20 of 1994, amended by GR No. 83 of 2001, governs share ownership on foreign companies investing in Indonesia. The investment law basically requires the formation of a limited liability company (Perseroan Terbatas [PT]) domiciled in Indonesia, either in the form of a joint venture between foreign and Indonesian individuals or legal entities, or with 100 percent foreign ownership. The amount of investment for a joint venture company is based on the agreement between the parties, depending on their economic capabilities. Further, foreign investors that are allowed to establish a 100 percent foreign-owned entity must, after 15 years of commercial operation, start to divest at least 5 percent of the shares to local individuals and/or legal bodies by way of direct placement or indirectly through the domestic stock exchange.

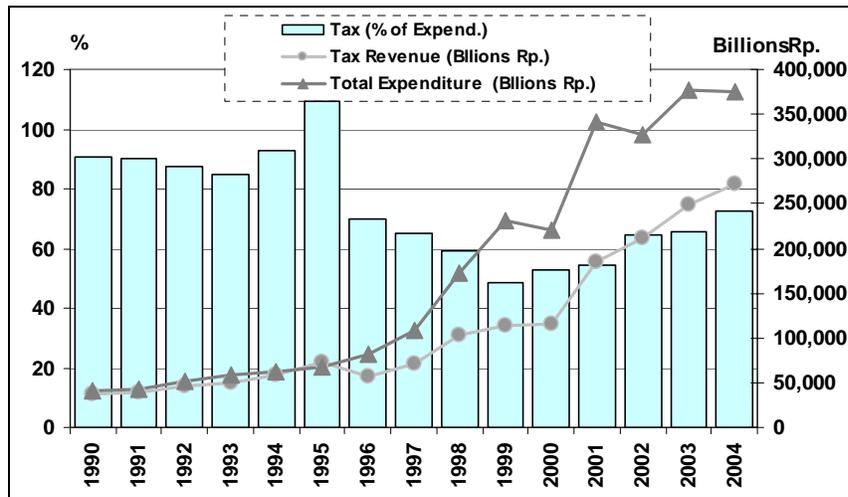
### **TAX STRUCTURE**

The Indonesian taxation system is frequently listed as one of the main obstacles to attracting investment and improving the competitiveness of the economy. Despite an increase in tax revenue in the recent years, analysis shows that the Indonesian tax ratio is relatively low compared to that in other countries, while its tax rate is among the highest.

#### ***Taxes in the Indonesian economy***

Taxes are the major source of government revenue and have been steadily increasing in the last five years, following a significant drop in 1999. However, the proportion of tax revenue is still relatively small compared to the pre-crisis era when tax revenue contributed an average of 90 percent of government expenditure. After the crisis, tax revenue as a percentage of government spending declined to 48.69 percent in 1999, before gradually increasing to over 70 percent in 2004. Thus, there is dynamic trend in the tax revenue in line with Indonesian economic performance overall. (See Figure I-15.)

**FIGURE I-15: TREND OF TAX REVENUE AND GOVERNMENT EXPENDITURE**

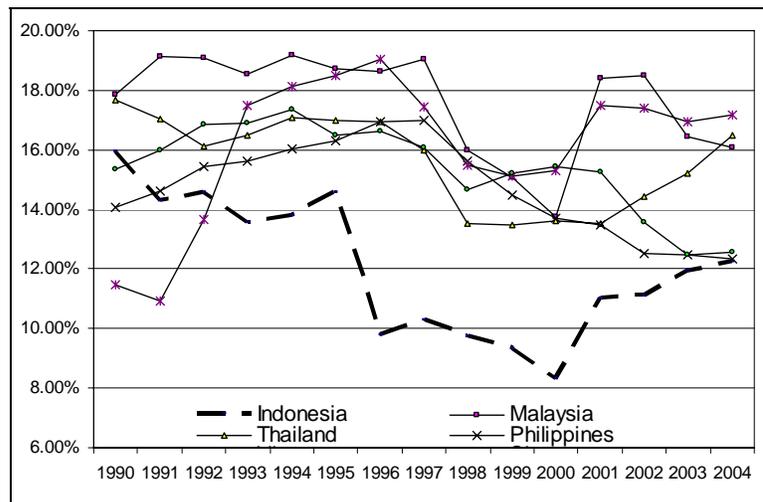


Source: ADB, Key Indicators, 2005.

The tax ratio, a more appropriate indicator by which to measure the performance of the tax system, increased from 11 percent in 2001 to 13.2 percent in 2004. However, Indonesia’s tax ratio remained the lowest in Southeast Asia, as shown in Figure I-16. Efforts to increase the tax ratio do not always translate into higher tax rates, but rather improvements in the tax system through more efficient administration, an increase in the tax base, reduction in the real tax rate, and better law enforcement.

Taxes are essentially a cost to investors, reducing gross profit earned. Thus, the tax regime factors into the decision to invest, in terms of both the tax rate and the efficiency of tax administration, including transparency, accountability, and neutrality. Therefore, taxation should be structured as an incentive, rather than a barrier, to investment.

**FIGURE I-16: TAX RATIO TREND OF INDONESIA COMPARED TO SELECTED COUNTRIES**



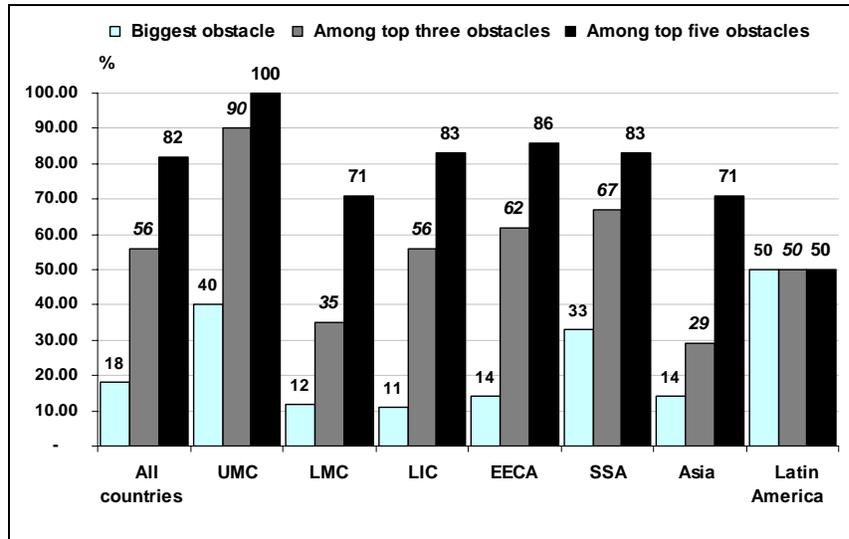
Source: ADB, Key Indicators and Country Statistics, 2005.

***Tax as a barrier in the investment climate***

There is a great deal of empirical evidence identifying taxes as one of the major determinants of the investment climate. In the World Bank’s World Development Report 2005, about 82 percent of the

firms surveyed, and 71 percent of firms in lower-middle-income countries reported that taxes are among the top five obstacles for their operations. (See Figure I-17.)

**FIGURE I-17: COUNTRIES WHERE FIRMS REPORT TAX RATES AS A KEY OBSTACLE**

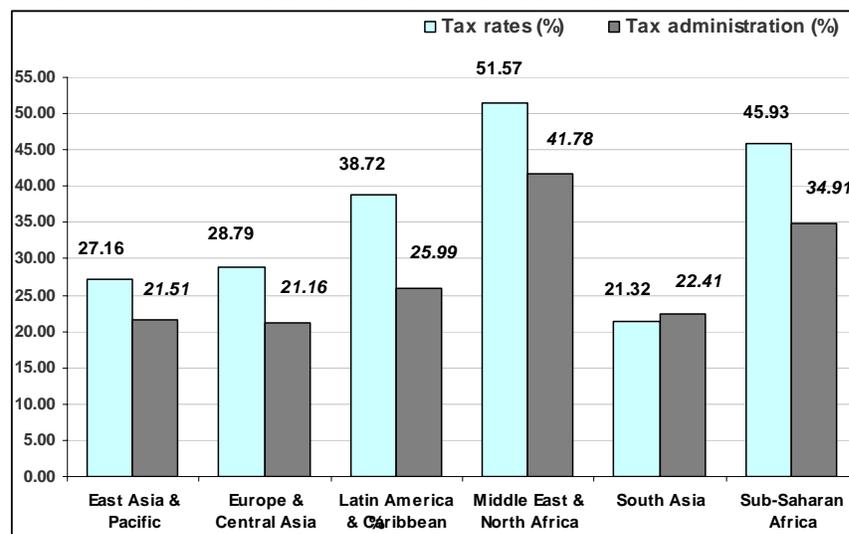


Note: UMC= Upper Middle Income, LMC= Lower Middle Income, LC= Low Income, EECA= Eastern Europe and Center Asia, SSA=Sub-Saharan Africa

Source: World Bank, World Development Report 2005.

In 2005 the International Finance Corporation (IFC) conducted enterprise surveys to capture business perceptions on the biggest obstacles to enterprise growth, the relative importance of various constraints to increasing employment and productivity, and the effects of a country's investment climate on its international competitiveness. The tax rate and tax administration were cited by 35 percent and 28 percent, respectively, of firms as the major obstacles to their business operation and growth (see Figure I-18).

**FIGURE I-18: TAXES AS A MAJOR OBSTACLE TO BUSINESS OPERATION AND GROWTH**

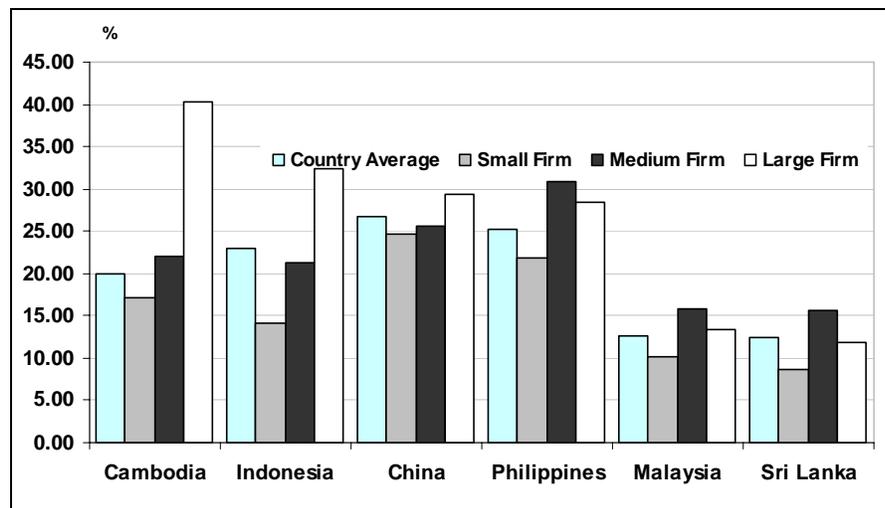


Source: IFC, World Bank, The Enterprise Survey, 2005.

Indonesia-specific studies reveal a similar pattern. The Regional Economic Development Institute (REDI) carried out a survey on FDI barriers in West Java, Bali, South Sulawesi, and North Sulawesi in 2004 aimed at identifying various barriers for FDI from the European Union. The survey showed that taxation was mentioned by approximately 63.24 percent of respondents as a barrier for FDI in these areas, followed by business licensing factors. In 2004, the International Business Chamber found that 84 percent of the entrepreneurs surveyed had negative experiences dealing with tax administration, and KPEN-KADIN (Indonesian Business Chamber) identified taxes as a priority area for reform.

In the country comparison provided by the IFC's Enterprise Survey, Indonesia was ranked last among the countries measured for the burden of tax administration, particularly for medium and large firms. More than 30 percent of Indonesian large-scale firms said that tax administration presented severe obstacles to large firm operation and growth (see Figure I-19).

**FIGURE I-19: NUMBER OF ENTERPRISES CITING TAX ADMINISTRATION AS AN OBSTACLE**



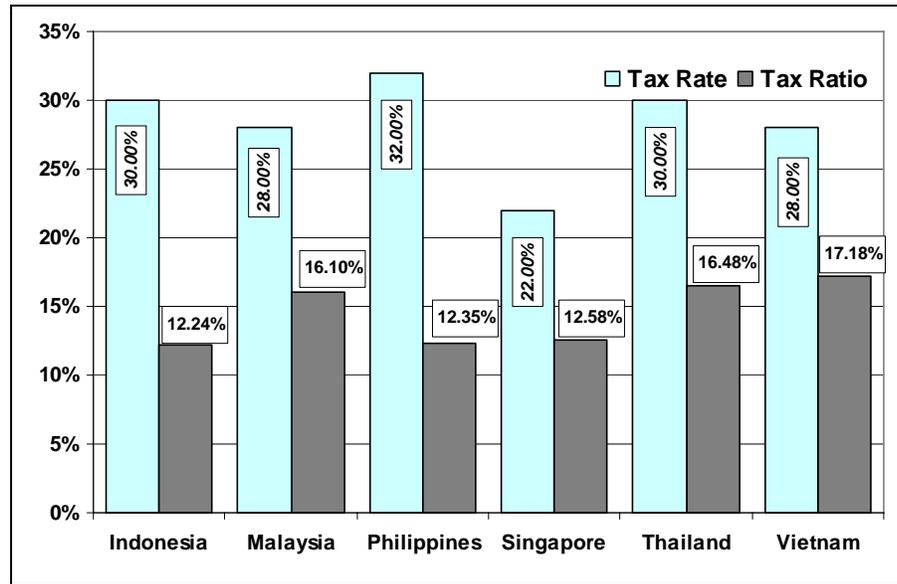
Source: IFC, World Bank, The Enterprise Survey, 2005.

The primary problems in the Indonesian tax system are an uncompetitive tax rate, a high tax payment ceiling, complicated and time-consuming tax administration, and corruption.

#### *Uncompetitive tax rate*

The high tax rate is often mentioned as one of the main problems of the uncompetitive taxation system in Indonesia. A 2004 study by REDI found that 35 percent of respondents said that tax rates in Indonesia are a very high burden to their firms, reduce the gross profit gained by investors, and make investment less attractive. The Indonesian tax rate, at 30 percent, is second only to the Philippines in the region, and higher than that in Vietnam, Singapore, and Malaysia. Meanwhile, while Thailand has an equally high tax rate, that government collects more revenue than Indonesia.

**FIGURE I-20: INDONESIAN TAX RATE COMPARED WITH SELECTED COUNTRIES**

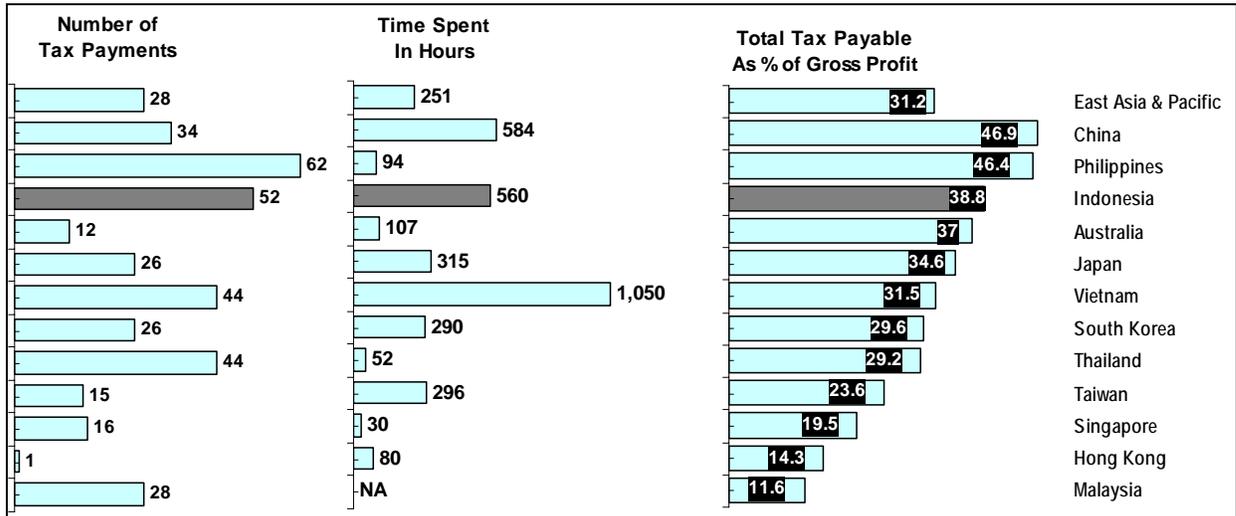


Source: ADB Key Indicators, Country Statistics; KPMG, 2005.

*Number of tax payments*

The number of tax payments is positively correlated with the tax rate and time spent in tax administration. In other words, the higher the number of tax payments, the higher the cost to investors. The IFC survey found 52 kinds of taxes in Indonesia, compared with an East Asia and Pacific average of 28. (See Figure I-21.)

**FIGURE I-21: TAXATION COMPARISON**



Source: IFC, World Bank, The Enterprise Survey, 2005.

*Complicated and time-consuming tax administration*

Time spent on tax administration adds additional costs to businesses. The IFC survey shows that it takes 560 hours for investors to complete tax administration, compared with 52 hours in Thailand. A

survey conducted by LPEM found that it takes an average of 45 person-days to complete tax documents for seven kinds of tax payments.

Time spent also becomes a problem in tax restitution payments. Restitution for overpaid taxes (value-added tax [VAT] and income tax) is frequently difficult to achieve because reimbursements may be postponed or canceled. Based on the LPEM survey, it takes 5.5 months on average to receive the reimbursement, and the amount refunded is only 87 percent of the claim. (See Table I-16.)

**TABLE I-16: VAT REFUND ACCORDING TO FIRM SIZE**

Firm Size	Waiting Time (months)	Percentage of Net Actual Refund	VAT Return Negotiation and Extra Payments			
			Yes	No	Yes	No
<100	3.3	86.0%	6	50.0%	6	50.0%
100 to <500	5.6	85.6%	58	55.8%	46	44.2%
500 to 1,000	5.2	88.1%	23	60.5%	15	39.5%
>1,000	4.8	90.1%	30	57.7%	22	42.3%
All Firms	4.9	87.3%	114	57.0%	86	43.0%

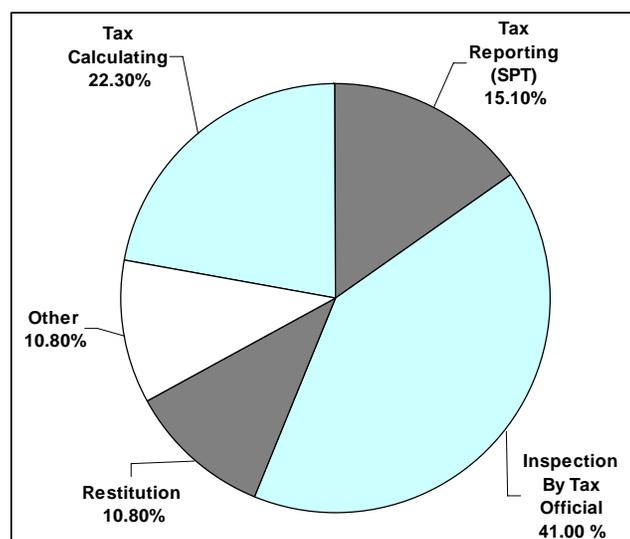
Source: LPEM-FEUI, 2005.

Complications in tax administration are the result of numerous documents, complicated calculations, inspections by tax officers, and the need to obtain restitution for over payment (REDI 2005). Inspection by tax officials seems to have greatest impact in complicating the process, according to 41 percent of respondents surveyed by REDI. Approximately 15.1 percent of the respondents surveyed cited tax reporting (SPT) as another key source of complication.

### *Corruption*

The problems discussed above create an environment conducive to corruption, including collusion and nepotism. To decrease the time and cost of tax administration, firms have two options: use the legal services of a tax consultant or negotiate with tax officials—often a cheaper and faster option. This situation is further aggravated by the direct contact between firms and tax officials at the stages of tax payment registration, inspection, and final payment. A third (30.3 percent) of FDI holders interviewed by REDI stated willingness to pay additional funds to tax officers in order to ease taxation problems. The LPEM survey found that 57 percent of total respondents had to negotiate with tax officials to obtain reimbursement of overpaid taxes.

**FIGURE I-22: COMPLICATIONS IN TAX ADMINISTRATION**



Sources: REDI, 2005.

### ***Improving the Indonesian Taxation System***

The new proposed Indonesian taxation system should be based on the following principles:

- Increase tax revenue through the expansion of the tax base, not by increasing the tax rate. Indonesia has a low level of tax obedience: only about 3 million people pay taxes, with SPT returns of 50–60 percent;.
- Improve transparency, accountability, and efficiency.
- Reduce the tax rate.
- Increase the use of electronic and information technology in tax administration, improving efficiency and reducing contact with tax officials.
- Separate the institutions of taxation policy maker and taxation executor in order to avoid conflict of interest and corruption. The Directorate General of Tax currently has too much authority as policy maker, policy interpreter, operator/executor, and supervising agency.
- Improve socialization of the taxation system and rules to improve taxpayers' understanding of the system.
- Establish a tax ombudsman commission to supervise the implementation of the tax law, solve disputes, and receive complaints. The commission should act independently and be directly responsible to the President.

### ***The proposed tax law***

In 2005, the government proposed three new tax laws to the Parliament: the law of general taxation rules and procedures, the law of income taxes, and the law of value added and luxury tax. In addition to improving legal certainty and broadening the tax base, the new proposed tax laws also provide the following investment incentives:

- Decreased personal income tax from 35 percent to 30 percent and decreased dividend income tax from 35 percent to 15 percent.
- Tax breaks for donations.
- Fiscal corrections for public taxpayers.
- Acceleration of tax restitution.
- Restitution for domestic expenses of foreign tourists.
- Transformation of the corporate income tax into a 30 percent single rate in 2005. The current law regulates the corporate income tax rate differently by the size of income ranging from 10 percent to 30 percent. The single rate will reduce to 28 percent in 2007 and 25 percent in 2010. Extension of the cut-off date for annual corporate income tax reporting is also proposed.
- Eliminate VAT for agricultural products.
- Increase non-taxable income margin to about 317 percent.

The new proposed tax laws face some resistance from the business community because they do not resolve the excessive power of the Directorate General of Tax, inequality between taxpayer and apparatus, disincentives for new taxpayers, the absence of a complaint mechanism, and the desire for increases in self-assessment.

### ***Investment law***

As part of an effort to create a healthy and competitive investment climate, the government is now preparing a new investment law to replace the existing law on foreign direct investment and domestic investment. Current investment law is not unified for all investments, is not oriented toward market principles, does not provide equal treatment for all investors, is restrictive, limits the type of investments that can be approved, and is subject to corruption. The excessive degree of control, regulation, and screening of businesses in Indonesia restricts their ability to respond quickly to market opportunities. Regarding the implementation of the law, businesses face an absence of legal certainty, through a lack of clarity in the law itself and through the effects of corruption.

### ***Investment incentives packages***

Changes in the investment law and its implementation should be accompanied by tax and non-tax incentive packages for all investors and for specific businesses and industries that are government priorities, such as small and medium-sized enterprises (SMEs). Incentives can be effective instruments to attract more investment providing that all other factors determining investment are equal among competing countries. However, investment incentives have to be selective and carefully carried out since they can also be costly and create distortions in the economy.

There are two types of investment incentives to be considered: general incentives to attract investment in all sectors, and incentives for particular sectors to achieve industrial development goals. For the first type, limited-time tax rate reductions and/or relief are the most common incentives provided, while incentives for particular industries must be formulated based on potential for employment generation, comparative and competitive advantages of the industries, and value added. Incentives may range from tax reduction and/or relief to location incentives, labor utilization relief, or industrial adjustment allowances.

To implement incentives for investment, it is a vital to establish a National Committee on Investment and Export Promotion. This committee's function would be to formulate national industrial and trade

strategies, prioritize specific sectors that need to be developed, and implement the best incentives to achieve national goals. Another committee function should be to review and monitor the effectiveness of the incentives with a view to removing, reducing, or improving them as conditions change over time. The national industrial and trade development strategy should be in line with the nature and characteristic of Indonesian comparative and competitive advantages, such as an abundance of natural resources, and the need to improve transportation and technology.

## **DECENTRALIZATION**

Decentralization is an important part of Indonesia's national development strategy. The primary objectives are to improve public services by reducing bureaucratic procedures, to enable local governments to fund their own priorities through the transfer of budget allocation powers to the regional level, and to improve political and economic participation of local people in formulating regional development programs, setting priorities, and exploiting non-oil natural resources.

Indonesia's decentralization process was initiated in 1999 and significant changes have since been made in many regions in terms of altering the structure of government institutions and reorienting economic and social planning. Another important trend is the partitioning of the regions, with 65 new regencies and cities added in the past six years.

### ***Conflicts in implementation***

After four years of implementation, it is clear that decentralization has deviated somewhat from the original objective. Provision of public services has not improved, local parliaments have been very weak in facilitating local participation, and an average of 85 percent of funds received from the central government are being used to finance routine and administrative expenditures. Of central importance to businesses have been a host of new regulations and levies, a lack of coordination among local governments, and lack of stability in the investment climate.

With limited funds available for development expenditures, district level governments have sought to increase local revenue through increased taxes on economic activities and imposition of additional regulations. A SMERU Research Institute study found that district governments in all visited provinces have issued a significant number of new regulations in recent years related to local levies. Specific levies have been imposed on almost all economic activities at the district level, and some activities require more than one kind of fee. Many regulations have been promulgated by local authorities with the primary objective of restricting the flow of commodities outside local boundaries, even if they are important raw materials for industries in other local areas. This has led to shortages of raw materials in export production centers, such as the footwear industry in Surabaya and the furniture industry in Cirebon.

Autonomy status has bred a competitive spirit among local governments, so they compete for opportunities to raise local revenue and obtain or maintain opportunities to increase value-added processing within their boundaries. Although this has the potential to lead to development of local industries and manufacturing activities, it has instead led to ineffective coordination and lack of cooperation among regions in promoting efficient industrial development for the nation as whole. Self-interest within each unit of local autonomy persists even if the necessary human resources or economic infrastructure do not exist to support the target industries. This lack of coordination among the visions and missions of local regions has encouraged the national government to step in by conducting a series of coordination meetings involving district governments.

Local (province and district) governments now issue approvals for large-scale domestic and foreign investments, including all regional permits related to licenses for location and land acquisition, building, and operation. However, there is no standard procedure to be followed by all local

governments so each has adopted different procedures and different incentives. While a few local areas have introduced “one stop service” to reduce the cost and time of approvals, they have not done enough to simplify the process. In addition, coordination between provincial governments and district and city-level governments in licensing and investment permit is very weak. In many cases, cities and district governments do not recognize permits issued by provincial governments, especially if the permits are related to natural resources exploitation.

## **INTELLECTUAL PROPERTY RIGHTS AND E-COMMERCE**

Inventors, SMEs, large firms, research centers, and universities will all benefit from better implementation of intellectual property regimes. This is a highly complex issue for which enforcement of “adequate and effective protection for intellectual property rights” has some major challenges in a large archipelago country such as Indonesia. Piracy levels in Indonesia are among the highest in the world, in the 85–95 percent range for all industry sectors, with illegal optical disc production and export piracy continuing to grow in 2004. The large Indonesian market remains dominated by retail piracy of all copyrighted materials, including optical disc piracy (compact discs [CDs], video compact discs [VCDs], CD-ROMs, and, increasingly, and digital video discs [DVDs]) and book piracy.

Although there have been some recent raids against optical disc factories, the 2003 intellectual property rights law rarely leads to effective prosecution and has almost never resulted in convictions or sentences. The audiovisual sector also encounters significant barriers to market access, which only exacerbates piracy. Losses to U.S. right holders as a result of Indonesian piracy were estimated at US\$203.6 million in 2004.

The International Intellectual Property Alliance (IIPA) is a private-sector coalition formed in 1984 to represent U.S. copyright-based industries in bilateral and multilateral efforts to improve international protection. IIPA is composed of seven trade associations, each representing a significant segment of the U.S. copyright community.<sup>4</sup> In 2005, the IIPA called for an immediate implementation of optical disc controls to curtail the massive and growing problem of unauthorized production and export of pirate optical discs in Indonesia

### ***Import controls on optical discs***

Regulations released in September 2005 established tight controls on the importation of optical media disks, including CDs, VCDs, and DVDs, containing movies, audio, software, and other content, as well as unrecorded or blank optical discs. The regulations are intended to prevent the inflow of illegal pirated films, music, and software using optical media.

Under these regulations, only registered importers are allowed to import optical media and related manufacturing machinery. The controls include:

- Registration and licensing requirements for all importers of optical media and optical media manufacturing machinery.
- Requirement for importers of machinery to provide specifications on the suppliers.
- Requirement to submit an annual schedule of planned imports.
- Prior approval from the Ministry of Trade for each import shipment.

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<sup>4</sup> The IIPA member associations represent 1,900 U.S. companies producing and distributing materials protected by copyright laws throughout the world.

- Periodic import realization reports.
- Shipment verification by surveyors in the countries of origin.

The regulation also controls importation of raw materials used in the processing and manufacturing of optical media, such as optical grade polycarbonate.

There are a number of problems with the new regulation, however, that make it difficult to comply with or enforce:

- Article 28 of the law refers to a requirement that optical disk production facilities comply with “all required permits,” but the requirement to obtain a permit as a condition to produce discs has been deleted from the regulation and replaced by a “registration” mechanism for those possessing machinery and equipment.
- Failure to register is punishable by a revocation or suspension of the “optical disc business license,” but nowhere else in the law is the procedure for obtaining such a license present and there is no centralized licensing of prerecorded or blank optical discs.
- The regulation requires imported prerecorded discs to be marked with an identification code from the country of origin, a stipulation that violates the General Agreement on Tariffs and Trade/World Trade Organization (WTO).
- The regulation does not require use of an appropriate identification code on blank discs. The law refers to a Source Identification Code now, but it is unclear whether the Philips/International Federation Phonographique Industrie code will be used.
- The regulation does not adequately cover stampers and masters. Stampers and masters are defined in the Regulation and there is a Source Identification Code requirement, but there is no licensing or registration requirement for their production.

### ***E-marketing of intellectual property***

The advent of the internet has led to a proliferation of websites devoted to the marketing and licensing of innovations from universities, R&D organizations, and private companies. With the internet proving to be far more convenient than conventional marketing processes, the possibility of marketing intellectual property will significantly increase in the coming years. As in other emerging economies with relatively limited R&D capabilities, use of internet technology for the marketing of intellectual property is not widely promoted in Indonesia.

Today there are dozens of intellectual property portals (IPPs), which can be defined as websites created specifically for the purpose of marketing intellectual property. Each IPP intends to harness the search capabilities and popularity of the internet to link buyers and sellers of technology. The business strategies of these IPPs vary in their revenue models, their approach to matchmaking, and their level of involvement with deal consummation. The IPPs hold the promise of reaching a much broader audience, but there is some question as to which business model will succeed and remain a longstanding complement to the process of technology transfer.

The internet-based intellectual property market has sprung up virtually overnight. More than half of these IPPs were launched in 1999 or later. A number of factors have influenced the rapid growth of this market, including:

- The dramatic rise in licensing revenues in the 1990s;
- The high value that the stock market has placed on intangible assets;

- The digital economy's reliance on technology;
- The increase in internet access;
- The natural match between the search capabilities of the internet and technology transfer agents' need to find commercial partners;
- The rise of e-commerce; and
- The resurgence of venture capital investments in the late 1990s.

Since 1999, the market for licensing inventions has been growing in the Western countries, where companies are under pressure to add high technology to their business profile and investors are willing to finance e-business opportunities. The growth in licensing revenues and activities put pressure on the technology transfer community to operate more efficiently and maximize the returns from intellectual property portfolios. Notwithstanding the absence of IPPs in Indonesia, international sites are available to Indonesian businesses, including the U.S. National Science & Technology Development Agency, Global Technology Network, NETT21 (Global Environment Centre Foundation Environmental Technology Database), U.S. Patent and Trademark Office, IP Australia, European Patent Office, Asia-Pacific Economic Cooperation (APEC) Virtual Centre for Environmental Technology Exchange, Asian Technology Information Program, Canadian Technology Network, Global Technoscan (India), and Centre for Environmentally Sound Technology Transfer (for the environmentally sound technology needs of China's SMEs and to strengthen their ability to access, assess, develop, introduce, and apply environmentally sound technology).

## **CORRUPTION**

Indonesia is one of the most corrupt countries in the world, according to the Transparency International (TI) Perception Index. The index defines corruption as the abuse of public office for private gain, and measures the degree to which corruption is perceived to exist among a country's public officials and politicians. The index is a composite, drawing on 16 surveys from 10 independent institutions, which includes the opinions of businesspeople together with country-level analysis. In 2004, the Corruption Perception Index (CPI) score for Indonesia was 2.0, ranking it the tenth most corrupt country among the 146 countries included in the TI survey. The nine countries that were more corrupt than Indonesia (with a CPI score of less than 2.0) were Haiti, Bangladesh, Nigeria, Myanmar, Chad, Paraguay, Azerbaijan, Turkmenistan, and Tajikistan. Indonesia's 2005 score increased slightly, to 2.2 and its rating increased to twentieth most corrupt.

TI Indonesia also produces a corruption index to compare the performance of internal institutions on a 0 to 5 scale. A 2004 survey of more than 1,200 people in Jakarta, Surabaya, and Medan found that the institutions in Indonesia that are perceived as the most corrupt are the House of Representatives and political parties, followed by the Customs and Excise Office, the judiciary, the police and the tax office.

### ***Economic impacts of corruption***

As has frequently been reported in the media, corruption in the Customs and Excise and Tax Administration offices creates the most serious economic distortions. Smuggling often takes place through under invoicing or support for false documents by custom officials who have been bribed by smugglers. Corruption in administration affects foreign investors to a large extent. The judiciary and the police create inconsistencies in law enforcement as it becomes widely known that justice can be bought and is therefore only within reach of the wealthy and influential.

The money paid to individuals rather than as official taxes and levies directly affects the income distribution in the economy as well as the size and the growth of GDP. Corruption also contributes to the high-cost economy, limits domestic revenues, and discourages productivity and investment. Based on international TI comparison, the welfare of the Indonesian people could increase significantly if the corruption, collusion, and nepotism (KKN) practices were eliminated. According to an International Monetary Fund estimate, each 2 point improvement in the corruption index may lead to a 4 percent increase in investment and a 0.5 percent increase in GDP growth. This implies that if corruption were eliminated in Indonesia and the corruption index reached 8.0, GDP of Indonesia could grow 2 percent higher than the existing rate.

The Indonesian GDP in 2004–2005 was approximately US\$173 billion. An additional 2 percent of GDP over five years would add US\$21.8 billion, or around US\$100 per capita. In a country with a per capita income of US\$1,140 in 2006, this amount is not insignificant. The impact on employment creation can be estimated by multiplying the additional value added in rupiah by the employment elasticity (0.022). The result is that approximately 4.8 million more individuals could be absorbed in productive activities, cutting current unemployment in half.

### *Anti-corruption initiatives*

Tackling systemic corruption is not an easy task and requires full commitment from all elements in government and civil society. The bureaucratic machine in government institutions should be reformed so that good governance can be realized, and the central government should create an enabling environment for local-level reforms that strengthen public participation in the making and monitoring of development policies and programs.

The new government has made some progress in combating the KKN through amendments to anti-corruption laws, improvements in National Budget allocation and management, the establishment and effective operation of a Commission to Eradicate Corruption, and the institution of annual performance reviews of all Cabinet members by the President. However, it is still too early to know if these measures will prove effective in combating systemic KKN.

## EXPORT AND INVESTMENT TRENDS

### TRADE POLICY

Indonesia's trade policy prior to the 1997 crisis was one of rapid liberalization. This pattern actually intensified following the crisis, in compliance with an International Monetary Fund program recommending the elimination of protections for the agricultural and automotive industries (Vanzetti et al. 2005). While Indonesia continues to be an important advocate for liberalization under the Asian Free Trade Agreement (AFTA), APEC, and the WTO, the government has recently begun to implement nontariff measures prohibiting imports. Critical to export competitiveness is the fact that these measures are actually having a negative impact on domestic producers. For example, with a negative effective rate of production on several agricultural products, domestic producers using those inputs are effectively taxed. Products falling into this category in Indonesia include livestock, poultry, fresh milk, and shrimp. The animal feed they rely on is subject to a 60 percent tariff (World Bank, *Making Indonesia Competitive* 2004).

While Indonesia's current high-cost economy sets the stage for the re-emergence of protectionism through the measures described above, momentum toward liberalization can be maintained through the formation of free trade agreements (FTAs). This activity was included in the 12-point recommendations made by KADIN and appears to be a priority of Indonesia's current administration. It is of particular importance considering that Indonesia's trade partners and competitors in the region are actively pursuing bilateral trade agreements and FTAs, including agreements between the United States and Singapore, Thailand, and Vietnam. Currently, Indonesia is pursuing other forms of trade agreements, such as an economic partnership agreement with Japan rather than a full-fledged FTA. Even so, the industrial and regulatory reforms needed to implement any sort of agreement will be beneficial to Indonesia's investment climate.

Agricultural exports to Organisation for Economic Co-operation and Development (OECD) countries are concentrated in low- or zero-duty products—with between 30 and 83 percent of products entering the European Union (EU), United States, and Canada (World Bank, *Making Indonesia Competitive* 2004). However, the products receiving most-favored nation (MFN) status are in nearly all cases commodities in their raw form. Tariff escalation, in which each successive level of processing leads to increased tariffs on exports, is a primary constraint to Indonesia's ability to increase processing in-country and add value to products and exports. This is particularly notable in the coffee, cocoa, and sugar industries and slightly less so, though still significant, in fruits, vegetables, and seafood. Developed-economy markets also make extensive use of non ad valorem duties, which also discriminate against low-value suppliers. Meanwhile, Indonesia faces tariffs on a full 100 percent of agricultural exports to major developing-country markets such as China, India, and Brazil.

Manufacturing exports also have low average duties in OECD countries, but there is significant variation in products, and the products that Indonesia exports to the United States and EU in particular tend to be those with a higher than average tariff rate. Meanwhile, 73 percent of manufacturing exports to Japan are allowed to enter duty-free because of their strategic nature as mineral and fuel products. Again, developing countries have much higher average tariff rates,

The WTO negotiations offer an important opportunity for Indonesia to improve access to its primary export markets, and discussions are under way to determine the formulas by which agricultural and manufacturing tariffs will be lowered. While the reduction in MFN tariffs will have some negative impact on Indonesia, the rate of utilization of this preference is low, so any harm is expected to be outweighed by gains through reductions in tariffs not subject to those preferences.

## **TRADE PATTERNS AND PERFORMANCE**

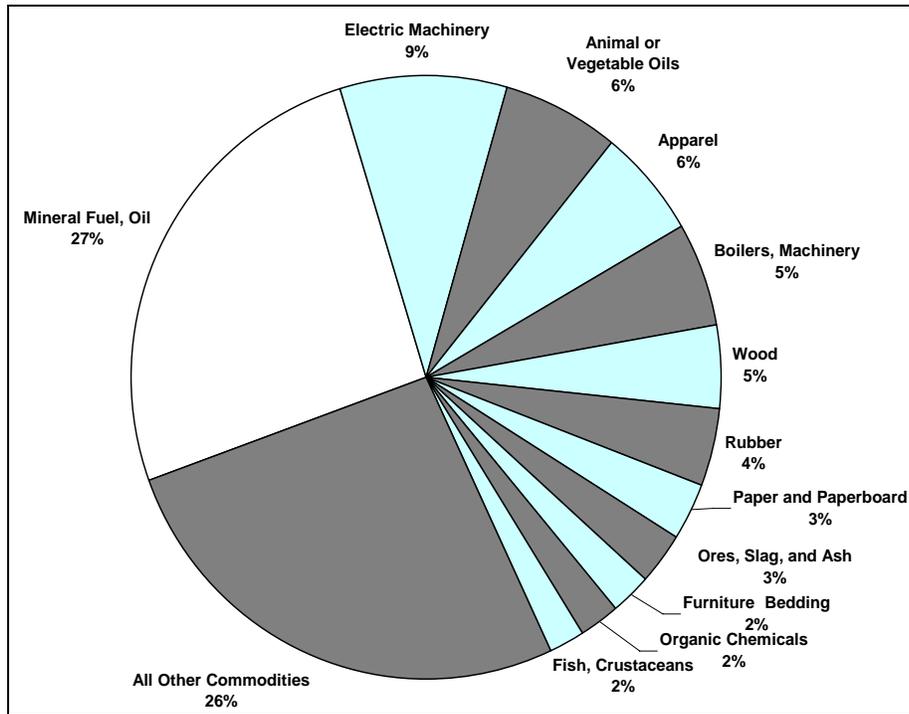
As part of the East Asian “economic miracle” in pre-1997 years, Indonesia had real GDP growth averaging about 7 percent from 1991 to 1996, driven primarily by exports that were growing at rates up to 9 percent in real terms. Today, Indonesia maintains an open economy, with a foreign trade turnover (exports + imports) of over 50 percent of GDP in 2004, but growth in non-oil exports has hovered around 0.5 percent per year on average while growth in GDP has varied between 3.5 and 5 percent.

Indonesia’s recovery from the 1997 crisis has been slower than that of its regional competitors, and growth in recent years has been driven by private consumption, with exports playing a relatively insignificant role. Increased competition from China and other regional players in some of Indonesia’s traditional exports, combined with high costs for domestic producers and a reduction in investment, has led to reduced market share in key industries such as apparel, footwear, and electronics. These conditions reflect some external conditions over which Indonesia has no control, but, more significantly, they reflect a lack of needed changes in the domestic environment in terms of lowering barriers to investment and efficient production and exports.

### **TRADE PATTERNS**

The structure of output as a percentage of Indonesian GDP has remained more or less static for the past five years, with industry responsible for 45 percent of output, services for 40 percent, and agriculture for 15 percent. Petroleum exports made up 27 percent of total exports from Indonesia in 2004, but the non-oil commodity structure of Indonesia’s exports and imports, shown in Figures I-23 and I-24, reflects a huge diversity of trade, with 11 categories of products comprising more than 2 percent of total exports. Non-oil exports at the two-digit Harmonized System (HS) level are led with 9 percent in electronics (camera and recording equipment and parts), 6 percent in palm and other oils, 6 percent in cotton apparel, and 5 percent in boilers and machinery. Within these top categories, Indonesia captured more than 1 percent of the world market in apparel in 2004, although this reflects a decrease from past years as a result of increased exports from other regional players, primarily China. There is some evidence, however, that Indonesia is facing this challenge by moving into higher-end products; the value of exports has increased in recent years even as quantity exported has decreased.

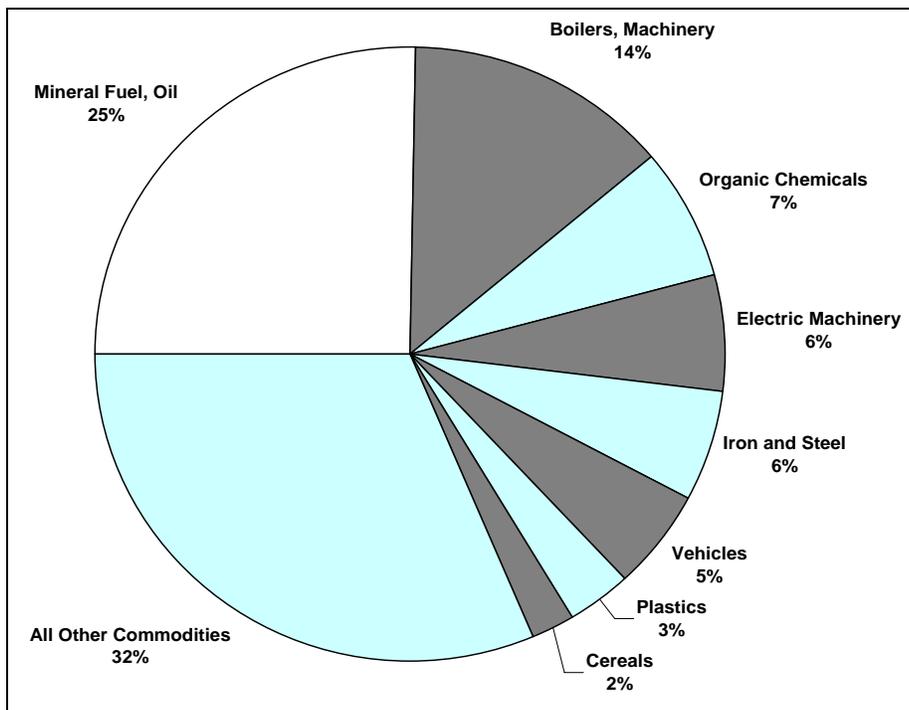
**FIGURE I-23: EXPORTS TO THE WORLD, 2004**



Total = US\$71.6 billion

Sources: The Global Trade Atlas; authors' calculations.

**FIGURE I-24: IMPORTS FROM THE WORLD, 2004**

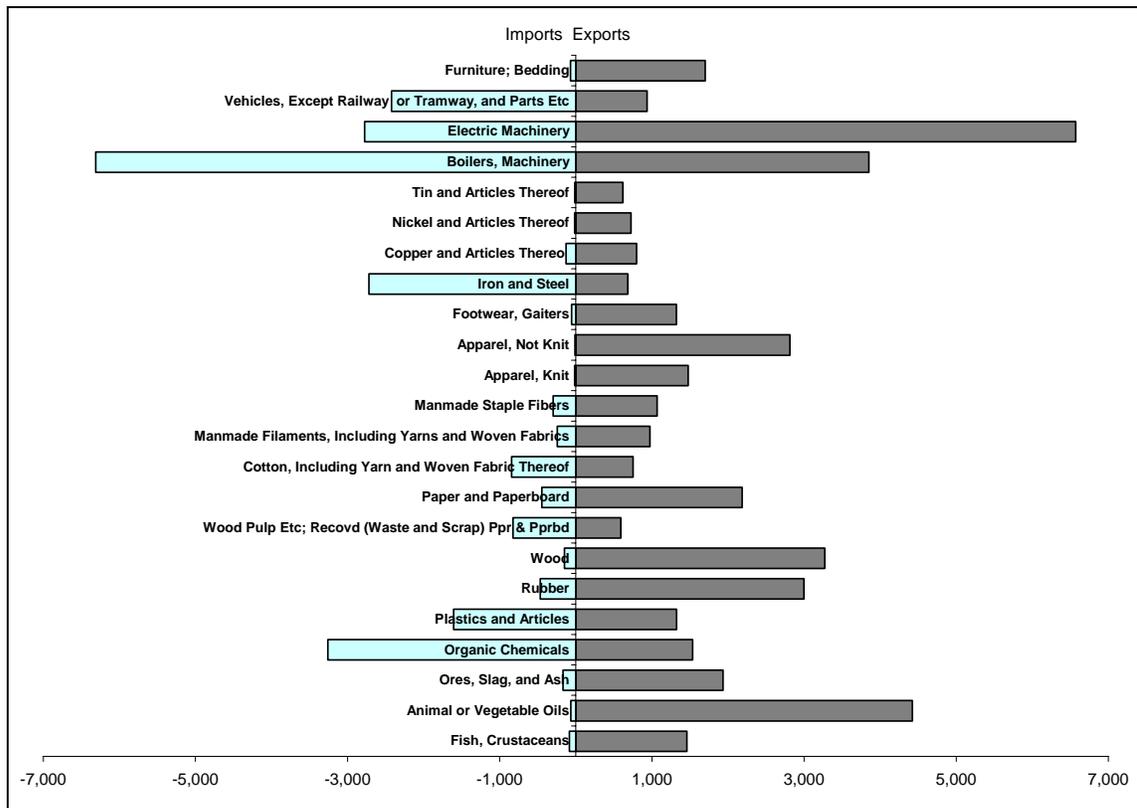


Total = US\$46.5 billion

Sources: The Global Trade Atlas; authors' calculations.

In addition to serving as Indonesia's primary export, petroleum comprises a quarter of all Indonesian imports, followed by machinery in a wide range of categories with 14 percent of imports, organic chemicals with 7 percent, and electronics with 6 percent. Indonesia continues to be a huge market for primary goods—as an import market, it is responsible for 3 percent of total world imports in cereals. Figure I-25 shows a comparison of imports and exports for selected non-oil commodities to provide a picture of Indonesia's relative trade balance in some of its most important industries.

**FIGURE I-25: IMPORTS AND EXPORTS OF SELECTED COMMODITIES, 2004**



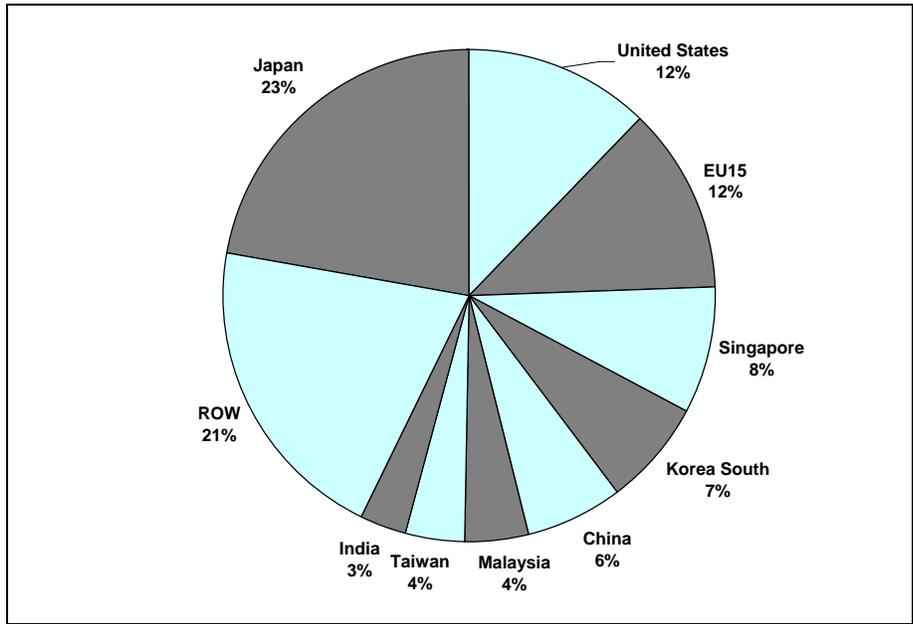
Sources: The Global Trade Atlas; authors' calculations.

### *Geography of trade*

In the years in which Indonesia's economy was flourishing, the country developed strong trade relationships with diverse markets such as Japan, the United States, and the EU (15), in addition to other countries of the region. In recent years, a subtle shift has taken place: the shares of exports to the United States, the EU (15), Singapore, and South Korea have decreased by about 1 percentage point each since 2002. Meanwhile, other regional markets such as Japan, Taiwan, China, India, and Malaysia have gained by the same amount. Indonesia's import structure is similar, with the addition of Thailand, Australia, and Saudi Arabia. These patterns suggest a strengthening of regional trade, a trend that is likely to grow as tariffs are completely phased out among members of the AFTA between 2010 and 2015.<sup>5</sup> (See Figure I-26.)

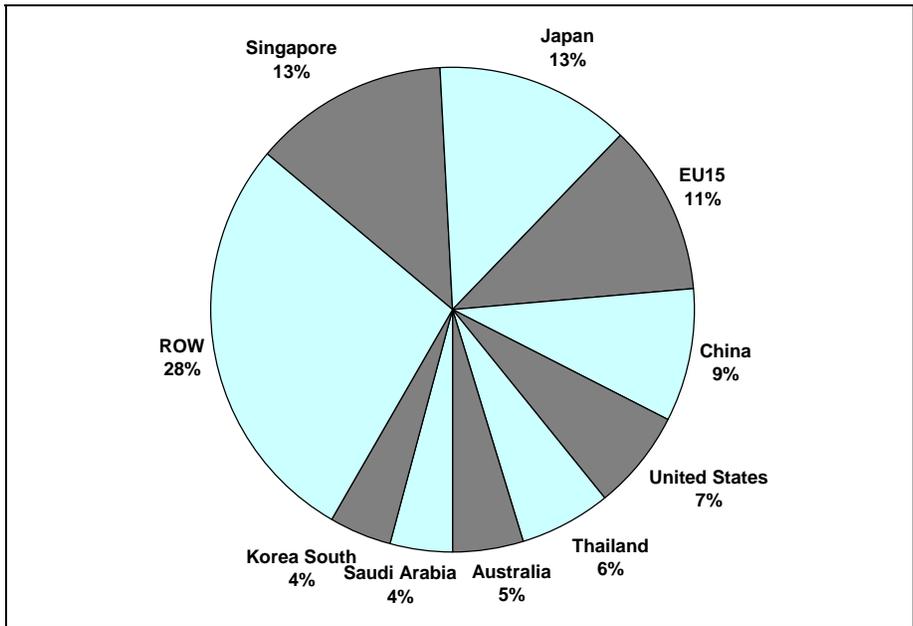
<sup>5</sup> The AFTA nations are Brunei Darussalam, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam.

**FIGURE I-26: EXPORT MARKETS, 2004**



Sources: The Global Trade Atlas; authors' calculations

**FIGURE I-27: IMPORT MARKETS, 2004**



Sources: The Global Trade Atlas; author's calculations

**COMPETITIVE PERFORMANCE**

*Revealed Comparative Advantage*

The Revealed Comparative Advantage (RCA) index identifies the degree to which countries specialize in exports of specific goods, a reflection of both factor endowments and changes in trade policy. A strong comparative advantage is indicated by an RCA greater than 2. The number of

Indonesian commodities with an RCA greater than 2 at the two-digit HS level has remained relatively stable since 1999, as shown in Table I-17, although the degree of specialization has decreased in some categories such as coffee, cocoa, apparel, and footwear and increased in palm oil, rubber, and tin. The increasing role of these traditional primary products suggests a reverse structural transformation, a phenomenon that is in line with the poor performance of Indonesian manufacturing in recent years and is also reflected in sectoral employment.

**TABLE I-17: RCA FOR INDONESIAN INDUSTRIES**

HS Code	Description	1999	2002	2004
03	Fish, Crustaceans	4.49	3.81	3.63
09	Coffee, Tea, and Spices	7.72	5.92	5.65
14	Vegetable Plaiting Materials and Products (Rattan)	5.56	9.87	13.63
15	Vegetable Oils (Palm Oil)	8.59	11.78	14.81
18	Cocoa and Cocoa Preparations	4.69	6.24	3.88
26	Ores, Slag, And Ash	6.95	8.62	5.53
27	Mineral Fuel, Oil	5.62	4.27	3.86
40	Rubber (Natural)	2.51	2.82	4.03
44	Wood (Plywood and Veneers)	6.12	5.22	4.21
46	Basketware and Wickerwork	6.72	6.61	5.35
47	Wood Pulp, Recovered Paper, and Paperboard	2.87	3.92	2.77
48	Paper and Paperboard	2.19	2.11	1.96
54	Manmade Yarns	3.76	3.67	3.15
55	Manmade Staple Fibers	4.07	4.24	4.76
62	Apparel, Not Knit	3.14	2.76	2.80
64	Footwear	4.11	2.63	2.77
67	Prepared Feathers, Down, Artificial Flowers	1.88	2.12	2.79
75	Nickel and Articles Thereof	3.04	0.04	4.90
80	Tin and Articles Thereof	15.20	17.31	24.11
92	Musical Instruments; Parts and Accessories Thereof	2.51	6.72	7.70

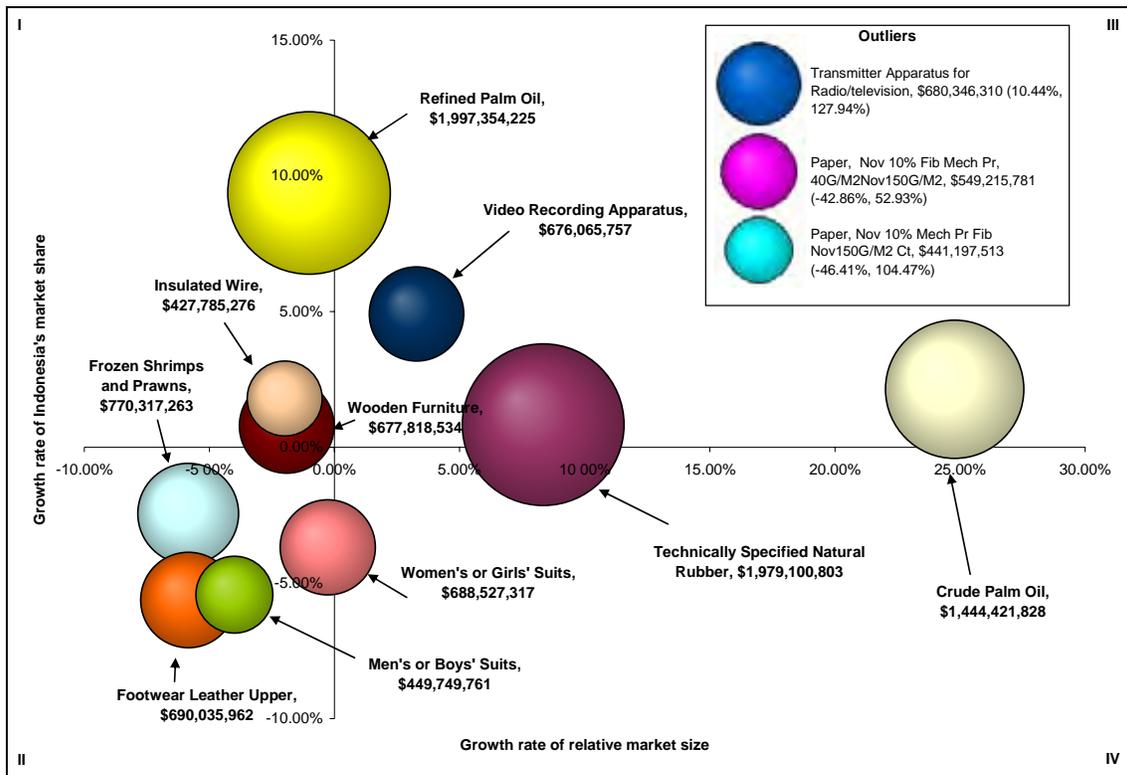
Sources: The Global Trade Atlas; authors' calculations.

### *Industry-specific issues*

To further examine the performance of specific industries in the world market, we use a modified “Boston Matrix” analytical framework. Figure I-28 illustrates the performance of Indonesian products with exports greater than US\$500 million in the world market at the six-digit HS level. Commodity categories fall into the different quadrants of the chart according to whether Indonesia is gaining or losing market share in the world market and whether the world market for these products is growing or declining in relative market size. Indonesia’s largest exports in terms of value are traditional exports such as natural rubber and crude palm oil. These products have also maintained a competitive edge in the world market, with a positive growth rate in market share for Indonesian products as well as positive growth in the size of the world market for these products relative to all others (Quadrant III). The subsector of transistor apparatus for radios and television recording equipment reveals a similar pattern with a smaller growth rate in the size of the market relative to others, while market share of Transmitter Apparatus (shown in Outliers) has increased dramatically, by 127 percent during

the five years measured. Indonesia's market share in paper production (Outliers) also shows positive growth relative to others, but the size of the market is growing negatively in comparison to others. Indonesia has lost market share in the other products shown, with relative stability in wooden furniture and a slight decrease in footwear and garments. More detail on major export products is shown in the cluster analysis segment of this report.

**FIGURE I-28: INDONESIA'S PERFORMANCE IN THE WORLD MARKET, 1999-2004 (EXPORT VALUE GREATER THAN US\$500 MILLION)**



Sources: The Global Trade Atlas; authors' calculations.

The Indonesian economy is falling behind other countries of the region in terms of export competitiveness. Other countries that suffered huge losses in the 1997 economic crisis, such as Thailand and South Korea, have recovered and are achieving solid, and occasionally dynamic, rates of economic growth, while countries that were behind in the region, such as Vietnam, have implemented important reforms and become increasingly competitive. Vietnam is currently working to institute a legal framework that will enable it to comply with the terms of a bilateral trade agreement signed with the United States in 2000. Further impacting Indonesian competitiveness is the high degree of correlation between Indonesian exports and those of other countries in the region, particularly Vietnam and Malaysia overall, Malaysia and the Philippines in agriculture, and Thailand, Malaysia, and China in manufacturing. Indonesia will have to work harder to build a strong position for its industries within this external dynamic.

## INVESTMENT PATTERNS AND ANALYSIS

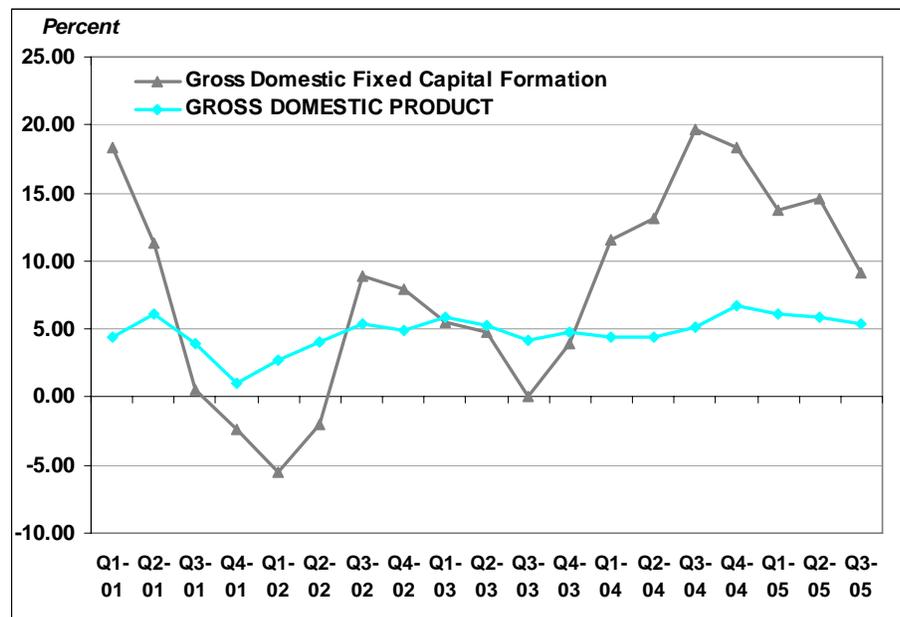
Despite recent improvements in macroeconomic stability and moderate growth in investment, the relatively small contribution of investment to national growth continues to reflect the unhealthy and

uncompetitive investment climate. Several studies identify four primary areas of constraint in the investment climate: the investment law itself; implementation of the law; the investment climate including tax, customs, manpower, and decentralization; and investment support such as infrastructure and industrial and trade policies.

### RECENT INVESTMENT TRENDS

Figure I-29 shows the recent growth rate of investment and consumption on a quarterly basis from 2001 to 2005. In six periods starting from the first quarter of 2004, gross domestic fixed capital formation shows growth of more than 10 percent on average. This exceeds growth of consumption, which only grew at 4 percent on average. Despite this positive trend, the contribution of investment to economic growth was still relatively small and its share in the formation of GDP has not yet reached pre-crisis levels.

**FIGURE I-29: GROWTH OF FIXED CAPITAL FORMATION AND CONSUMPTION**

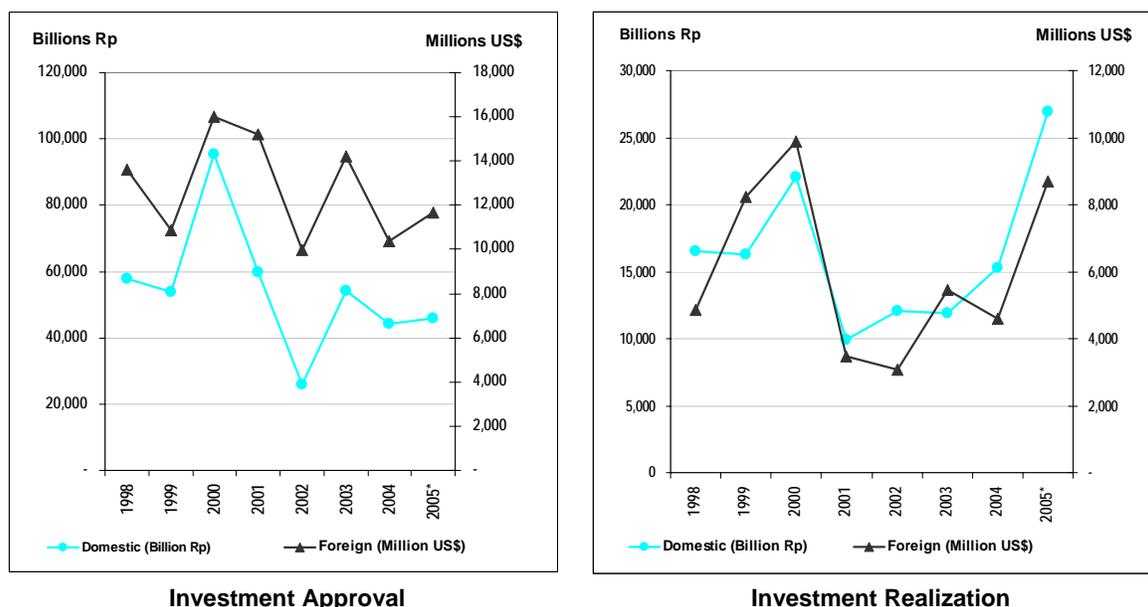


Source: Bank Indonesia, 2005.

Positive developments in Indonesian investment figures are reported by the Indonesian Investment Coordinating Board (BKPM), which notes tremendous growth in both domestic and foreign investment at the end of 2005 (Figure I-30). In November 2005, domestic approvals reached Rp 45.731 billion, an increase of 12.3 percent compared with November 2004. FDI approvals in November 2005 were US\$11.7 million, an increase of 20.6 percent compared with the same period in 2004.

Since 2001, domestic and foreign investment realization has increased significantly. In November 2005, domestic realization reached Rp 26.9 million, 98.4 percent higher than in 2004, while FDI realization was US\$8.7 million, an increase of 136.4 percent. These trends must be interpreted with caution, however, since last year's increases were due to changes in investment registration procedures, such as granting permanent licenses (*Izin Usaha Tetap*) to existing investments as well as intended investments still at the planning stage.

**FIGURE I-30: INVESTMENT APPROVAL AND REALIZATION TRENDS**



\* Until November 2005  
Source: BKPM, 2005.

A more detailed analysis of investment development can be seen in the performance of the primary, secondary, and tertiary sectors. For domestic investment, the decrease seen in primary sector realization continued until 2003 when it began to increase again. In 2005, investment realization in the primary sector went to industries in food crops and plantations. Meanwhile, the secondary sector became a major sector for domestic investment in the last few years, both in terms of volume and in comparison with the other sectors. In 2005, investment realization in the secondary sector mainly went to the paper and printing industry. In the tertiary sector, there was an increase in investment in 2005 after a significant decline in the period 2003–2004, primarily in construction. More detailed figures on investment development can be seen in Table I-18.

**TABLE I-18: SUBSECTORAL SHARE OF DOMESTIC INVESTMENT REALIZATION**

Sector	2000	2001	2002	2003	2004	2005*
Food Crops and Plantation	5.86	6.10	2.43	0.65	3.32	8.28
Livestock	0.70	2.13	1.85	0.25	0.13	0.35
Forestry	0.46	0.00	1.25	3.81	0.00	0.00
Fishery	3.28	2.05	0.00	0.28	0.00	0.02
Mining	0.66	1.49	2.99	0.14	2.94	3.62
Food Industry	14.28	18.83	1.61	27.95	22.98	13.44
Textile Industry	8.74	4.05	12.50	2.10	0.46	6.00
Leather Goods and Footwear Industry	1.37	0.17	0.98	0.01	0.16	0.05
Wood Industry	2.44	2.84	0.32	3.00	5.82	0.74
Paper and Printing Industry	18.10	2.74	2.06	0.84	1.35	35.82
Chemical and Pharmaceutical Industry	5.63	3.18	5.42	11.46	28.07	6.65

Sector	2000	2001	2002	2003	2004	2005*
Rubber and Plastic Industry	5.78	7.56	2.33	0.45	2.92	2.08
Non Metallic Mineral Industry	15.34	13.82	47.19	0.00	3.44	2.88
Metal, Machinery, and Electronic Industry	3.22	0.89	4.65	4.61	3.58	2.99
Medical Precision and Optical Instruments	0.01	3.37	0.00	1.19	0.00	0.00
Motor Vehicles and Other Transport Equipment Industry	4.51	1.42	0.77	0.49	0.13	1.06
Other Industry	0.72	0.40	0.07	0.31	0.00	0.30
Electricity, Gas, and Water Supply	0.11	1.39	1.74	0.00	0.00	0.00
Construction	1.51	1.14	4.69	4.25	12.33	9.15
Trade and Repair	0.02	0.05	0.62	4.09	2.45	0.34
Hotel and Restaurant	5.04	9.57	0.43	0.57	0.52	1.00
Transport, Storage, and Communication	0.87	4.39	4.97	29.53	8.00	2.37
Real Estate, Ind. Estate, and Business Activities	0.90	12.41	0.85	0.80	0.01	0.17
Other Services	0.44	0.01	0.28	3.23	1.41	2.69
<b>TOTAL</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\* Until November 2005.  
Source: BKPM), 2005.

In terms of foreign investment, the secondary sector continued to increase during 2002–2005, but there was an overall shift to the tertiary sector. In the secondary sector, 2005 investments were made in the chemical and pharmaceutical industry, which comprised 13.15 percent of the total investment. The tertiary sector was dominated by transport, storage, and communication (33.73 percent), while the primary one was dominated by food crops and plantation. Table I-19 shows more detail on the development of foreign investment realization in the last five years.

**TABLE I-19: SUBSECTORAL SHARE OF FOREIGN INVESTMENT REALIZATION**

Sector	2000	2001	2002	2003	2004	2005*
Food Crops and Plantation	0.78	2.15	0.29	4.02	3.50	1.84
Livestock	0.15	0.12	0.26	0.02	0.44	0.61
Forestry	0.00	0.00	0.00	0.00	0.00	1.37
Fishery	0.14	0.32	0.04	0.02	0.12	0.06
Mining	0.09	1.90	2.74	0.59	2.65	0.59
Food Industry	4.08	3.55	7.20	5.86	12.48	6.33
Textile Industry	1.72	8.24	3.92	2.80	3.60	0.82
Leather Goods and Footwear Industry	0.36	0.61	1.93	0.11	0.29	0.54
Wood Industry	1.30	0.65	0.63	2.90	0.09	1.03
Paper and Printing Industry	4.69	10.81	0.86	0.15	9.00	0.10
Chemical and Pharmaceutical Industry	13.74	20.34	17.40	5.18	13.35	13.15
Rubber and Plastic Industry	4.15	2.94	1.82	1.83	1.76	4.57

Sector	2000	2001	2002	2003	2004	2005*
Non Metallic Mineral Industry	1.12	0.38	1.75	0.79	2.33	0.54
Metal, Machinery, and Electronic Industry	11.31	11.34	11.48	7.97	6.80	5.42
Medical Precision and Optical Instruments	0.11	0.11	0.01	0.12	0.28	0.02
Motor Vehicles and Other Transport Equip. Industry	4.72	2.63	2.92	5.75	8.75	4.15
Other Industry	0.89	0.79	0.97	1.05	2.20	2.07
Electricity, Gas, and Water Supply	29.96	5.60	0.00	1.41	0.13	0.79
Construction	3.09	3.72	0.22	1.96	8.38	10.33
Trade and Repair	2.26	2.05	5.09	5.64	14.62	4.12
Hotel and Restaurant	4.56	1.02	0.94	1.47	1.95	2.08
Transport, Storage, and Communication	4.84	5.47	37.83	48.94	2.26	33.73
Real Estate, Ind. Estate, and Business Activities	3.65	3.84	0.19	0.01	0.77	2.40
Other Services	2.27	11.41	1.54	1.42	4.27	3.35
<b>TOTAL</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>	<b>100.00</b>

\* Until November 2005.

Source: BKPM, 2005.

## INVESTMENT ANALYSIS

Investment has not yet become an engine of growth in Indonesia, a situation for which there are various explanations. First, the share of capital formation in GDP is still relatively small compared with pre-crisis levels and in comparison with other countries (Table I-20). Second, growth of investment is limited only to several subsectors (Table I-21). Third, there is a shift to capital-intensive investments in the foreign investment structure, which creates only a small multiplier effect in terms of employment creation. The data show a shift in investment from the secondary sector, which comprises more than 68.70 percent of the labor force, to the tertiary sector, which only provides about 21 percent of employment opportunities.

**TABLE I-20: COUNTRY COMPARISON OF GROSS CAPITAL FORMATION (% OF GDP)**

Country	1998	1999	2000	2001	2002	2003	2004
Singapore	32.27	31.98	32.46	26.02	22.75	14.84	18.30
Philippines	20.34	18.75	21.17	18.97	17.56	16.64	17.04
Malaysia	26.67	22.38	27.30	23.92	23.78	21.37	22.45
Cambodia	11.89	16.95	17.22	21.17	22.18	22.64	-
Indonesia	16.77	11.37	22.25	22.03	20.93	17.60	22.77
Thailand	20.45	20.50	22.84	24.10	23.87	25.01	27.13
China	37.71	37.41	36.33	38.49	40.22	43.82	45.29
Vietnam	29.05	27.63	29.61	31.17	33.22	33.82	35.45

Source: ADB, Key Indicators 2005.

**TABLE I-21: SECTOR SHARE IN INVESTMENT REALIZATION (%)**

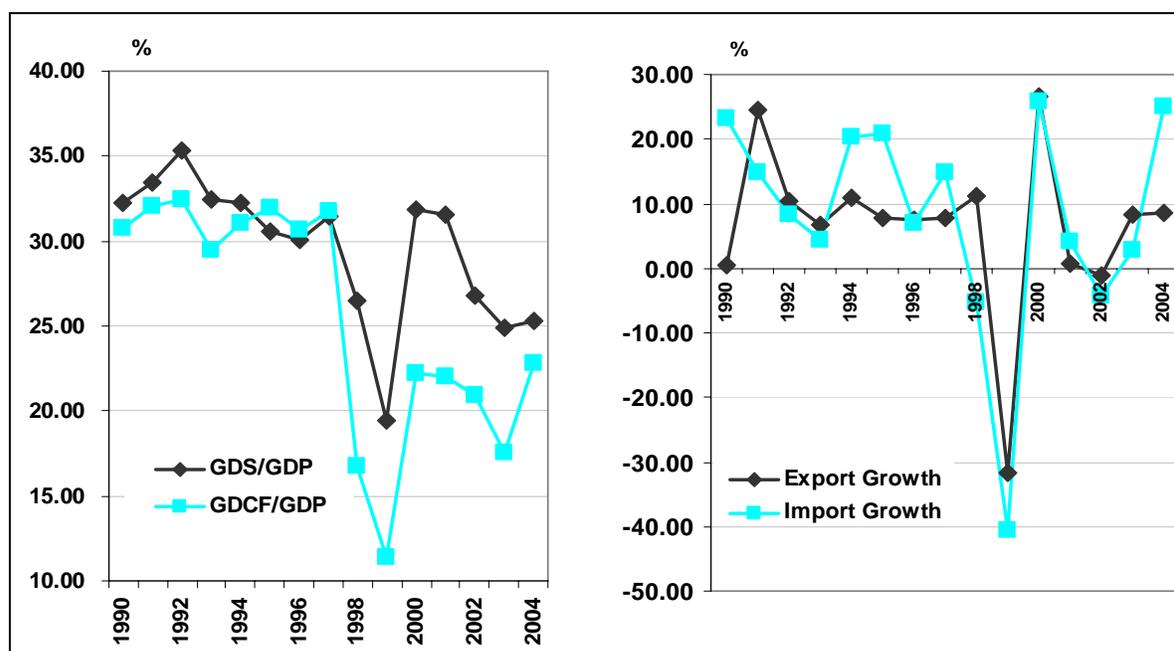
Domestic Investment	2000	2001	2002	2003	2004	2005*
Food Industry	14.28	18.83	1.61	27.95	22.98	13.44
Paper and Printing Industry	18.10	2.74	2.06	0.84	1.35	35.82
Chemical and Pharmaceutical Industry	5.63	3.18	5.42	11.46	28.07	6.65
Non Metallic Mineral Industry	15.34	13.82	47.19	0.0	3.44	2.88
Transport, Storage, and Communication	0.87	4.39	4.97	29.53	8.00	2.37
Foreign Investment	2000	2001	2002	2003	2004	2005*
Food Industry	4.08	3.55	7.20	5.86	12.48	6.33
Chemical and Pharmaceutical Industry	13.74	20.34	17.40	5.18	13.35	13.15
Metal, Machinery, and Electronic Industry	11.31	11.34	11.48	7.97	6.80	5.42
Electricity, Gas, and Water Supply	29.96	5.60	0.00	1.41	0.13	0.79
Transport, Storage, and Communication	4.84	5.47	37.83	48.94	2.26	33.73

\* Until November 2005.

Source: BKPM, 2005.

The small share of investment in the formation of GDP is explained by imbalance in the expenditure structure, which occurs in domestic savings and investment and export and import growth (Figure I-31).

**FIGURE I-31: SAVING-INVESTMENT AND EXPORT-IMPORT GAP**

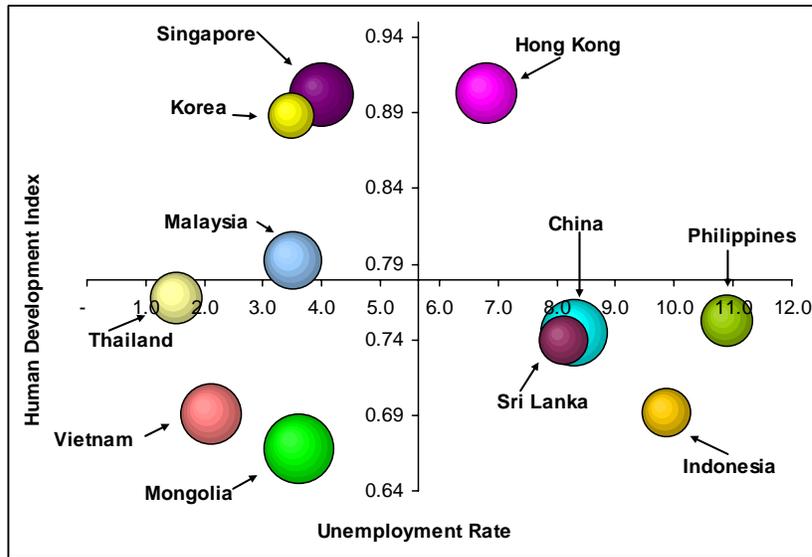


GDS = gross domestic saving; GDCF = gross domestic capital formation

Source: Bank Indonesia, 2005.

Comparison among Asian countries shows that Indonesia is among the few experiencing slow economic growth, low human resource development, and high unemployment rates (Figure I-32). The ideal position is held by countries like Korea, Singapore, and Malaysia, with high human resource development scores, low levels of unemployment, and high rates of economic growth.

**FIGURE I-32: GROWTH QUALITY COMPARISON**



Source: ADB, Key Indicators 2005.

PART II

# INDUSTRY CASE STUDIES

The west end of the island of Flores in Indonesia is famous for the Mangerai ritual whip dancing (or *caci*). This young man was seen at an inter school contest. He is holding a leather shield in his hands which he uses to protect himself from an opponent who is facing him and is armed with a large leather whip.



## THE STATE OF INDONESIAN COMPETITIVENESS 2006

What is competitiveness and what does it mean for Indonesia? The concept is straightforward and there is no need to complicate it with academic definitions. Competitiveness is achieving better results than your rivals. In business, the concept of competitiveness is tied up with the concept of value added. Competitive economies simply add more value than their neighbors.

What is competitiveness in the Indonesian context? It is the ability of Indonesia's firms, on aggregate, to achieve better economic results than their competitors in the global marketplace. The success measure is if Indonesia's incomes can rise faster than the mean. There is a calculus at work here: there must be a differential. This may be a difficult standard to be held to, but it is one that reflects economic reality.

Compared to its more successful Asian neighbors, Indonesia has been stuck in a cycle of resource dependency and low human value added, an obsolete economic system where resources are extracted, exported in bulk, and value is then added elsewhere. Or Indonesia has been a source of cheap labor. In today's global economy, those businesses closest to the customer grab the lion's share of the value added. Those stuck down at the resource base get only what that day's commodity exchange offers; up some days and down others.

In terms of human value added, there exists a logical progression from resource extraction and agriculture to commodity manufacturing to value-added manufacturing to value-added services. As with all developed economies, Indonesia must move up this chain if its citizens are to enjoy higher standards of living. Higher standards of living are, after all, the "bottom line" of the competitiveness exercise.

Indonesia's obstacles are well documented. One does not have to be an "Indonesia hand" to recognize the drag on competitiveness posed by pervasive corruption, an unattractive labor code, inadequate infrastructure, or human resource problems. But these are all movable obstacles in the long run.

A major obstacle not often referred to—and ostensibly the easiest to fix—is the misperception that competitiveness equals low cost. Indonesia is not winning at the low-cost game right now; winning means having the lowest total cost to market among all players, and lower costs are not in and of themselves a clear path to higher standards of living. Often low costs lead to a downward income spiral.

What about a change in business strategy? Strategy is another straightforward concept made complex by excessive contemplation. Strategy implies doing things differently and better than your competitors. There are only two paths to get there, the low-cost approach or the differentiated approach. Deliver the same products and services at lower cost (the conventional wisdom) or deliver superior products and services (the concept of higher value added—which all developed economies pursue). Indonesian business needs to engage in the superior value proposition and not focus only on winning the low-cost game. In the neighborhood of China and India, with combined populations 10 times that of Indonesia, the low-cost game is not a game Indonesia is likely to win.

The superior value strategy requires understanding customer needs intimately, responding to change better than your neighbors, and pursuing process and efficiency improvements relentlessly. This strategy can work at an industry level but it must be implemented at the firm level. The unit of competitiveness is the firm. It is simply the way competitiveness works in the global economy of 2006. Some characteristics of highly competitive firms:

- The ability to respond quickly to changes in the environment. Change is inevitable and the pace of change is accelerating.
- The ability to be responsive to customer needs.
- The ability to flow business processes backwards from the customer.
- A culture of continuous improvement (but remember: continuous improvement = continuous dissatisfaction = perpetual discomfort!!!)
- The ability to be honestly self-critical and to allow candid criticism as the basis of problem identification and root-cause analysis.

Not to downplay the importance of low costs to competitiveness: low costs are a prerequisite to play the game, a best practice that must be pursued to get to strategy.

This document compiles the excellent body of research available on Indonesia's economic situation. We hesitate to call it an assessment per se, as assessments alone do not lead to action and to improvement. It is a baseline study. We prefer to dub this document a call to action for Indonesia, as competitiveness will not improve until Indonesia's firms change their behavior and improve their performance. The legal and regulatory environment must be conducive to business, but business must produce goods and services the world's customers want to buy. Only enterprises can create economic value.

“Will it work in Indonesia?” “Indonesia is different.” “Java's business culture is different than anywhere else on earth.” SENADA submits this document in full confidence that the principles of market economics and competitiveness that operate globally also apply to Indonesia. This does not imply that Indonesia will lose its unique and valuable culture. Ours is an optimistic message: Indonesia can become more globally competitive through focus, drive, and commitment to following competitive best practice and ultimately achieving winning competitive strategy. The solution ultimately lies in business behavior change. Achieving global competitiveness is a large-scale exercise in change management. There is no inherent reason why Indonesia cannot succeed.

Ronald E. Ashkin  
Development Alternatives, Inc.  
Chief of Party, USAID/SENADA

Jakarta, February 2006

## INDUSTRY CASE STUDIES

The objective of the SENADA project is to generate growth, trade, jobs, and income by improving Indonesia's business and investment climates and increasing competitiveness and productivity.<sup>6</sup> SENADA will meet these goals through an approach that combines top-down (business environment) and bottom-up (competitiveness and productivity of firms) technical assistance. Technical assistance at both the macroeconomic and firm levels is necessary to improve competitiveness—neither approach is sufficient in and of itself.

The first half of this paper described the enabling environment and trends in exports and investment. This review establishes a baseline against which future conditions can be compared. However, in recognition of the importance of decentralization in Indonesia today, and the increased effectiveness of working directly with firms, SENADA will largely be a bottom-up project.

SENADA will improve firm-level capacity to compete through broad-scale direct consulting interventions within selected high-potential industries. Progress at the business environment level will primarily be driven by issues brought to the fore at the firm, industry, and regional levels.

**FIGURE II-1: EVOLUTION OF SENADA PROJECT RESOURCE ALLOCATION OVER TIME**

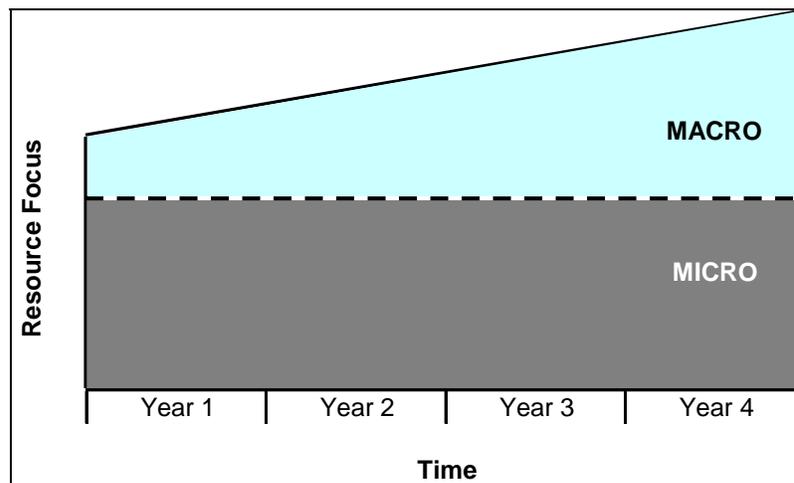


Figure II-1 illustrates this chronological evolution. The project's initial focus will be the targeting and delivery of business assistance to medium-sized companies, falling within the broad range of US\$50,000 to \$10 million of sales revenue (Rp 500 million to Rp 100 billion, assuming Rp 10,000 to \$1).

While it is anticipated that this focus will be consistent throughout the project, an increasing amount of effort will gradually be invested into working with government agencies at the local and national levels, business associations, and other influential development entities.

The underpinning rationale for this approach is quite clear. It is only by working with selected industries, closely aligned with the government's focus, that a comprehensive understanding of each industry's dynamics and constraints can be gained, facilitating an informed loop-back into policy advocacy.

<sup>6</sup> From the SENADA Scope of Work, page 7.

## STRUCTURE

SENADA will be structured with Regional Competitiveness Centers (RCCs) located initially in Jakarta (West Java), Bandung (West Java), and Surabaya (East Java). Additional RCCs are contemplated for Medan (North Sumatra), Yogyakarta (Central Java), and Makassar (South Sulawesi). Regional Competitiveness Alliances (RCAs) will also be created, made up of stakeholders and change leaders from both public and private sectors—industry, associations, chambers of commerce, government, HEIs, NGOs, and so on—who have mutual interest in furthering competitiveness.

The function of the RCA will be to foster positive change in the business environment by advocating removal of specific constraints. Industry strategies will be facilitated through industry-specific working groups, where assistance to member firms of the RCC intersects with the group activities of the RCA. RCAs will participate in a National Competitive Alliance.

## THE INDUSTRIES

SENADA will initially focus its assistance on three industries: automotive parts, footwear, and information and communication technologies (ICT). Over the course of the project, SENADA will assist an additional three industries, with the textile and apparel, ceramics, and rattan industries identified as initial candidates.

Table II-1 provides a summary of SENADA's industry selection criteria. Seven criteria were used, ranging from an industry's ability to respond positively to assistance to the effect such a positive response might have on Indonesia's job creation, both overall and regionally. The seven criteria encompass 37 subcriteria.

**TABLE II-1: SUMMARY OF SENADA INDUSTRY SELECTION RESULTS**

Theme	Weight	Auto Parts	Footwear	ICT	Rattan	Apparel	Ceramics
Leadership, Readiness, and Commitment	20%	3.8	2.8	4	2.6	2.8	1.4
Potential Impact of Improved Competitiveness at Regional and National Levels of Economy	15%	3.15	2.7	3.15	2.85	3.15	2.4
Impact on Job Creation	15%	1.05	1.05	0.9	0.6	0.6	0.75
Potential to Differentiate from Competition	10%	0.7	0.9	0.8	0.6	0.2	0.5
Potential for Increased Incomes	15%	0.9	0.75	0.75	1.05	0.6	0.75
Unmet Market Demand	15%	1.35	0.9	1.35	0.6	1.35	0.9
Growth Potential of the Industry Value Chain	10%	0.7	0.8	1.1	0.7	0.9	0.7
Total score achieved by sector	100%	11.65	9.9	12.05	9	9.6	7.4
Maximum total score possible		16.5	16.5	16.5	16.5	16.5	16.5
Percentage of maximum score achieved		71%	60%	73%	55%	58%	45%

The industry overviews prepared below have the following structure:

- **Introduction:** A brief history of industry performance in Indonesia, including size, recent trends, and policy considerations.
- **Composition of the industry:** What subsectors of the industry are present in Indonesia, who is operating them, and where in the archipelago they are active.
- **Competitive conditions:** Data on domestic sales and/or exports, other demand conditions, competitors, supporting industries, and a SWOT analysis.
- **Industry challenges:** Key constraints identified in the SWOT analysis and elsewhere that begin to target industry-specific issues.
- **The way forward:** Without making hard and fast recommendations, this section presents some preliminary ideas for resolving the challenges described in the preceding section.

The methodology adopted in collating these industry overviews rests primarily on secondary data drawn from a wide range of sources both inside and outside of Indonesia. The information drawn from these secondary sources has been cross-referenced with and tempered by primary anecdotal information wherever possible.

It is stressed that these overviews are not presented as comprehensive and definitive documents. Rather, they again form a baseline from which SENADA's understanding of these industries can grow and against which improvements in performance can be measured.

## INFORMATION AND COMMUNICATION TECHNOLOGIES

ICT is a crosscutting industry with implications for all the sectors identified for intervention in SENADA, in addition to being an industry the project will work with directly. Its role in improving the functioning of value chains is discussed briefly here, but this section focuses in large part on trends in the industry itself, including where Indonesia stands in relation to the necessary policy environment and technological infrastructure and diffusion upon which the industry will grow.

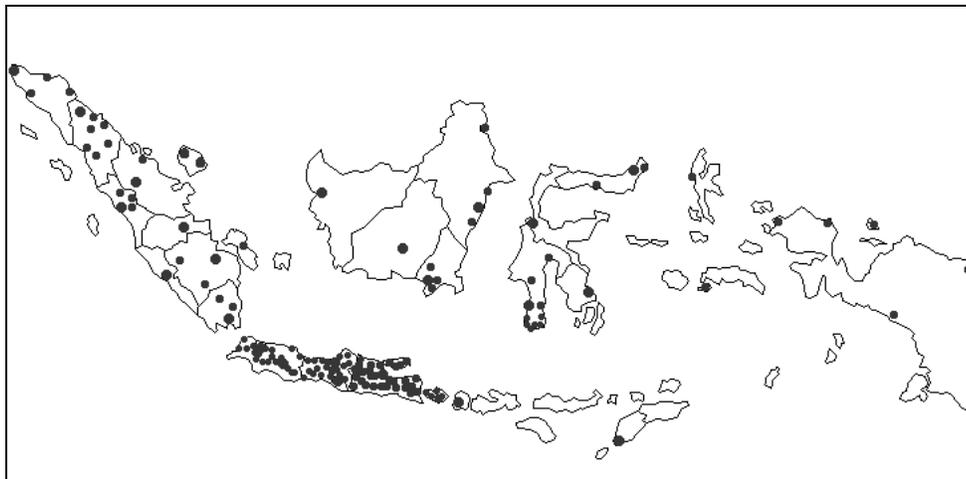
### INTRODUCTION

The most detailed and current study on Internet usage in Indonesia, conducted by The Asia Foundation in 2002, found that the poor state of infrastructure limits Internet use to cities and larger towns. In 2003, the total number of installed lines for various divisional areas of PT Telkom, the main telecommunications incumbent, ranged from 3 million in Jakarta alone to 780,000 in all of Kalimantan and Eastern Indonesia, out of a total of 8.5 million across the country. In many rural areas, Internet Service Provider (ISP) service is unavailable and Internet users must access ISPs through long-distance calls to nearby towns using telephone lines, which are also in short supply and of poor quality. Transmission speeds are extremely low, often below 10 kilobits per second (kbps), and there are frequent connection breaks. ISP service is also limited in towns outside Java, Bali, and Sumatra due to the low number of subscribers in these areas.

Even so, while the use of Internet is still limited as a means of promotion and communications in Indonesia, over 40 percent of SMEs had websites in 2002 and new innovations in ICT are providing opportunities as well as challenges for the business community in Indonesia. While telephone connections remain unavailable to many SMEs, the costs of accessing new communication

technologies, such as mobile phones, are falling rapidly, and investment in ICT will have an enormous benefit for businesses in the future.<sup>7</sup> In 2004, total revenue in the ICT sector was approximately \$1.6 billion, or 0.7 percent of GDP. Total investment reached \$ 1 billion, with average annual growth of 843 percent from 1990 to 2002.

**FIGURE II-2: INTERNET ACCESS IN INDONESIA**



Source: CastleAsia and Asia Foundation Survey (2002)

The ICT industry is also receiving priority attention at the highest levels of government, with the reorganization and empowerment of the former State Minister of Communications and Information (*Kominfo*) to become the Department of Communications and Informatics (*Depkominfo*), which will have licensing and other new executive powers. The new institutional arrangement is intended to create greater synergy, efficiency, and effectiveness through the pillars of application, infrastructure, and content (*e-indonesia* 2006). The current government is also emphasizing a greater role for ICT in improving economic competitiveness and implementing e-governance through the introduction of a digital identification (SIN) card. In addition to the establishment of the new *Depkominfo*, it is currently preparing to establish a new “ICT Task Force” (*Gugus Tugas Tingkat Tinggi Telematika Indonesia*, GT4I), chaired by the President (Detik.net 2006).

**TABLE II-2: OVERVIEW OF TELECOMMUNICATION SERVICES AND OPERATIONS**

Telecom Services	Telecom Operations	Competition Regime
Fixed Wire Line Local	Exclusive right, 1996–2010 PT Telkom	None
Fixed Domestic LD	Exclusive right, 1996–2010 (PT Telkom)	None
Fixed Wireless Local	Limited competition (Satelindo)	Limited
Fixed International	Duopoly 1995–2004, (Indosat, Satelindo)	Limited
Mobile	Competitive (Satelindo, Excelkomindo, Telkomsel, etc.)	Competitive
Internet Service Provision	Partially competitive, currently 124 ISPs official, 54 unlicensed	Competitive

<sup>7</sup> In this paper, microenterprises (those with only one or two owners/employees) are treated as part of small- and medium-sized enterprises (SMEs).

## POLICY

The 1999 telecommunications law opened the sector to up to 95 percent foreign ownership in non-basic or value-added services—defined as intelligent network services (IN), services with interactive technology (voice response)—and 49 percent foreign ownership in basic telecommunications services (USA-STAT Information and Communication).

In 2002, additional implementing regulations for the telecom law established a duopoly and accelerated reforms in the sector. In 2003, PT Telkom's exclusive rights to domestic line service and PT Indosat and Satelindo's rights to international service were brought to an end. Partial privatizations of these state telecommunications companies also began in 2002 with government ownership of PT Telkom and PT Indosat reduced to 51 percent and 15 percent, respectively. Some 41.9 percent of Indosat was sold to Singapore Technologies Telemedia (USTR 2005).

**TABLE II-3: INTERNET (BROADBAND) PRICES FOR BUSINESS USERS, 2005**

Bandwidth	Indonesia	India	Ratio
64 kbps	\$393	\$128	3.0 : 1
128 kbps	\$639	\$230	2.8 : 1
256 kbps	\$1,180	\$396	3.0 : 1
512 kbps	\$2,596	\$612	4.2 : 1
1 mbps	\$3,776	\$970	3.9 : 1

Source: Divankar Goswami & Onno Purbo, Indonesia Wi-Fi Access Innovation, LIRNEasia.net, Oct. 2005

**TABLE II-4: ADSL RETAIL PRICES (MONTHLY), 2005**

Bandwidth	Indonesia *	India **	Ratio
384 kbps Usage Limit 1 GB* ; 2 GB**	\$74	\$23	3.2 : 1
512 kbps Usage Limit 2 GB* ; 5 GB**	\$93	\$41	2.3 : 1

Source: Divankar Goswami & Onno Purbo, Indonesia Wi-Fi Access Innovation, LIRNEasia.net, Oct. 2005

In 2003, the Indonesian Directorate General of Post and Telecommunications released an invitation to international telecommunications companies to bid on the rights to provide third-generation (3G) mobile services (IMT-2000), which will provide cellular customers with a wider range of services and enhance the country's telecommunications industry. As can be seen in the table above, the price of Internet as an input to other businesses is a disadvantage to businesses in comparison to India, where the price is two to three times less.

## COMPOSITION OF THE INDUSTRY

The ICT industry is made up of a complex of interrelated industrial segments. While each segment of the industry may be distinct from the others in terms of inputs, they are all interconnected at some point along their interdependent value chains. The primary components are:

- **Hardware:** Devices such as computers, servers, storage, and peripherals
- **Software:** Operating systems and applications
- **Infrastructure and networking:** Fixed phone lines, broadband cables, and satellites
- **Service providers:** ISPs, network access protection (NAP), and multimedia

ICT services offer potential for small and large businesses to improve communications along all links of the value chain, from customers and suppliers to potential partners and investors. Additional functions include marketing, performance monitoring, dissemination of market information, production management, and improved record keeping (Suriadinata 2001).

The breakdown of IT spending in 2002 shows that over 75 percent of spending was on hardware, with a little over 8 percent on software and close to 14.5 percent on services.

Approximately 66 percent of PCs sold in Indonesia are assembled locally, with hundreds of SMEs engaged as assemblers in the market. Local assembly is primarily for the low-to-medium market, with prices ranging from \$300 to \$600.

The market for hardware vendors is dominated by local companies such as Zyrex, Mugen, Relion, Wearness, Extron, IndoPC, and Access, but these companies are only responsible for about 21 percent of the market, with smaller companies comprising the rest.

**TABLE II-5: NUMBER OF TELECOMMUNICATIONS ESTABLISHMENTS AND NUMBER OF WORKERS**

	2001	2002	2003
Number of Establishments	15	15	17
Production Workers	2,492	7,164	5,466
- Male	1,595	2,434	1,896
- Female	897	4,730	3,569
Other Workers	430	619	634
- Male	321	441	455
- Female	109	178	179
<b>Total</b>	<b>2,922</b>	<b>7,783</b>	<b>6,099</b>

Source: BPS Indonesian Statistics Agency, various years

**TABLE II-6: NUMBER OF TELECOMMUNICATIONS ESTABLISHMENTS BY INVESTMENT STATUS**

Type of investment	2001	2002	2003
Domestic	13	5	2
Foreign	16	2	4
Other	14	8	11
<b>Total</b>	<b>43</b>	<b>15</b>	<b>17</b>

Statistics on software demand in Indonesia are scarce, as an estimated 87 percent of software currently in use is pirated. In 2005, Microsoft granted Indonesia a one-time amnesty on the pirated software being used on 50,000 government computers for the fee of \$1 per computer. The expectation is that in the future, government users will purchase their software legally (ABC News Online 2005).

### INTEGRATED SOFTWARE

Most companies in Indonesia do not have integrated software to manage production process, from purchasing of raw material though distribution of finished goods to the buyer. However, integrated software can play an important role for any type of industry in production, inventory, assembly, marketing, finance, and management to improve efficiency and effectiveness. Below is a list of the steps in a general supply chain, with comments on increasing the competitiveness of those processes.

- **Production and assembly.** An integrated software package enables the people responsible for production planning and inventory control (PPIC) to communicate the model and quantity of the goods that they want to produce directly to the purchasing department.
- **Inventory.** The inventory department can more easily procure materials and manage inventory (monitoring the buffer stock).
- **Warehouse for finished goods.** Accuracy of stock control of finished goods will be improved.
- **Marketing and sales.** Marketing and sales departments can develop marketing plans, and record and prepare statistics on buyers by week, month, year, and model. Sales people can quickly send accurate deliveries to buyers, automatically generating a shipping order to the logistic department and warehouse and invoice to the finance department.

- **Finance.** Integrated software can assist the finance department in tracking information on materials, including prices, terms of payment, and warranty on materials for each vendor. This information will help companies create financial reports and monitor accounts payable and receivable.
- **Management.** Management can track company financials more effectively, improving the ability to plan for the future, measure productivity of labor, and track overall productivity by mapping data on inputs of raw material against outputs of finished goods.

**SERVICE PROVIDERS**

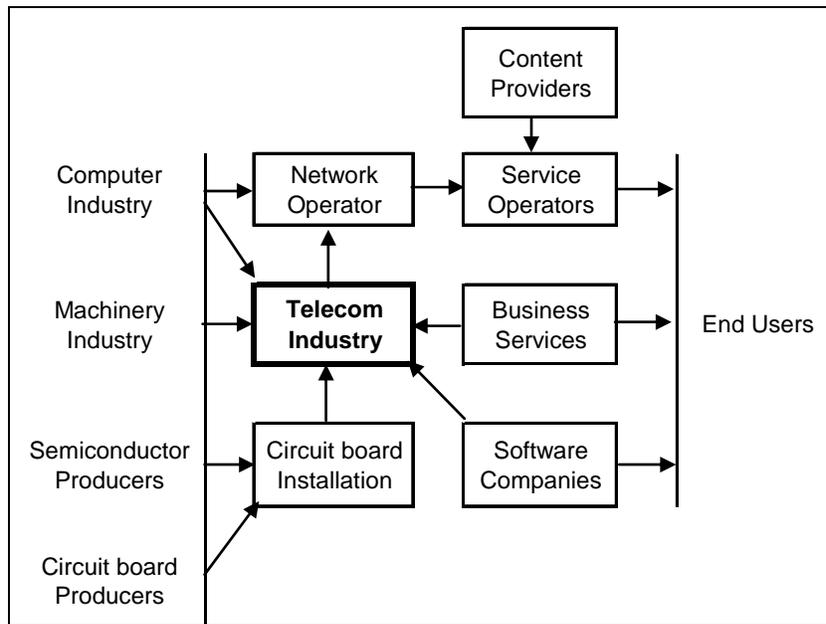
**TABLE II-7: LICENSES ISSUED BY DIRECTOR GENERAL OF POST AND TELECOMMUNICATIONS**

	1999	2000	2001	2002	2003	2004	2005
ISP	50	139	172	180	190	228	232
Network Access Protection	—	5	16	18	22	36	36
Multimedia	8	18	24	24	24	24	24

Source: APJII, 2006

The number of ISPs has been increasing each year in Indonesia, reaching 232 in 2005. The largest are the two state-owned companies, Telkom and Indosat, which both provide satellite access in addition to leasing broadband. ISPs are part of a larger category of multimedia services that includes web hosting, co-location, and interactive portals.

**FIGURE II-3: THE GENERIC ICT INDUSTRY**



Source: Sakari Luukkainen, Digital Economy.

## COMPETITIVE CONDITIONS

### DEMAND

The value of ICT exports from Indonesia is expected to reach \$4 billion by 2009, a rise of 122 percent compared to \$1.8 billion in 2005. The Director General of Transport and ICT equipment stated that the ICT industry is a “national industry pillar” and increased international product standards must be attained. In a related comment, the Director General of Post and Telecommunications (DGPT) from the Department of Communications and Information stated that from 2006, operators in telecommunications services are “obliged to spend 20 percent of their equipment expenditure budget on domestic ICT components.” Such a directive might be directed to boost the prospects of the state-owned electronic product sector—companies such as PT Inti (Bandung)—as the state-owned electronic product sector has been generally less competitive than private-sector counterparts (Bisnis Indonesia 2005).

While business players and economic observers predict that the Indonesian economy will face a challenging year in 2006, the cellular phone industry is one among a short list of services sectors that is viewed with a great deal of optimism (Warta Ekonomi 2006). This industry has shown remarkable growth in recent years and the Chair of the Association of Cellular Telecommunications Operators of Indonesia (ATSI) estimates that 2006 will see subscriber growth of close to 30 percent. An additional 10 million new customers are expected to enter the market, increasing the number of subscribers to 42 million.

The Indonesian ICT market was valued at \$636 million in 2003, with growth in 2004 up to more than \$1 billion, the vast majority of which was spent on computer related products (Stats-USA Personal Computer and Peripherals Market 2004). Approximately 750,000 units were sold in 2003, at a value of \$636 million, while 2004 values grew by 20 percent, to \$763 million. The PC population, meanwhile, grew from 2.5 million in 2001 to 4.8 million in 2004. Demand for PCs remains predominantly in the business and government sectors, with home use still a small percentage. SMEs are the fastest growing sector in the corporate world.

The low rate of home use of personal computers has driven a boom in the market for public access kiosks, called warung Internet, or warnet. These kiosks provide access to individuals as well as SMEs that do not yet have the capacity to own and manage their network infrastructure. A strategy to increase PC penetration in homes has been employed in India, where television penetration rates are extremely high. Tapping into this market through innovative technology, the TVPCT—a combined television, PC, telephone/fax—is now available at a slightly higher cost than a television alone. This introduces PCs into homes, where young people quickly pick up the technology and become computer literate at an early age.

**TABLE II-8: MARKET FOR COMPUTERS IN INDONESIA IN 2003**

	Desktop		Notebook		Server		Total	
	US\$ '000	Market Share						
Import PC	153,000	34%	115,900	95%	55,680	87%	324,805	51%
Local Assembled PC	297,000	66%	6,100	5%	8,320	13%	311,420	49%
Total Market	450,000	100%	122,000	100%	64,000	100%	636,000	100%
Imports from U.S.	108,000	24%	48,800	40%	54,144	84.60%	210,944	33%

Source: APWKomtel estimates, Indonesian Personal Computer and Peripheral Market, 2004 US&FCS Market Research Reports, Stats USA

The percentage of Internet subscribers (0.65 percent of 230 million population) and users (6.95 percent) is still rather low in Indonesia, but there has been consistent rapid growth in both categories in the last seven years. Internet subscribers have been averaging annual growth of 43 percent, and with 67 percent growth, Internet users are increasing even more rapidly. A 2003 report published by the Internet Data Center (IDC) estimates that by 2007, the IT market in Indonesia will reach \$ 1.9 billion (IDC 2003).

**TABLE II-9: GROWTH OF INTERNET SUBSCRIBERS AND ESTIMATED USERS, 1998–2005**

Year	Subscribers (growth in %)		Users (growth in %)	
1998	134,000		512,000	
1999	256,000	(91%)	1,000,000	(95%)
2000	400,000	(56%)	1,900,000	(90%)
2001	581,000	(45%)	4,200,000	(121%)
2002	667,002	(15%)	4,500,000	(7%)
2003	865,706	(30%)	8,080,543	(80%)
2004	1,087,428	(26%)	11,226,143	(39%)
2005*	1,500,000	(38%)	16,000,000	(43%)

Source: APJII, 2006

Note: \* Figures for the number of users for 2005 are estimates

As illustrated in Table II-10, a cross-country comparison of users and subscribers, gender breakdown, broadband subscribers, wireless subscribers, and number of PCs illustrates large variations among East Asian countries—Indonesia has a much lower percentage of the population using the Internet and a much lower number of PCs per 1,000 people than its regional competitor countries.

**TABLE II-10: COMPARATIVE INTERNATIONAL INTERNET INDICATORS, 2004**

	Indonesia	Thailand	Malaysia	South Korea	Hong Kong	Singapore
Absolute Internet Users (millions) and (%)	12.86 (<1)	6.97 (7)	9.40 (36)	31.58 (75)	2.50 (67)	2.40 (71)
Females Among Internet Users (%)	36 (2000)	53	36 (2002)	65	50	47 (2002)
Broadband Subscribers (thousands)	36 (2003)	15.9 (2003)	218	12,260 (2005)	1,557 (2005)	576.1 (2005)
Wireless Internet Subscribers	NA	4 m mobile data users	NA	35.02 m (2004)	1.2 m (2001)	NA
Number of PCs per 1,000	11.9 (2003)	39.8 (2003)	146.8 (2003)	544.9 (2005)	422 (2003)	Home PC penetration 74%
Fixed & Mobile Subscribers	68.9% (2003)	71.3% (2003)	70.9% (2003)	58.6% (2003)	68.9% (2005)	68.8% (2005)

Source: Pou-Chou Liang, Internet Access, APEC TELWG32/DCSG/15, Seoul, Sept. 2005

## COMPETITION

There are no barriers to trade in the computer hardware market in Indonesia. The implementation of the ASEAN Free Trade Agreement (AFTA) in 2002 reduced tariffs for ASEAN-produced products to 5 percent or less. In 2004, U.S. PC companies Hewlett-Packard, Dell, and IBM comprised 23 percent of all imported PCs—making up the top five brandname computers in the Indonesian market are Taiwan’s Acer and Japan’s Toshiba. Domestic production has also increased in recent years and now comprises nearly half of the market. Locally assembled PCs include Zyrex, Mugen, Relion, Wearness, Extrn, IncoPC, and Access. These firms have formed an alliance to develop a national brand that will be marketed to the low-end consumer for approximately \$300 (USA-Stats Computer and Peripherals Market 2004).

Servers and storage products are also dominated by U.S. manufacturers, which had a 90 percent share of the Indonesian market in 2003. The Indonesian brands—Wearnes, Mugen, and Zyrex—remain at the very low end of the market for servers. Taiwanese, Japanese, and Korean companies dominate in the peripherals market (motherboards, memory chips, and monitors) while Japanese brands dominate in the laptop industry (USA-Stats Computer and Peripherals Market 2004).

In 2000, 20 percent of Indonesia’s telecommunications imports were in the HS category “Other apparatus for carrier-current line systems (Digital line systems).” The main suppliers of this product were the United States (40 percent), Finland (30 percent), and Singapore (8.6 percent). The second largest import was “Other electrical apparatus for line telephony/telegraphy,” accounting for 16 percent of the total imports and led by Germany (26 percent), Sweden (25 percent), and the United States (16.75 percent).

## SUPPORTING INDUSTRIES

Each segment of the ICT industry has a different series of inputs. Hardware relies on plastic and electrical components, software on human resources and code, infrastructure on cables and broadband, and service provision again on human resources. The hardware industry is the only one with significant production in Indonesia.

The Indonesian electronics industry is the largest non-oil source of export income in Indonesia. In 2004, the value of exports was \$6.6 billion, primarily in television, radio, and recording equipment, but with over \$118 million in cables and \$330 million in integrated circuitry.

## SWOT ANALYSIS

Strengths	Opportunities
<ul style="list-style-type: none"><li>▪ Private sector-led activities have driven the agenda of the industry since 1995.</li><li>▪ National strategy on ICT development in place since 2001.</li><li>▪ Good local technical skills, if insufficient supply: web-design, low-level programming for database and network management, other IT skills.</li><li>▪ Growing opportunities for education in ICT fields.</li></ul>	<ul style="list-style-type: none"><li>▪ Significant room for increased PC and telecom penetration.</li><li>▪ Wireless frequency opening.</li><li>▪ Joint awareness-raising and ICT promotion work by APJII and other members of Indonesia IT Federation.</li><li>▪ Strong ICT sector boosts productivity of other sectors.</li><li>▪ An increasingly educated domestic population.</li></ul>

Weaknesses	Threats
<ul style="list-style-type: none"> <li>▪ Poor links between private and public sectors.</li> <li>▪ Lack of diffusion weakens impact of ICT for innovating firms.</li> <li>▪ Fragmented private sector.</li> <li>▪ Cyberlaws (draft-law RUU-ITE, RUU-AIP) have yet to be implemented.</li> </ul>	<ul style="list-style-type: none"> <li>▪ ICT goods are subject to a luxury goods tax.</li> <li>▪ New draft tax laws on taxation of bandwidth and e-commerce may stifle the industry.</li> <li>▪ Poor infrastructure of wireline telecommunication.</li> <li>▪ Lack of competition in telecommunications.</li> <li>▪ Effective monopoly on fixed lines by Telkom.</li> <li>▪ High electricity costs.<sup>8</sup></li> </ul>

## INDUSTRY CHALLENGES

### INFRASTRUCTURE AND EXISTING TECHNOLOGY

Companies in the ICT industry and those hoping to make use of it face limited infrastructure of low quality and high cost. Installation of telephone lines and cables remains the key constraint to broader Internet diffusion in Indonesia, with significant impacts on SMEs outside of major urban centers. Satellite-based mobile bandwidth is becoming increasingly available outside of Jakarta, but the high price of these services puts them beyond the reach of most SMEs and service companies. Interviews with ISPs revealed that high operational costs combined with low revenues have made it difficult for them to reach profitability. Greater competition in fixed and leased line provision would lower ISP costs and support improved services.

### EDUCATION, TRAINING, AND SUPPORT

The educational system in Indonesia is not yet of high enough quality to meet the needs of knowledge industries. Outside large cities such as Jakarta and Surabaya, Internet users frequently point out that they face difficulties finding capable service consultants to help with IT development and website design. Use of integrated software also requires skilled technicians to tailor programs to meet industry needs and provide support on an ongoing basis.

## THE WAY FORWARD

The following are suggestions for increasing the competitiveness of the Indonesian ICT sector:

### IMPROVE THE COMPETITIVE/INVESTMENT ENVIRONMENT

- Apply the Indonesia anti-monopoly law to state-owned telecommunications companies to allow maximum choice and better services for retail customers and SMEs, as well as to ensure a productive operating environment for ISPs and other support companies.
- Increase phone rates to a point above the level of operating costs through fair implementation of Universal Service Obligations (USO).

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<sup>8</sup> The sensitive nature of the demand for computer equipment has been demonstrated recently with the adverse impact of rising oil and gas prices in October 2005 on the sale of computers. Mr. Adri Tanuwijaya of the Computer Business Association (West Java) suggests that further rise in the electricity prices of over 30 percent could lower sales by over 40 percent (Bisnis Indonesia, Feb. 9, 2006).

#### **EDUCATIONAL AND EMPLOYMENT OPPORTUNITIES**

- Privately-owned IT schools are already being set up in Jakarta but broader national diffusion is needed to decentralize ICT services.

#### **DEVELOP SCIENCE AND TECHNOLOGY INDICATORS**

- The Indonesian Institute of Sciences has plans to release indicators on science and technology in 2007. These will enable larger international companies to implement a strategy for investing in new technologies as is already taking place in other countries in the Asia-Pacific region, such as Thailand, Malaysia, Singapore, Korea, and Taiwan.

# AUTOMOTIVE PARTS

## INTRODUCTION

The automotive parts industry in Indonesia is supported by the rapidly growing market for motorcycles. In both rural and urban areas, the motorcycle has emerged as a viable alternative method of transportation due to its affordability, loan support from financing companies—borrowers need only provide a down payment of Rp 500,000—and its economical use of fuel.

Multinational firms such as Yamaha and Honda have recognized the potential in Indonesia and both have recently increased their investments. PT. Yamaha Motor Manufacturing West Java (YMMWJ) invested \$14.7 million for a factory in Kerawang Industrial District. The factory is expected to hire at least 700 workers and double motorcycle manufacturing to 600,000 units a year by 2007, increasing total Yamaha manufacturing in Indonesia to 1.8 million units a year. Meanwhile, Honda has expanded into a third factory in Indonesia with an investment of over \$100 million and a production capacity of 1 million units per year. This new factory is expected to absorb 4,000 employees and purchase spare parts from over 150 SMEs in Indonesia.

## COMPOSITION OF THE INDUSTRY

The automotive parts produced in Indonesia include:

- Engine electrical system (battery, battery cable, wiring harness, spark plug, starter, alternator, horn, halogen lamp)
- Engine system (air filter, oil filter, fuel, valve, gasket, piston, fly wheel, pulley, exhaust system)
- Brake system (brake shoe, brake pad, brake lining, disc brake, brake drum, disc rotor)
- Cooling system (air conditioning system, freon, radiator, water tank)
- Body and frame (chassis, door frame, door lock, window regulator)
- Plastic products (injection molding parts, plastic container box, mirror, steering wheel)
- Cast and smelt parts (aluminum cast parts, ferro cast parts, machining)
- Power train (clutch system, transmission, propeller shaft, main shaft, differential [axle], bearing, motorcycle chain)
- Suspension (shock absorber, front fork, stay damper)
- Forged parts (mechanical jack, tool set, steering knuckle, under bracket)
- Other products (rubber products, colorant and compounds, cutting products, trading)

<b>Firm Size</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Motor vehicle component and apparatus</b>			
Large	127	172	160
Medium	68	90	94

<b>Motorcycle component and apparatus</b>			
Large	89	84	92
Medium	33	27	32

Source: Central Bureau of Statistic (BPS)

Automotive parts production takes place across Java, while metal material inputs are produced in Banten Province (PT Krakatau Steel) and West Java. Supporting industries in Indonesia include: steel factories; metal surface finishing, such as electro and powder plating and nickel chrome work; production of polypropylene; welding; and production of plastics and rubber.

The number of companies producing automotive components remained relatively stable until 2003. Official statistics from 2004 are not yet available but industry experts estimate that the number of firms has grown significantly as motor vehicle and motorcycle assembly has increased.

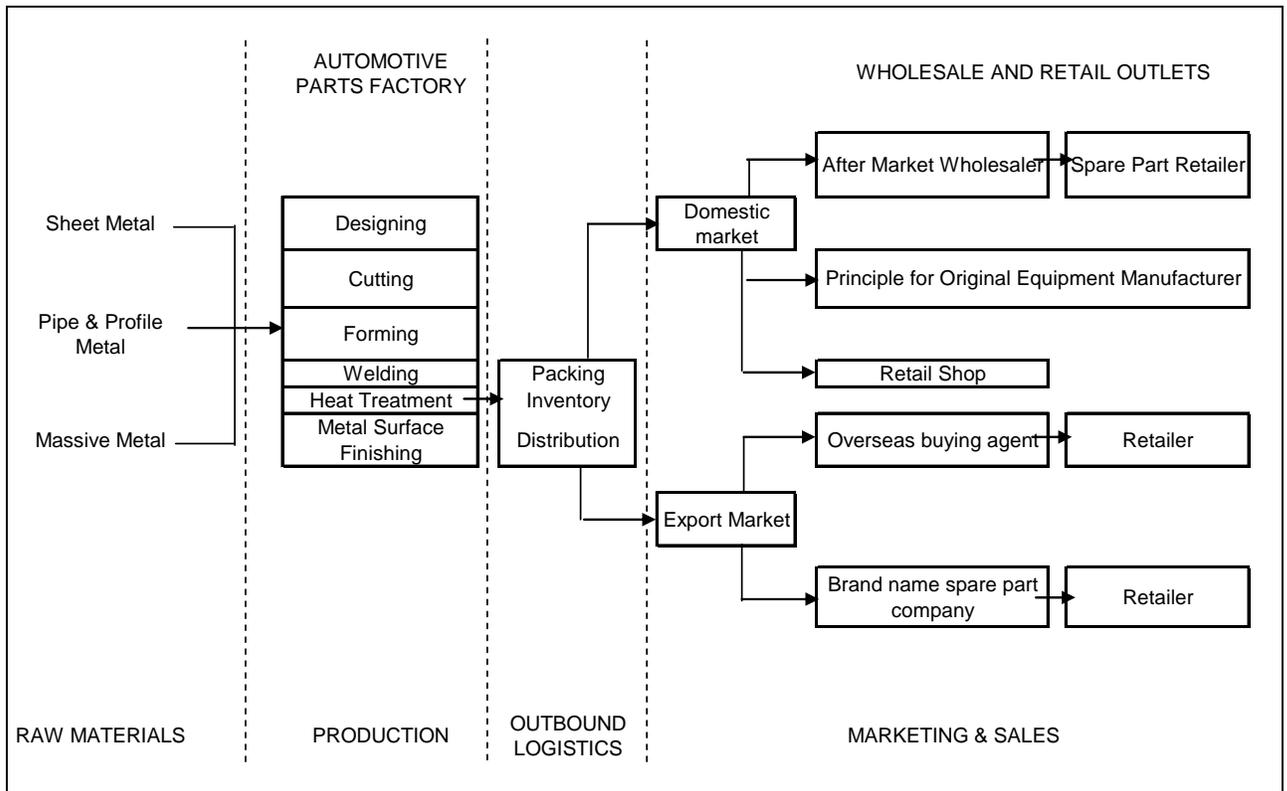
This industry is an important source of employment in Indonesia, with total employment in 2003 estimated to be over 100,000 employees.

<b>TABLE II-12: EMPLOYMENT IN THE AUTOMOTIVE PARTS INDUSTRY</b>			
<b>Firm size</b>	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Motor vehicle components and apparatus</b>			
Large	29,372	37,628	39,566
Medium	26,632	33,339	36,577
<b>Motorcycle components and apparatus</b>			
Large	18,035	14,756	16,521
Medium	15,563	12,102	13,768

Source: Central Bureau of Statistic (BPS)

The nature of the automotive parts industry is one of contract-manufacturing among automotive parts companies. Each factory specializes in relatively specific steps of the assembly process so that a factory specializing in cutting will frequently contract out the forming and welding steps to another firm.

**FIGURE II-4: THE AUTOMOTIVE PARTS SUPPLY CHAIN**



## COMPETITIVE CONDITIONS

### DEMAND

The transportation-parts industry is one of the largest and most significant in Indonesia, with strong potential for growth in both the domestic and export markets. There are three primary markets:

1. Automotive plants located in Indonesia.
2. After sales markets (spare parts) across Indonesia.
3. Export markets in the Middle East, Africa, ASEAN countries, and to a lesser extent Europe and the United States.

Statistics from the Indonesian Association of Motorcycle (AISI) show that motorcycles sales of AISI members increased by 38.15 percent from 2,814,050 units in 2003 to 3,887,820 units in 2004. The total sales of automobiles sold in Indonesia increased at approximately the same rate, from 350,000 units in 2003 to 483,000 in 2004 (Ministry of Industry and Trade 2005). Loans provided for motorcycle purchases also increased by 37 percent between 2002 and 2003, according to Indoconsult and AISI data.

**TABLE II-13: NUMBER OF DOMESTICALLY ASSEMBLED MOTOR VEHICLES, 1999–2004**

Type of Motor Vehicles	1999	2000	2001	2002	2003	2004
Jeeps	1,287	3,087	1,931	1,011	894	145
Passenger cars	5,974	37,327	32,209	23,880	33,496	257,316
Pick-up	69,454	216,654	197,161	219,697	219,307	92,629
Buses	10,435	29,108	40,458	45,769	45,629	1231
Trucks	1,812	6,546	7,059	6,202	5,626	70,778
Motorcycles	572,553	982,380	1,645,133	2,318,238	2,814,054	3,897,250
<b>TOTAL</b>	<b>661,515</b>	<b>1,275,102</b>	<b>1,923,951</b>	<b>2,614,797</b>	<b>3,119,006</b>	<b>4,319,349</b>

Source: Ministry of Industry and Trade

Table II-13 shows the number of motor vehicles assembled in Indonesia for the past five years. Dramatic increases can be seen in the categories of passenger cars, trucks, and motorcycles between 2003 and 2004, while jeeps, pick-ups, and buses have decreased.

**TABLE II-14: SALES VALUE IN THE AUTOMOTIVE PARTS INDUSTRY, MILLION RP**

Firm size	2001	2002	2003
<b>Motor vehicle components and apparatus</b>			
Large	8,189	8,539	10,445
Medium	7,828	7,927	9,858
<b>Motorcycle components and apparatus</b>			
Large	15,318	5,783	7,197
Medium	15,087	5,424	6,839

Source: Central Bureau of Statistic (BPS)

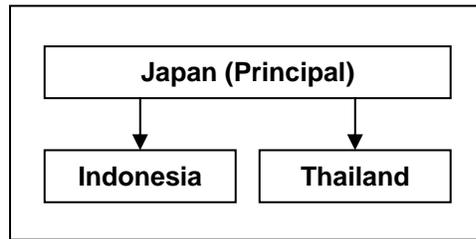
Economic stability, bolstered by the tight competition in Thailand, has also encouraged automotive producers to locate in Indonesia. Korean producers such as KIA Motors and Hyundai have increased their capital investments, while Honda recently invested an additional \$134 million. The French automotive manufacturer Peugeot 206 recently established a plant in Indonesia, and Nissan has plans to turn Indonesia into an industrial center for sport utility vehicles (SUVs).

While production to this point has been primarily for the domestic market, export potential is seen in high-tech spare parts such as automotive batteries, shock absorbers, brake pads, and brake shoes. Lower-end parts face significant competition from China and are therefore not viewed as an area with high potential.

## COMPETITION

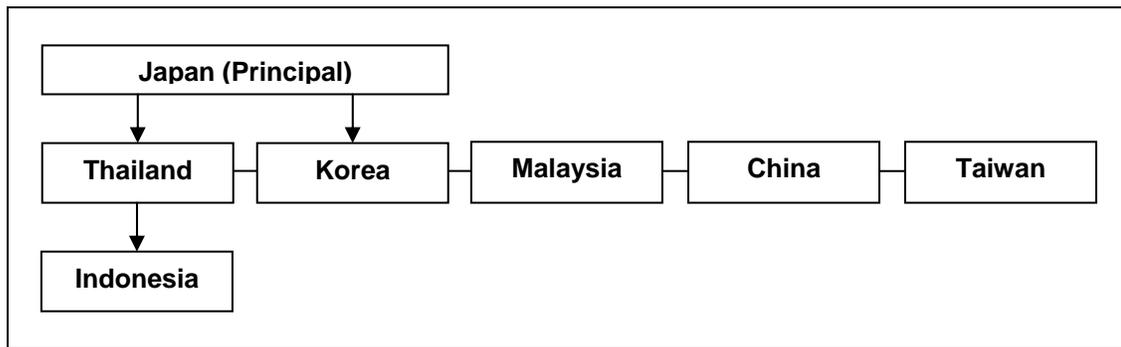
The market in automotive parts has become significantly more competitive in recent years. In 1991, the competitive market for automotive parts in Indonesia consisted of Japanese car manufacturers functioning as principals, supplied by Indonesia and Thailand.

**FIGURE II-5: 1991 COMPETITIVE CONDITIONS**



Ten years later, Japan sources automotive parts from around the region, including Thailand, Korea, Malaysia, China, and Taiwan, with Indonesia playing a smaller role.

**FIGURE II-6: 2000 COMPETITIVE CONDITIONS**



According to the Foundation of Dharma Bhakti Astra, of the leading automotive company Astra International Group, the total production of genuine parts currently fulfills less than 40 percent of the required market needs. Moreover, the price of the genuine parts is substantially higher than that of the inferior substitutes. For example, the price for genuine gasoline filter parts for the Toyota Soluna is Rp 188,500, while imitation parts are worth only Rp 65,000. The Astra Group has seized this opportunity to produce parts under the Aspira brand name at a price point nearly 30 percent below the price of its own original product. Despite this strategy, market demand is still unmet and imports from China, Korea, Thailand, and Taiwan are repackaged and distributed domestically.

**SWOT ANALYSIS**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Enormous domestic demand.</li> <li>▪ Well-established industry with support from government.</li> <li>▪ Presence of training facilities to improve skills: PINDAD and MIDC (Metal Institute Development Centre).</li> <li>▪ Presence of major automotive manufacturers in Indonesia: Honda, Yamaha, Toyota, Isuzu, Peugeot, Suzuki, Daihatsu, KIA, Isuzu, Mercedes.</li> <li>▪ In-house training for spare parts manufacturers through automotive companies.</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Yamaha, Honda, KIA, and Hyundai have recently increased their investments in motorcycle production in Indonesia.</li> <li>▪ Exploit the large and growing after-market industry.</li> <li>▪ Investigate niche OEM business.</li> </ul>
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<b>Weaknesses</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>▪ R&amp;D support is still weak.</li> <li>▪ Low efficiency and productivity.</li> <li>▪ Dependence on imported raw materials.</li> <li>▪ Lack of professional marketing force.</li> <li>▪ Production of engines with outdated gas emission standards constricts production to domestic market.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The entrance of imported automotive parts products and/or second-hand products at more competitive prices.</li> <li>▪ Increasing competitiveness of China, Thailand, Malaysia, and Korea.</li> </ul>

## **INDUSTRY CHALLENGES**

While the automotive parts industry in Indonesia has a great deal of potential, it suffers from the lack of a fully trained work force, particularly in SMEs. Additional knowledge is needed for moulds and dies in terms of reading and creating technical drawings, creating designs, and providing machinery support.

In addition, second-layer vendors of automotive parts, those that supply larger primary vendors, are weak in their adherence to specification, quality, cost, and delivery time. As a result, primary vendors find it difficult to find reliable second-tier partners with whom to meet the standard requirements of multinational companies. In addition, they are often unable to provide the necessary certification and documentation materials, such as Inspection Result Data (IRD), Production Flow Process, Failure Mode and Effect Analysis (FMEA), and Quality Control Processing (QPC).

## **THE WAY FORWARD**

By improving and maintaining the quality of goods, increasing production capacity, and providing on-time delivery, SMES could be positioned to fulfill a large portion of the unmet market demand. In particular, training is needed in early stages of the process, including creating and reading technical drawings, selecting quality raw materials, automotive welding, creating supporting tools, and training on computer software.

Additional solutions include:

- Developing a strategic approach to penetrating new markets, domestic and local;
- Assistance in creating coherent, well-funded business operations, including access to finance;
- Working with industry and the technical universities to secure alternative energy sources;
- Providing assistance for SMEs in the areas of production planning, inventory control and production cost management, and improved product design; and
- Certification processes.

# FOOTWEAR

## INTRODUCTION

Throughout the 1980s and 1990s, footwear grew into one of the most important industries in Indonesia. In addition to making contributions to foreign exchange earnings for Indonesia, the sector provides a significant number of jobs. At its peak in 1996, Indonesia exported 250 million pairs of shoes valued at nearly \$2.2 billion. The 2003 national labor force survey published by the Central Bureau of Statistics found 310,000 people employed in the footwear industry in 2002.

However, an unfavorable investment climate and high labor costs are blamed for the recent closures of shoe factories and the pullout of some major sports shoe investors. The government's commitment to rebuilding competitiveness in this industry was demonstrated in 2005 through support for footwear cluster initiatives around the country, beginning in Surabaya in 2005 and extending to West Java in 2007 and Medan in 2010.

The government has also made commitments to mitigating some of the key constraints to investment and predicts that labor-intensive manufacturing, including the footwear industry, will grow at around 10 percent annually for the next five years (2005–2009). This would create an increase in new jobs of nearly 4 percent a year.

## COMPOSITION OF THE INDUSTRY

Indonesia produces a wide range of footwear products, including casual shoes, sports shoes, shoes for industrial use, and sandals. As shown in the Table II-15, sports shoes create the highest gross margin for the manufacturer among all shoe categories, with \$537.2 million, followed by casual footwear with \$148.7 million.

**TABLE II-15: VALUE ADDED BEFORE TAX (MILLION US\$)**

	Gross Output Value	Production Costs	Value Added
Casual footwear	321.7	172.9	148.7
Sport shoes	1,404.2	867.0	537.2
Industrial shoes	6.7	4.5	2.2
Footwear n.e.c.	72.4	42.2	30.2
<b>Overall</b>	<b>1,805.0</b>	<b>1,086.7</b>	<b>718.33</b>

Source: BPS Statistics Indonesia, 2003

Table II-16 presents data on number of companies in 2003 broken down by type of footwear, size of company, and origin of the investment. Most companies are engaged in the production of casual footwear, and a significant majority of those companies are SMEs. The largest employers in the footwear industry are sports shoe manufacturers, with nearly 120,000 direct employees in 2003 and 132,000 employees all told. Employment in the footwear industry overall was estimated to be 220,000 in 2003, a decrease of 110,000 from the year before. This industry makes extensive use of home workers and SMEs, particularly for sewing, embroidery, and beading of women's shoes and sandals.

Footwear industries are located across Java and North Sumatera, with centers of production in Surabaya and Bandung. Several small-scale industries are concentrated in production centers in East Java, West Java, West Sumatera, South Sulawesi, North Sumatera, and Riau.

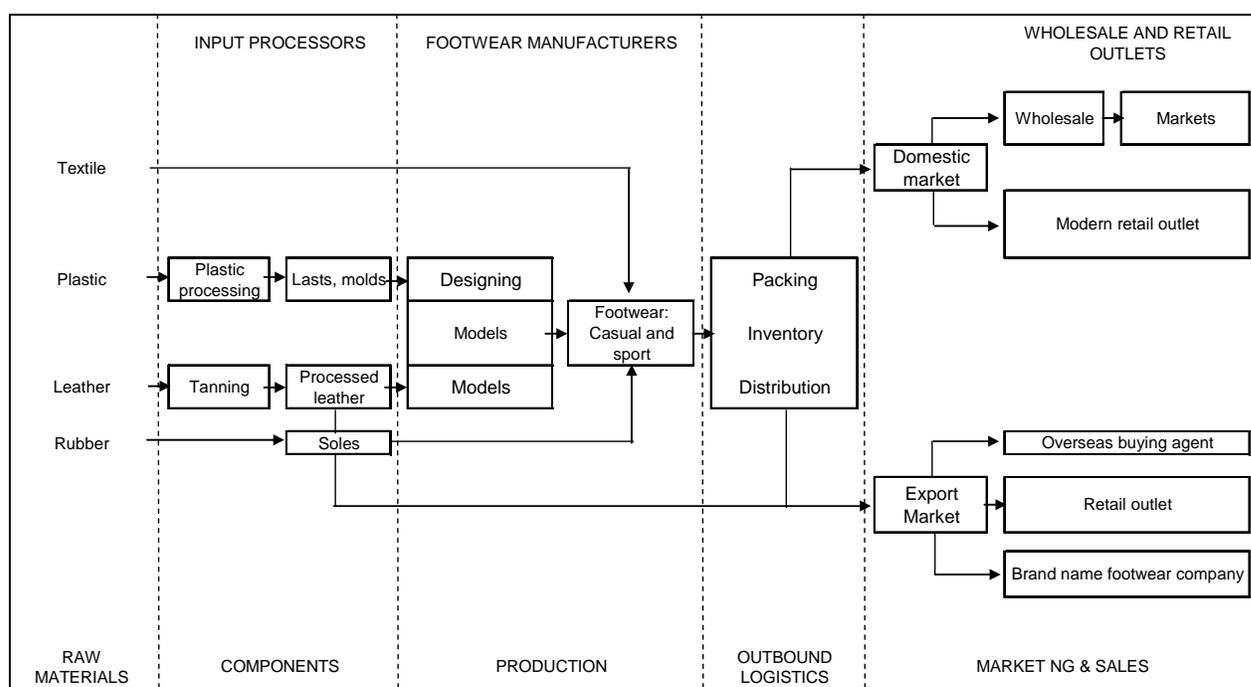
**TABLE II-16: NUMBER OF FOOTWEAR FIRMS**

	Large Domestic	Large Foreign	Domestic SMEs	Total
Casual footwear	16	23	189	228
Sport shoes	13	11	40	64
Industrial shoes	2	-	4	6
Footwear n.e.c.	8	4	40	52
Overall	39	38	273	350

Source: BPS Statistics Indonesia, 2003

Traditionally, 75 percent of manufacturers have financed their investments using working capital from banks, while the other 25 percent relies on personal sources. Interest rates in Indonesia have been on the rise, however, which limits access to finance from banks, constraining additional investments.

**FIGURE II-7: THE FOOTWEAR SUPPLY CHAIN**



## COMPETITIVE CONDITIONS

### DEMAND

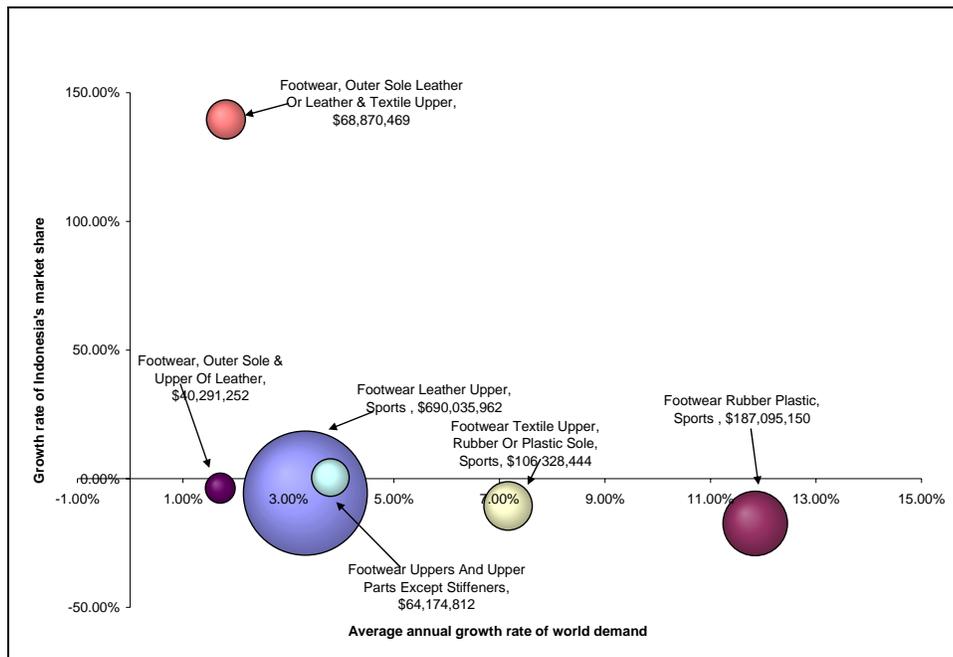
**TABLE II-17: FOOTWEAR EXPORTS AND IMPORTS (MILLION US\$)**

	2000	2001	2002	2003	2004
Export	1,672.11	1,505.58	1,148.05	1,182.18	1,320.47
Import	87.38	66.14	60.21	61.51	55.55

The footwear industry in Indonesia is slightly biased toward exports, with 55 percent produced for export and 45 percent for domestic consumption. Among Original Equipment Manufacturers (OEMs), the difference is even more pronounced, with 70 percent of products exported and 30 percent sold domestically. This trend is expected to continue as domestic purchasing power remains suppressed by high fuel costs and inflation.

World demand for footwear is high and growing. As Figure II-8 illustrates, average annual demand for leather, textile, and plastic has grown over the last five years, with the highest rates of growth for sports shoes. Meanwhile, the growth in Indonesia's market share in these industries has been negative, with the exception of shoes with leather uppers. With such strong demand, however, there is a great deal of potential for Indonesia to regain market share in this industry.

**FIGURE II-8: INDONESIA'S PERFORMANCE IN THE FOOTWEAR INDUSTRY, 1999-2004**



Source: Global Trade Atlas, author's calculations

The main export markets for Indonesian footwear are the United States and Europe, with 35.5 percent and 35.8 percent of total Indonesian exports, respectively in 2003.

### COMPETITION

In 2003, Indonesia's overall share of the global footwear market reached 4.58 percent, following China (26.97 percent), Italy (19.28 percent), and Spain (5.16 percent). However, among ASEAN countries Indonesia is second only to Thailand in market share.

Indonesia's production of international branded sport shoes is ranked 2<sup>nd</sup> with a market share of 25 percent. This number has been on a decline since the currency crisis, when it peaked at 36 percent. China also dominates this market, with a share of 35 percent, while Vietnam has 20 percent and Thailand 15 percent. At present, these competing countries seem to be more successful in attracting additional investment capital and securing global manufacturing orders.

## SUPPORTING INDUSTRIES

Indonesia imports some semi-processed parts of footwear and outer soles and heels made of rubber and plastic, but the bulk of raw materials for medium and low-end footwear is produced by domestic industries. Rubber comes from Jakarta and West Java. Textile is produced by industry centers in West Java and Central Java, and leather and tanned leather are produced in West Java, Yogyakarta, and East Java. Plastic can be obtained from petrochemical industries in East Java and Banten.

## SWOT ANALYSIS

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Abundant labor supply.</li> <li>▪ Abundant supply of raw materials.</li> <li>▪ Sufficient production capacity.</li> <li>▪ Strong commitment and business sustainability among SMEs and business associations.</li> <li>▪ Original brand subcontract manufacturing.</li> </ul>	<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Low productivity.</li> <li>▪ Unstable efficiency rate.</li> <li>▪ Lack of technology and production process.</li> <li>▪ Limited R&amp;D.</li> <li>▪ Supporting industries not fully developed.</li> <li>▪ Lacking quality standards (ISO 9000, ISO 14000, and eco-labeling).</li> <li>▪ Small pool of skilled labor.</li> <li>▪ Insufficient financing.</li> <li>▪ Poor export knowledge and sales channels.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Increased domestic population and market demand.</li> <li>▪ World demand, particularly in sports shoes, is high and growing.</li> <li>▪ Government is committed to revitalize footwear industry through cluster development.</li> <li>▪ Foreign investors are seeking local partners.</li> <li>▪ Extensive backward linkages.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Increasing energy costs.</li> <li>▪ Domestic purchasing power is very low.</li> <li>▪ High cost of imported raw materials.</li> <li>▪ Competing against illegal imports and low price-based competition with China.</li> <li>▪ Lack of domestic material, exacerbated by the 0 percent tax on the export of raw leather.</li> </ul>

## INDUSTRY CHALLENGES

The footwear industry suffers from the same macro-level constraints as other industries in Indonesia, with low labor productivity highlighted as a key problem by industry experts. According to figures cited by the Indonesian Footwear Services Center, Indonesian productivity is half that of Chinese workers and one fourth that of workers in Vietnam.

The footwear industry also suffers from a lack of effective coordination between final product and upstream industries. Because Indonesia has abundant resources in many of the raw materials used in making footwear, it has the opportunity to develop much stronger supporting industries, both to supply the domestic footwear industry and to export to other producing countries.

## **THE WAY FORWARD**

- More efficient production processes aligned with success in the market should be the key concern going forward.
- For this to work, the links between effective supply chain relationships with supporting industries and the exploitation of ICT services will need to be improved.
- The industry must become more sensitized to its global industry dynamics and respond accordingly
- This will require an urgent concerted effort underpinned by the government into the medium term.

# TEXTILES AND APPAREL

## INTRODUCTION

The textile and apparel industry in Indonesia grew rapidly throughout the 15 years from 1975 to 1990. In the 1970s, demand rose in the domestic market and as this source of demand slowed with the end of the oil boom in the early 1980s, it was replaced by growth opportunities in the export market.

Indonesia developed a comparative advantage in this industry due to low labor costs, unutilized export quotas, an undervalued exchange rate, and attractive subsidies in the export certificate scheme Subsidi Ekspor, as well as beneficial interest rates for export credits (Pangestu 1997).

However, by 1993, export growth began to slow as intense competition emerged from other low-wage countries and domestic wage policies suppressed Indonesia's export competitiveness (Pangestu 1997). The highly competitive nature of the industry has been accentuated in recent years with the expiration of the Multifiber Agreement (MFA) in 2005 and China's explosive growth in this industry.

## THE COMPOSITION OF THE INDUSTRY

The main apparel products produced in Indonesia include shirts and blouses, jackets, undergarments, and suits. Man-made fibers, such as those used in the production of polyester and rayon fabrics, are produced domestically using resources from Indonesia's petroleum industry. Natural fibers such as cotton, wool, and silk must be imported from abroad. The garment industry, including the manufacturing of upstream materials, is mainly located in West and Central Java. Relatively few factories operate in North Sumatra and East Java. Within West Java, 17 percent of production takes place in Jakarta.

**TABLE II-18: EMPLOYMENT IN THE TEXTILE AND APPAREL INDUSTRY**

Employment	2001	2002	2003	2004
Direct (large industry)	1,219,325	1,182,212	1,182,871	1,184,079
Direct (small industry)	721,193	635,210	584,786	668,372
Indirect	3,881,036	3,634,844	3,535,314	3,704,902
Total	5,821,554	5,452,266	5,302,971	5,557,353

Source: Indonesian Textile Association (ITA), 2005

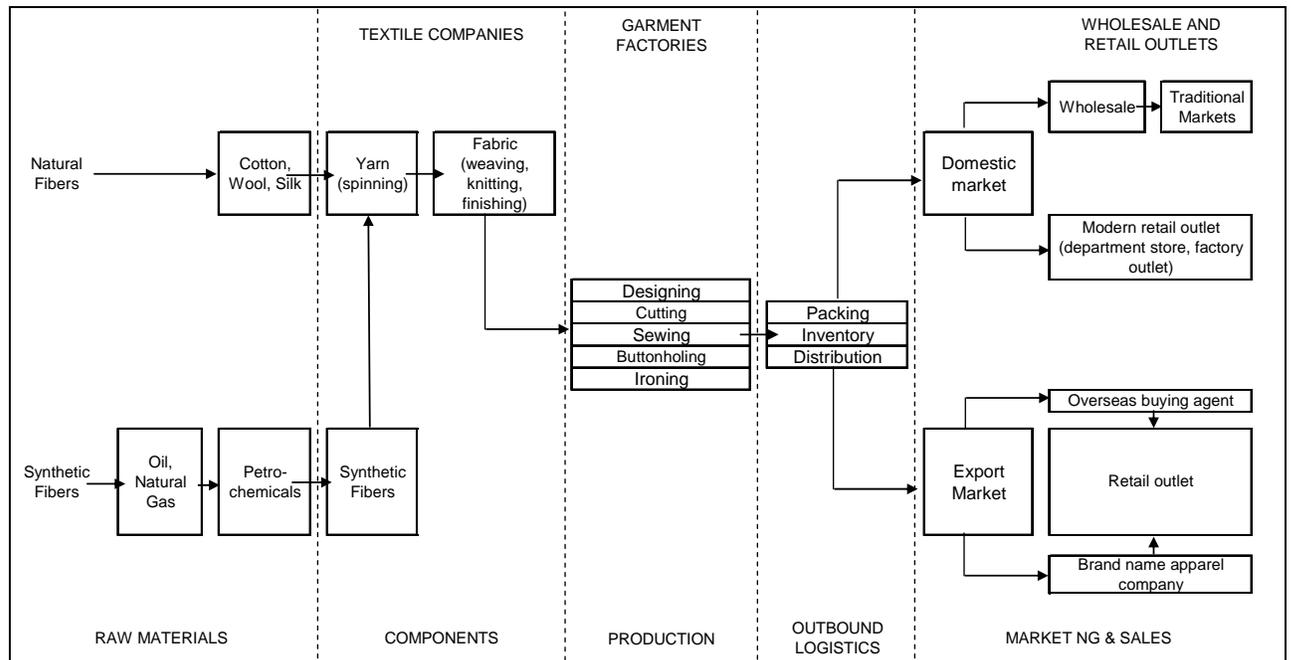
Textile and manufacturing continues to be enormously important for the Indonesian economy. It is the largest single earner of foreign exchange, drawing nearly 16 percent of the total in 2004, with nearly \$7.3 billion in exports. The industry also employed over 5.5 million Indonesians in 2004—1.9 million directly and 3.7 million indirectly (Table II-18). However, these numbers have decreased somewhat in recent years as Indonesia's competitiveness in this industry has waned.

The number of firms in the textile and apparel industry has remained relatively stable in recent years, with 2004 BPS data showing approximately 28 companies engaged in fiber production; 204 in yarn production and spinning; 1,044 companies engaged in weaving, knitting, and finishing; 2,661 textile companies; and 861 companies producing finished garments and clothing. There are also many SMEs working in related industries such as button and zipper production and early-stage manufacturing processes, such as pattern making and sewing.

However, the textile manufacturers association estimates that the number of SMEs will decrease in the future as the structure of the industry shifts to address competitive constraints. They envision that

smaller companies will be absorbed by larger firms, as differing production processes are increasingly brought under one roof.

**FIGURE II-9: THE TEXTILE AND APPAREL SUPPLY CHAIN**

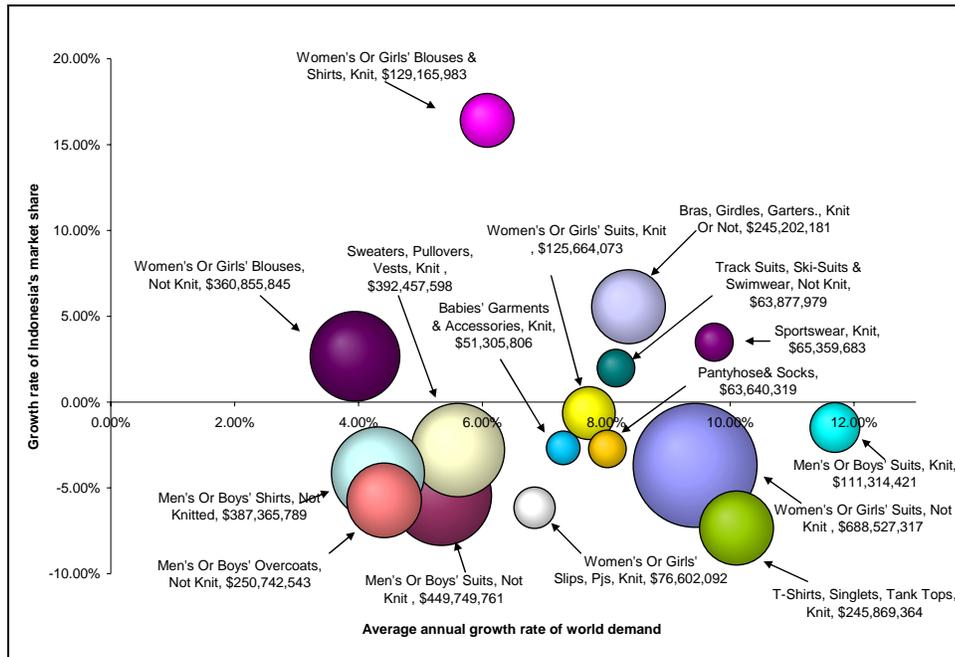


## COMPETITIVE CONDITIONS

### DEMAND

In the years since 1996, the orientation of the market has shifted from domestic sales to a 60-40 ratio favoring exports. Following the 1997 crisis, industry picked up enough to reach an average annual growth rate of 18.5 percent from 1995–2000, reaching a value of \$8.2 billion, or 13.2 percent of national exports in 2000. Export volumes of Indonesian textile and apparel saw “satisfactory” growth in the early 2000s, according to industry representatives. In more recent years, as shown in Figure II-10, the average annual growth rate of all of Indonesia’s primary apparel commodities has grown positively. Indonesia has also maintained market share in a number of products, including women’s and girls’ blouses and undergarments.

**FIGURE II-10: INDONESIA'S PERFORMANCE IN TEXTILE AND APPAREL EXPORTS TO THE WORLD, 1999-2004**

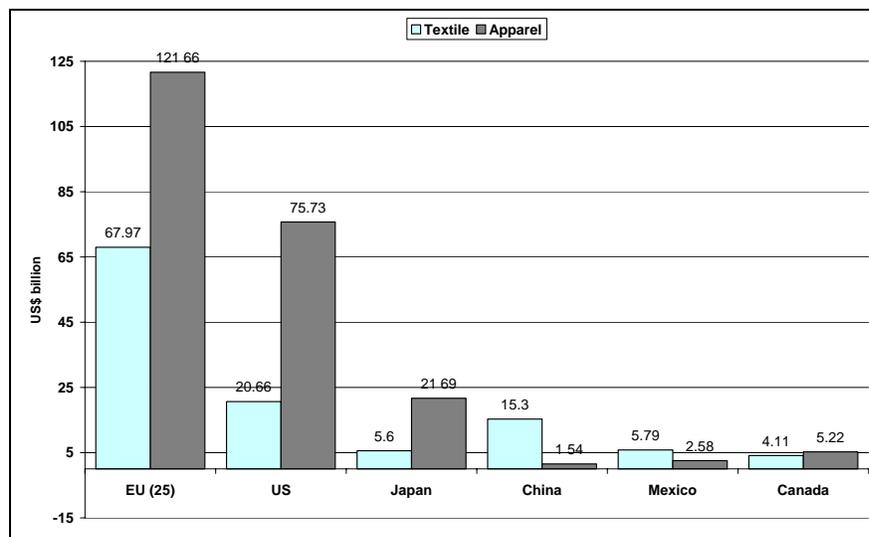


Source: Global Trade Atlas, author's calculations

The main markets for Indonesian textile and apparel goods are the United States, with 31 percent of exports, the EU with 22 percent, Japan with 7 percent, and the United Arab Emirates with 4 percent. World demand for textile and apparel products has grown steadily in recent years, and the textile and apparel association estimates that by 2010, world demand will reach 68 million tons, or \$420 billion.

Indonesian domestic demand has also been on the upswing, following a dip in 2002–2003, and if growth continues as expected it could reach 1 million tons, or \$3.24 billion by 2010.

**FIGURE II-11: IMPORTS OF TEXTILE AND APPAREL, 2004**



Source: Indonesian Textile Association (API) 2005

## COMPETITION

Indonesia continues to rank as one of the leading exporters of textile and apparel, ranking number 11 in the world in terms of textiles and number 9 in clothing in 2004.

**TABLE II-19: LEADING EXPORTERS, 2004**

Textiles				Clothing			
Rank	Country	Value (US\$ billion)	Share (%)	Rank	Country	Value (US\$ billion)	Share (%)
1	EU (25)	71.29	36.6	1	EU (25)	74.92	29
2	China	33.43	17.2	2	China	61.86	24
3	Hong Kong	14.3	-	3	Hong Kong	25.1	-
4	United States	11.99	6.2	4	Turkey	11.19	4.3
5	Korea	10.84	5.6	5	Mexico	7.2	2.8
11	Indonesia	3.15	1.6	9	Indonesia	4.45	1.7
<b>World</b>		<b>194.73</b>	<b>100</b>	<b>World</b>		<b>258.1</b>	<b>100</b>

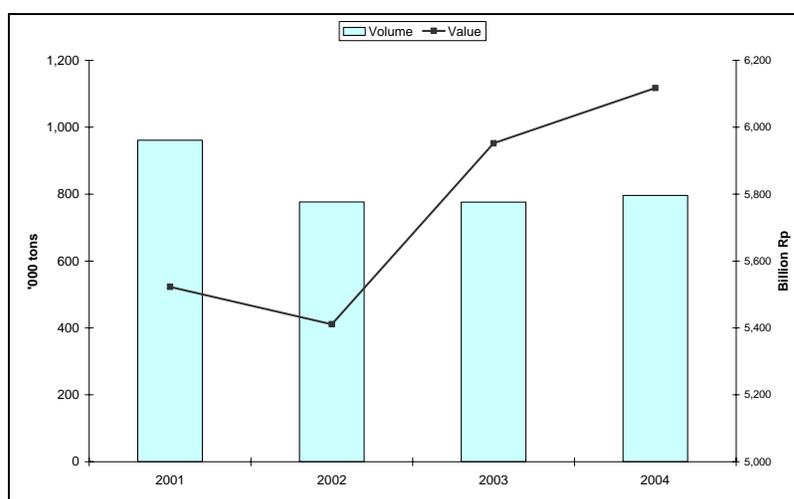
Source: Indonesian Textile Association (API) 2005

China's exports of apparel (HS codes 61 and 62) nearly doubled from \$32.4 billion in 2000 to \$66 billion in 2004. Meanwhile, the North American Free Trade Agreement (NAFTA) between the United States, Canada, and Mexico has increased Mexico's preferential treatment in the U.S. market.

## SUPPORTING INDUSTRIES

The apparel industry in Indonesia is very fragmented, with a large number of SMEs and larger firms working in upstream industries, producing man-made fiber, spinning, weaving, dyeing, cutting, and sewing.

**FIGURE II-12: FIBER PRODUCTION**

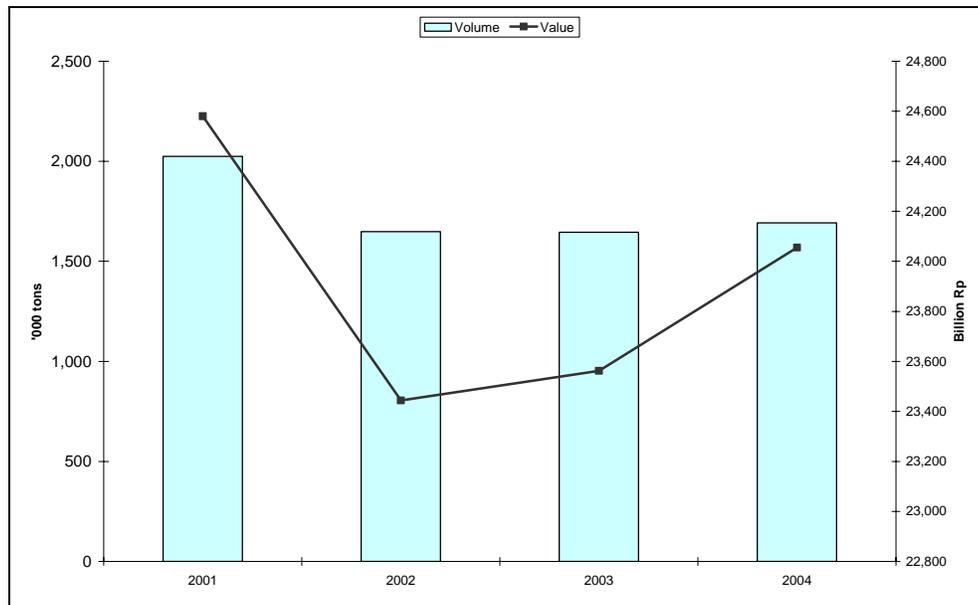


Source: BPS, Department of Industry, API

There are 28 fiber-producing companies in Indonesia, with approximately one machine per company and a total of 29,500 employees. Production capacity is 1 million tons but production remains closer to 800,000 tons per year. Imports of textile and apparel fiber in 2004 were worth nearly five times

more than exports, roughly \$1 billion and \$200 million, respectively. As Figure II-12 illustrates, the value of fiber production is increasing, even as the volume remains relatively stable.

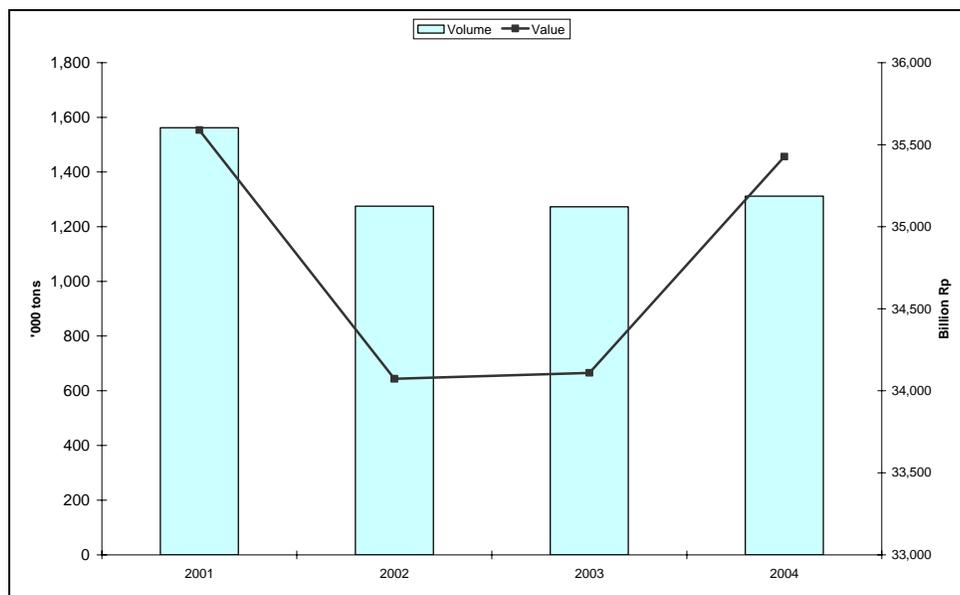
**FIGURE II-13: SPINNING AND YARN PRODUCTION**



Source: BPS, Department of Industry, Indonesian Textile Association (API) 2005

The spinning industry has 204 companies employing 208,000 people and producing 1.7 million tons of yarn each year. Exports far outweigh imports in value terms in this segment of the industry, earning \$1.5 billion (against imports of only \$250,000). The trend in the value of spinning and yarn is on the upswing, although volume has remained stable since falling to about 1.7 million tons in 2002.

**FIGURE II-14: WEAVING, KNITTING, FINISHING**



Source: BPS, Department of Industry, Indonesian Textile Association (API) 2005

The weaving industry has over 1,000 companies in Indonesia, employing close to 344,000 people. Indonesia ranks second in the Asia/Oceania region for number of shuttle looms and third for shuttleless looms—behind China and Thailand. Exports in this industry are nearly three times the value of imports. The year 2004 saw stable volumes of weaving and kitting produced and a dramatic rise in the value.

## SWOT ANALYSIS

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Natural resources for man-made fibers.</li> <li>▪ Large labor force.</li> <li>▪ Established value chain.</li> <li>▪ Rich variety of textile patterns/motifs.</li> <li>▪ Reputation for high quality.</li> <li>▪ Large domestic market.</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Increased market access to the region with full implementation of AFTA.</li> <li>▪ Increasing market demand.</li> <li>▪ Exploit niche markets for high value-added designer products.</li> </ul>
<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Out-dated machinery.</li> <li>▪ Lack of experienced designers.</li> <li>▪ Low labor productivity.</li> <li>▪ Underdeveloped supporting industries.</li> <li>▪ Weak brand image for “made-in-Indonesia” products.</li> <li>▪ Lack of professional marketing skills.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Imports from China and Vietnam.</li> <li>▪ Reduced market access benefits with expiration of MFA and development of bilateral free trade agreements</li> <li>▪ NAFTA preferences for Mexico.</li> <li>▪ Nontariff barriers from export markets.</li> </ul>

## INDUSTRY CHALLENGES

The main areas of constraint in the textile and apparel industry are in the categories of human resources, capital investment, and production capacity.

In terms of labor, skill levels are relatively low and there is a lack of educational or training programs to prepare workers for the use and maintenance of high-tech machinery. Increasingly, Indonesian producers are being asked to use cutting-edge computer technology to provide patterns and designs to buyers, an environment for which Indonesian workers are not adequately prepared.

**TABLE II-20: MACHINE AGE IN THE TEXTILE AND APPAREL INDUSTRY, 2002**

Type of Industry	Machine Age (Year)			
	0 – 5 (%)	> 5 – 10 (%)	> 10 – 15 (%)	> 15 (%)
Synthetic Fiber	21	18	40	21
Spinning	35	18	9	38
Weaving	11	17	12	60
Knitting	16	23	13	48
Apparel	18	38	14	30
Finishing	7	18	18	57

Source: Dirjen ILMEA, Deperindag, 2002

Meanwhile, low capital investments have led to a sorely outdated industry with weak capacity and low productivity. As shown in Table II-20, in 2002 more than half of all weaving and finishing machines and nearly half of all knitting machines were more than 15 years old.

## **THE WAY FORWARD**

- To maintain and increase their market share in this industry, Indonesian producers will have to take a strategic approach to strengthening multiple aspects all along the value chain. The industry will have to be upgraded in terms of both labor and capital, with skills developed in new areas such as design and patterning.
- Integration along the value chain will also have to be improved, with supporting industries—such as SMEs that produce zippers, buttons, and those that process fibers and fabrics—supplying the larger garment manufacturers more effectively.
- In terms of skill development, the textile and apparel industry would be well served by the development of a center for excellence in production. The city of Bandung is a prime location in which to establish such a center, as it is already home to a Textile Academy and the Bandung School of Textiles. Both of these institutions would benefit from improved curriculum development and accreditation programs. The establishment of Textile Vocational High Schools could also assist in creating a pathway for young people interested in joining the industry.

Strengthening the industry value chain will have a number of components, with particular relevance for SMEs.

- Improve the information network, making use of existing sites such as ILMEA Net
- Improve R&D in spinning and yarn
- Develop national brands for international markets
- Improve application of international standards

# CERAMICS

## INTRODUCTION

The 1997 currency crisis sparked the development of the export ceramics industry in Indonesia, as the devalued Rupiah made Indonesian ceramics competitive on the world market. Although the export market was characterized by falling prices throughout the late 1990s and early 2000s, large Indonesian tile producers such as KIA (now American Standard) and P.T. Saranagriya Lestari Keramik (producing for Milan, Super Milan, and Hercules) saw impressive growth during that time. KIA sales increased by 40 percent each year between 1999 and 2001 (Rochaini 2002).

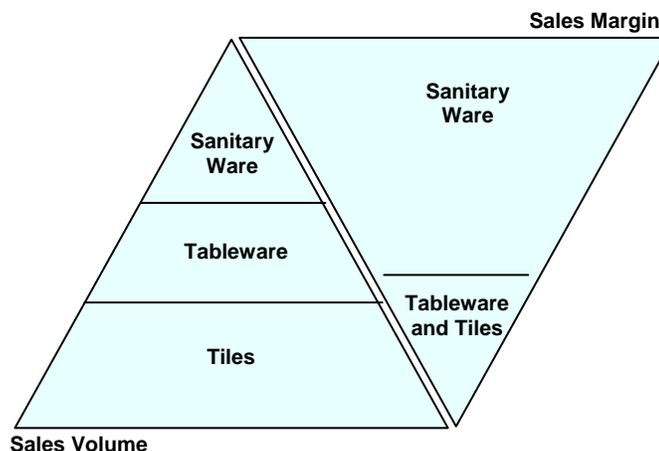
Indonesia and Thailand, a major competitor, maintain the most open trade regime in ASEAN, with import duties of only 5 percent. In contrast, Malaysia maintains a 20 percent import duty and the duties on sanitary ware and tiles in Vietnam are 40 to 50 percent. Vietnam is actively investing in this industry as well (Rochaini 2002).

## COMPOSITION OF THE INDUSTRY

The ceramics industry in Indonesia produces a diverse range of items in the following four market segments:

1. Ceramic tiles—commodity tile (backed with clay and glaze applied) and homogenous tile (glaze and clay mixed and fired together)
2. Tableware—typically large companies using locally sourced materials
3. Sanitary ware—sinks, toilets, baths, and bidets
4. Art ware—a wide range of handicrafts produced by SMEs

**FIGURE II-15: SALES VOLUME AND MARGIN IN CERAMIC SUBSECTORS**



The characteristics of sales margin and sales value differ greatly among the three main subindustries (excluding art ware). While tiles represent the biggest volume of ceramics, with tableware second, margins generally available in these two segments are the lowest. Sanitary ware on the other hand is relatively lower volume and generates far higher margins.

Sanitary ware production is dominated by joint ventures with foreign companies such as American Standard's joint venture with KIA and Toto's joint venture with PT Sangko.

**TABLE II-21: DYNAMICS OF TABLEWARE VOLUMES AND TRADE (TONS)**

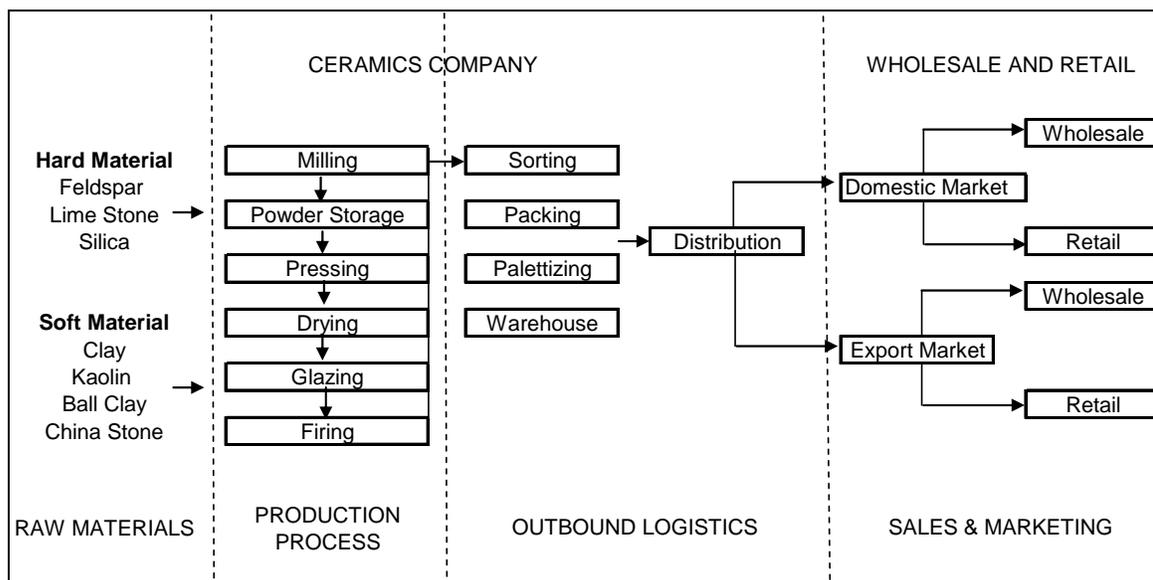
Tableware	2001	2004
Total market	40,000	69,230
Imports	20,000	45,000
Local production for domestic market	20,000	24,230

Indonesia imports a huge amount of ceramics product. In 2001, it imported 20,000 tons of tableware and by 2005 the figure had risen to 45,000 tons. As a result, imported product's share of the local market rose from 50 percent to 65 percent over those three years. In 2003, there were 50,000 tons of imports of wall and floor tiles, 34,000 tons of tableware imports, and 2,000 tons of imported sanitary ware imported. This led to the closure of three factories in Indonesia and an estimated loss of 4,500 jobs (Asian Ceramics Magazine). The main sources for Indonesian imports of ceramics are China, the United States, Australia, Hong Kong, India, the United Kingdom, Italy, Japan, Germany, Malaysia, France, South Korea, Taiwan, and Thailand.

Indonesian tableware firms lack specialization in their production, conducting all processing functions from treatment of raw materials through finished product. This involves different mixes of kaolin, feldspar, quartz, and ball clay. In Japan, table ware factories do not process the raw materials because there are firms that specialize in this activity selling a "ready mix" material input. Consequently, Japanese table ware firms can focus on the activities of forming → drying → glazing → firing → finished goods, thereby benefiting from specialization.

Two other examples are "ready feldspar" and quartz and kaolin. Ready feldspar is in short supply in Indonesia, with main ceramics firms purchasing "unprocessed stone of feldspar" that needs be processed in the following stages: sorting → grinding → removing the iron parts → ready feldspar (Indonesian Ceramics Association 2006). Quartz and kaolin, meanwhile, are naturally found in a blended form and need to be separated prior to their application in ceramics.

**FIGURE II-16: THE CERAMICS SUPPLY CHAIN**



Ceramics factories are predominantly concentrated in the following regions:

- 60 percent in West Java
- 10 percent in East Java
- 5 percent in Medan

However, factories are increasingly congregating in Central Java, due to the comparatively lower minimum wage there. Raw materials are more widely spread, throughout Java, Kalimantan, and Bangka Belitung, as follows:

- **Feldspar:** Central Java, with some found in East Java
- **Ball clay:** West Kalimantan
- **Kaolin:** Mainly in Bangka Belitung
- **Quartz:** Mainly in Bangka Belitung
- **Limestone:** Mainly in West Java, with some found in East Java

Ceramics production is fairly labor intensive, employing approximately 200,000 workers (Indonesian Department of Trade and Industry 2004). The tableware subindustry employed 20,000 workers in 2001, but this has fallen to 10,000 in 2004 (Indonesian Ceramic Industry Association 2005). However, tonnage produced per worker per annum has more than doubled in this period, from 1.0 ton per annum to 2.4 tons per annum—raising room for further investigation.

## COMPETITIVE CONDITIONS

### DEMAND

The world ceramics market was valued at \$700 million in 2003. In 2004, Indonesia's export value reached approximately \$188 million, and it has been growing at an average rate of 2.2 percent over the last five years (Indonesian Department of Trade and Industry 2004). The main export markets are the United States, Turkey, Europe, and the Middle East.

In the tile subsector, Indonesia ranks fifth in the world, with China as the world leader. Indonesia's output is 230 million square meters per annum, representing around 167 tile production lines (based upon each line producing 5,000 square meters per day at 5.5 days per week over 50 weeks per year) (Kong 2006). China's production is 1 billion square meters, representing around 727 tile production lines.

PT Arwana Citramulin's sales were \$18.5 million in 2002. The company has a combined production capacity of 11 million square metres per annum. It aimed for 90 percent utilization in 2004. Assuming utilization of 80 percent in 2002, this gives a revenue yield of \$2.10 per square meter sold. Indonesia's targets are to grow export trade by 5 percent per year and achieve 80 percent factory utilization (Indonesian Ceramics Industry Association 2006).

### COMPETITION

Indonesia was once the low-price center for ceramics in the region, but China has now taken that position. As a result of the damage being done to the domestic ceramic industry, in 2004 the tableware industry lobbied hard for industry protection from Chinese imports. This resulted in the

application of the following import duties by the Indonesia Trade Safeguard Committee in January 2006.

Year One: Rp 1600 per Kg

Year Two: Rp 1,400 per Kg

Year Three: Rp 1,200 per Kg

Overall, Chinese prices are about 67 percent of Indonesian prices, with Indonesian productivity at 300 plates per day and their Chinese counterparts producing 1,000 plates per day. Consequently, the Indonesian tableware industry faces a severe and sustained challenge from Chinese imports (Asian Ceramics Magazine).

### SUPPORTING INDUSTRIES

Indonesia imports the majority of inputs to the ceramics industry, with the exception of silica. While Kaolin, Zirconium, and other clays are mined in Indonesia, they are typically of poor quality and the United States, China, India, Turkey, Ukraine, and Spain serve as major sources countries (Rochaini 2002). According to industry experts, approximately 50 percent of glaze comes from the United States and Europe, 80 percent of feldspar comes from India and China, and nearly all color stain is imported from the United States.

Other upstream industries include:

- Machineries and equipment
- Chemical industry (glazing and pigments)
- Natural gas
- Raw material processing (to process clay, kaolin, silica, feldspar, limestone, ball clay, and quartz)

### SWOT ANALYSIS

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Well established industry and supply chain.</li> <li>▪ Local sourcing of some raw materials.</li> <li>▪ Capacity for high-end products.</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Large and growing domestic market.</li> <li>▪ Strong construction market.</li> <li>▪ Access to growing ASEAN markets.</li> <li>▪ No VAT on exports.</li> <li>▪ No import duties on raw materials.</li> </ul>
<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ High transport costs.</li> <li>▪ Natural gas supplies uncertain, energy supplies generally expensive and uncertain.</li> <li>▪ Shortage of skilled workers and training opportunities.</li> <li>▪ Some outdated machinery.</li> <li>▪ Inputs are largely imported.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ Aggressive international competition particularly from China.</li> <li>▪ Energy costs and shortages.</li> </ul>

## **INDUSTRY CHALLENGES**

- Uncertain cost of natural gas means firms face increased risks.
- Low investment in new equipment compared to regional averages.
- Poor infrastructure for land transportation and harbors increases the time it takes to get raw materials from source to the ceramics factories (can take two to three days).
- Shortage of skilled workers and low labor productivity, although there is evidence this second issue is improving.
- Chinese production of low-end tableware is edging out Indonesian producers in the domestic market.

## **THE WAY FORWARD**

The applicability of the following suggestions is reliant on future market research identifying critical success factors for Indonesia's target export market:

### **Skill development**

- Implement training on total quality management for ceramic and raw material processing factories.
- Develop or strengthen links with related Indonesian industries such as machinery and mining.
- Improve efficiency in getting domestic and imported inputs to factories.
- Reinforce the role of the research institute (Balai Penelitian Keramik/Ceramic Centre of Excellence) to serve a more effective role in information dissemination, research and development, and certification.

### **Strategic marketing**

- Improve market access and penetration in the international market.
- Develop and promote local brand in the international market to ameliorate the supply/demand price trap.
- Optimize penetration in the domestic market and develop a strategy to address import products from around the world.
- Certify domestically produced tableware producers to meet export market safety regulations.

### **Value chain development**

- Build supporting industry capacity through development of dedicated factories to process inputs, such as raw material units to produce ready mix and production of ready feldspar.
- Reinforce chemical industries such as glazes and color stains to reduce the dependency on imports.
- Investigate potential to build capacity in the high-margin sanitary ware subsector.
- Focus on developing a high-end tableware subsector, through improved management, design, quality standards, and branding.

# RATTAN

## INTRODUCTION

The rattan and rattan furniture industry in Indonesia is shaped by two primary forces: the huge abundance of rattan in Indonesia and the restrictions on exports of raw rattan in place since the late 1970s.

Indonesia became a major rattan producer in the 1970s, at which time it accounted for 70 percent of the global trade. Since that time, the value of the rattan trade has increased exponentially, becoming a multimillion-dollar industry, with trade in raw rattan worth about \$50 million worldwide, and the trade in furniture and handicraft products worth close to \$4 billion (INBAR). According to industry experts, Indonesia remains the largest producer of rattan in the world, producing 80 percent of the world total in 2004.

In the early years of Indonesia's rattan production 87 percent of raw rattan was exported, leading the government to implement a series of export restrictions intended to retain the value-added from rattan processing, furniture, and handicrafts. With these policies in place, all raw and semi-processed rattan was soon shipped to Java for manufacturing. This positively influenced income and employment generation in Java but had an adverse impact on producing islands such as Sulawesi and Kalimantan.

With artificially depressed demand, raw material producers have been forced to accept lower prices (INBAR 1999). A variety of export restrictions have been implemented since that time, with the most recent, in 2005, allowing a quota of 25,000 tons/year of small-diameter raw rattan to be exported, as well as 16,000 tons/year of semi-processed rattan. In both cases, only plantation-grown rattan can be exported.

## COMPOSITION OF THE INDUSTRY

**TABLE II-22: PRODUCTION OF RATTAN FURNITURE**

	Volume (pieces)	Value (US\$)	% of total capacity
Rattan rack	9,000	66,500	90
Rattan chair	500,000	1,920,500	90.91
Rattan table	125,000	480,100	83.33

Source: Ministry of Industry, 2004

Rattan is used to produce various types of furniture and crafts, such as chairs, tables, beds, baskets, and boxes. Products are typically made from whole rattan and then combined with other materials such as iron or wood.

It is gathered and processed in three ways, depending on the island on which it is produced. In Sulawesi, the largest producing island, rattan is typically harvested from the wild. Sulawesi rattan is the large-diameter species, the most highly prized for large furniture and handicraft industries. In East and South Kalimantan, by contrast, producers grow small-diameter rattan in gardens in a shifting cultivation system with rice, vegetables, and root crops. This type of rattan is of high quality, typically used to produce lampit (a mat made of rattan strips sewn together), 90 percent of which is sold to Japan for tatami and for smaller furniture. Finally, rattan plantations have been developed in Java (Cirebon and Surabaya).

In the late 1990s, production in Java fulfilled only a small percentage of rattan demand. The differing methods of production imply somewhat different relationships among producers, plantation owners,

traders, semi-processors, and medium-sized and large firms, but once the material is harvested the processing system does not differ greatly.

**TABLE II-23: DISTRIBUTION OF THE RATTAN INDUSTRY IN 24 PROVINCES**

Provinces	# of firms	Production Capacity (tons/year)	
		Semi-finished product	Finished product
			980
Aceh	3	885	14,054
North Sumatra	14	14,171	8,419
West Sumatra	16	15,487	5,712
Riau	8	7,627	-
Jambi	2	3,160	3,600
Bengkulu	1	-	276
South Sumatra	2	1,796	1,008
Lampung	4	780	25,626
DKI Jakarta	28	5,662	218,830
West Java	169	53.46	22,668
Central Java	7	2,580	1,280
DI Yogyakarta	2	-	148,497
East Java	96	155,064	23
Bali	1	-	8,208
West Kalimantan	7	33,610	14,219
Central Kalimantan	17	23,274	29,627
South Kalimantan	55	31,985	2,163
East Kalimantan	8	5,142	2,540
North Sulawesi	24	51,251	15,352
Central Sulawesi	54	112,495	10,186
South Sulawesi	30	46,341	90
South-east Sulawesi	27	50,648	-
West Nusa Tenggara	8	4,220	300
Maluku	1	-	
<b>Total</b>	<b>584</b>	<b>619,637</b>	<b>533,658</b>

Source: Soedarto Kartodihardjo, The State of Bamboo and Rattan Development in Indonesia, Ministry of Forestry and Estate Crops, 2005.

Production and processing for Indonesia's rattan industry takes place across the major islands; after production and some semi-processing in Sulawesi (42 percent), Jawa dan Bali (34.9 percent) and South Kalimantan (15.2 percent), raw rattan is transported through Surabaya for distribution to the centers of production throughout Cirebon (West Java) and Semarang-Jepara dan Sukoharjo (Central Java).

Following harvesting, small-diameter rattan is cleaned and scrubbed with metal brushes, sun-dried for several days, then smoked with sulfur for 12 hours. Following another sun-drying, washed and sulfured (W&S) rattan has an optimum dryness and color. Large-diameter rattan processing includes frying the cleaned stems in kerosene for 30-45 minutes, followed by sun-drying for a few days and

smoking with sulfur for 12 hours. The sulfured rattan is again exposed to sunlight to obtain optimum dryness.

Once the rattan has been processed it is cut and heated to facilitate shaping for the end product. The sizes of rattan processors also differ from region to region. Models include large companies that contract out framing and plaiting to home workers, and SMEs and small firms that sell their final products through a trading house. Profit distribution is tipped toward large manufacturers who control rattan harvesting rights.

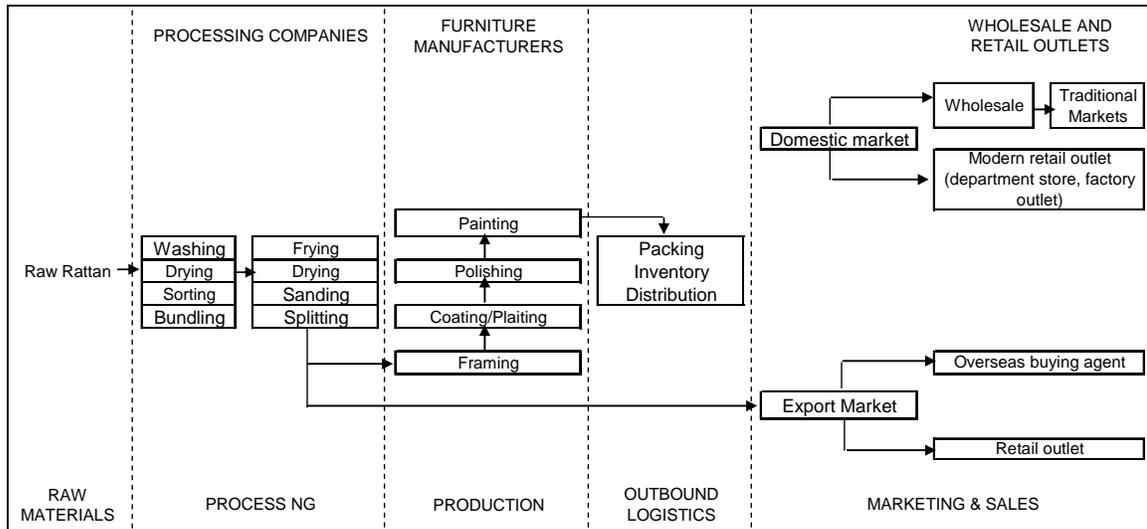
In Indonesia, estimated total profit is 5 percent for the gatherer, 10 percent for the trader, 20 percent for the semi-processor, and 65 percent for the manufacturer.

<b>TABLE II-24: COMPANIES, WORKERS, AND VALUE ADDED OF RATTAN FURNITURE</b>			
	<b>2001</b>	<b>2002</b>	<b>2003</b>
<b>Number of Companies</b>			
Domestic investment (facilitated)	57	24	15
Foreign investment (facilitated)	8	5	5
Others	155	180	193
<b>Total</b>	<b>220</b>	<b>209</b>	<b>213</b>
<b>Number of Workers</b>			
Production worker	43,071	39,166	40,110
Indirect worker	5,155	4,912	4,701
<b>Total</b>	<b>48,226</b>	<b>44,078</b>	<b>44,811</b>
<b>Value</b>			
Value of gross output (\$)	177,066	236,255	241,245
Input costs (\$)	106,714	149,209	114,886
Value added (at market prices) (\$)	70,352	87,047	126,358
Indirect taxes	546	447	895
<b>Value added (at factor costs) (\$)</b>	<b>69,421</b>	<b>85,857</b>	<b>125,463</b>

Source: Central Statistics Agency, various years

There are an estimated 2.4 million people employed in the rattan sector, although the true number may be far greater due to the high degree of informal employment in this industry. Rattan manufacturing companies outsource or subcontract the majority of their labor needs, with a ratio of fixed laborers to subcontract laborers of 1:8.

**FIGURE II-17: THE RATTAN SUPPLY CHAIN**



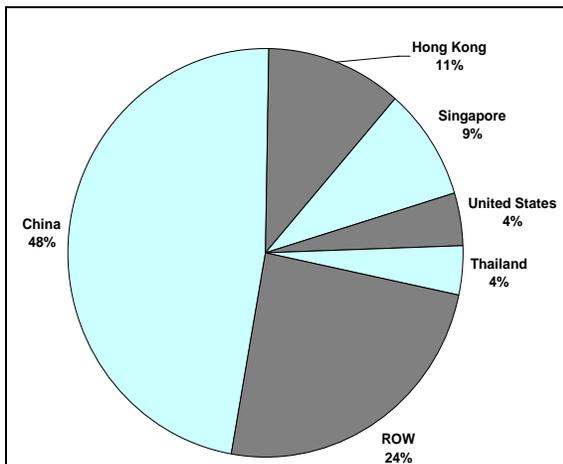
**COMPETITIVE CONDITIONS**

**DEMAND**

Strong demand exists for rattan furniture and handcraft items, with major consumer markets in the European Union (EU), Japan, and the United States. The EU alone accounts for roughly 30 percent of the end market for rattan furniture (Figure II-19).

On the basis of data from BPS, the leading market for raw materials is Hong Kong, followed by Singapore, the Netherlands, and China. Data on the Netherlands appear disproportional because it is a transit point for goods destined for Germany (Otten 2004). Similarly, Hong Kong and Singapore are through-points for regional rattan exports to China and Europe. China has increased import taxes on semi-finished rattan product while maintaining a zero tariff for raw material so raw materials alone are increasing to that market (Figure II-18).

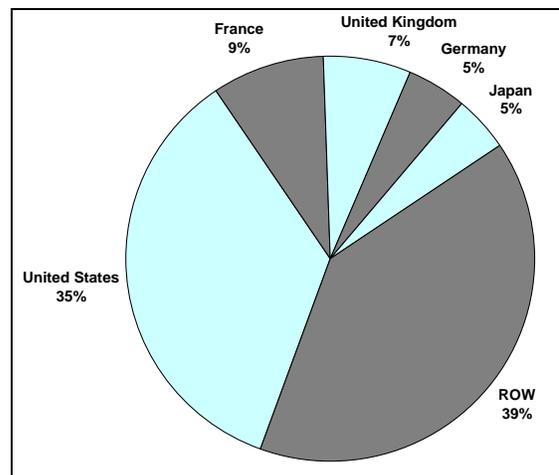
**FIGURE II-18: RATTAN IMPORTING COUNTRIES**



Total = \$58.4 million

Source: Global Trade Atlas, author's calculations

**FIGURE II-19: IMPORTERS OF CANE/RATTAN/BAMBOO FURNITURE**

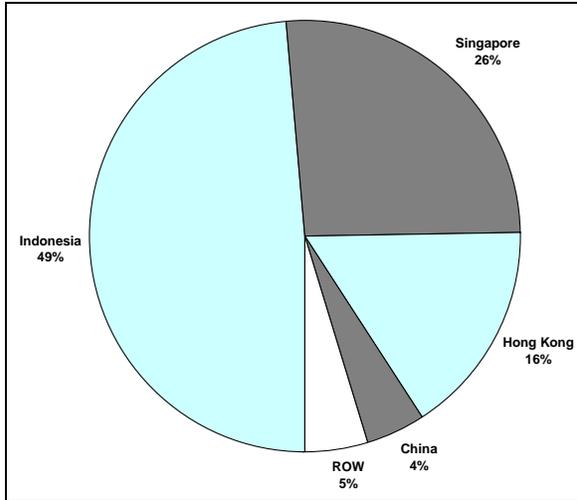


Total = \$1.1 billion

**COMPETITION**

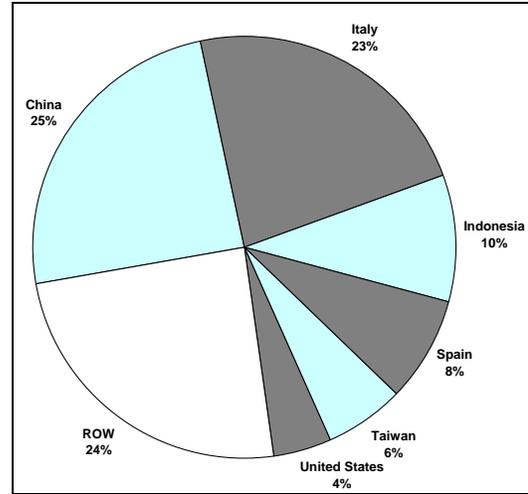
The Philippines is another country in Asia with a long-established and thriving furniture industry. The archipelago is renowned for its design and Indonesian manufacturers cite the high quality of rattan furniture from the Philippines as a competitive concern. However, the Philippines does not have sufficient raw materials to meet demand and encounters acute shortages. Conversely, China is cited as a concern due to the low cost production in that country, which beats Indonesia even though much of the raw material used in China is smuggled and sold at a higher price.

**FIGURE II-20: RATTAN EXPORTING COUNTRIES**



Total = \$45.6 million  
Source: Global Trade Atlas, author's calculations<sup>9</sup>

**FIGURE II-21: EXPORTERS OF CANE/RATTAN/BAMBOO FURNITURE**



Total = \$1.4 billion

**SWOT ANALYSIS**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>▪ Leader in raw material.</li> <li>▪ Long tradition of rattan manufacturing.</li> <li>▪ Strong market share of world exports.</li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ Strong demand worldwide.</li> <li>▪ Increasing production in Southeast Asia.</li> <li>▪ International markets are open.</li> </ul>
<p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>▪ Low efficiency in production.</li> <li>▪ Poor R&amp;D for treating raw material.</li> <li>▪ Low skills in design and finishing.</li> <li>▪ Poor integration among upstream and downstream producers.</li> <li>▪ Depressed local prices for raw rattan.</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>▪ High import taxes on processed rattan in China.</li> <li>▪ Substitute materials and synthetic plaited rattan is invented.</li> <li>▪ Lack of public sector investment in the industry.</li> <li>▪ Scarcity of large-diameter rattan.</li> <li>▪ Lack of licensing enforcement.</li> <li>▪ Smuggling.</li> </ul>

<sup>9</sup> Import and export numbers differ significantly as a result of under and over invoicing by reporting countries.

## **INDUSTRY CHALLENGES**

The rattan industry is still facing some uncertainty with regard to the regulatory environment. Specifically, confusion exists relating to regulations associated with export and inter-island trade. The granting of export permits has the effect of inflating the price of raw rattan in the domestic market. Therefore, rattan manufacturers want raw rattan exports be curtailed. Provincial governments have responded by limiting inter-island raw rattan trade in Sulawesi.

The rattan industry in Indonesia is still very traditional, with low technology methods in place for each step, from harvesting and cleaning to design and furniture processing. Particularly in these last two areas, Indonesia has fallen behind competitors such as the Philippines, which has a higher degree of innovation in design. This gap reflects a lack of skill development in the industry, as well as a lack of innovation and use of technology to increase efficiency and improve quantity and quality. As a result of this weakness, Indonesian furniture exports remain at the lower end of the market, with brand development hampered.

## **THE WAY FORWARD**

A range of initiatives are necessary to improve the performance of the industry. The best chance of success lies in a range of industry-level improvement initiatives targeting the different stages of the value chain. These initiatives will include labor training, process management and streamlining—particularly but not exclusively in the area of quality management—and finishing, painting, and drying. This work must be aligned with a growing understanding of key markets' critical success factors.

In tandem with these initiatives, it will be necessary to positively influence industry policy making at the provincial level to strike the right balance between restriction and support for the industry in terms of raw rattan exports.

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## **ANNEX A: INTERNATIONAL BEST PRACTICES**

This report outlines the key constraints to Indonesian competitiveness in the enabling environment and the effects of uncompetitive policies and conditions on exports and investment. At the macroeconomic level, those constraints include weak institutions, compounded by a high level of corruption; inadequate infrastructure, including the poor condition of roads and ports, and high energy costs; restrictive labor laws; and burdensome tax administration. At the micro level, we see low levels of education and training and low labor productivity; lack of business sophistication and development of supporting industries; and lack of technological readiness in terms of government prioritization of ICT and technological diffusion (World Bank, Doing Business 2006).

### **INTERNATIONAL BENCHMARKING**

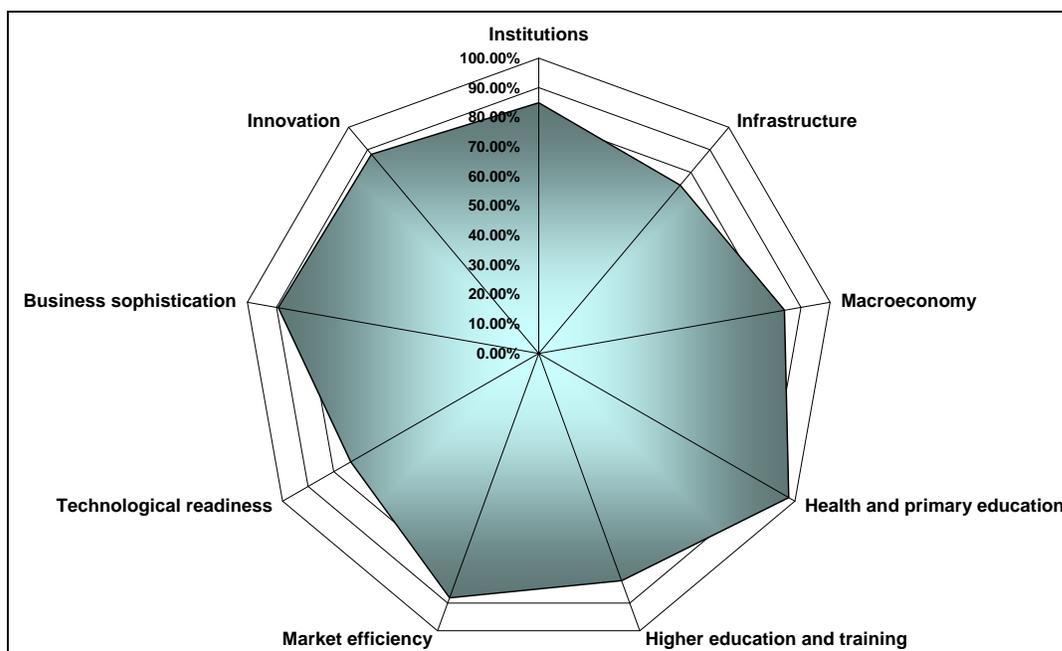
The experiences of other countries that have been successful in addressing problems such as those cited above can provide lessons and strategies for Indonesia and can help government and private-sector actors set priorities for future action. The additional information provided by benchmarking indicators also enables businesses and investors to reduce the risk involved in decision making.

### **THE WORLD ECONOMIC FORUM'S GLOBAL COMPETITIVENESS REPORT**

The Global Competitiveness Report is based on several indices developed through a combination of “hard data” on macroeconomic performance and “soft data” gathered through an annual survey of business executives administered by the World Economic Forum (WEF). The Global Competitiveness Index comprises weighted measures of the macroeconomic environment (stability, government waste, and country credit rating); the state of public institutions (contracts and law, corruption); and the relative state of technology (innovation, ICT, and technology transfer).

While Indonesia's ranking on the Growth Competitiveness Index fell from 65 to 74 between 2005 and 2006, this decline is not a direct reflection of decreasing competitiveness in Indonesia, because the index is a relative measure—if a new country is added to the ranking, or other countries improve their score significantly, then Indonesia's rank may fall even if its scores improve. That said, it is still useful to note that Indonesia ranks far below several of its major competitors in Southeast Asia, such as Malaysia (24), Thailand (36), and China (49). Figure A-1 plots Indonesian's performance on the eight pillars of the index against the average scores of its Southeast Asian competitors. Indonesia is at least 10 percent below the average in all areas, with the exception of health and primary education. Areas of particular weakness relative to the average include infrastructure and technological readiness. The WEF Executive Opinion Survey of 2005 identifies inefficient government bureaucracy, inadequate infrastructure, prohibitive tax regulations, and corruption as the top four obstacles to doing business in Indonesia.

**FIGURE A-1: INDONESIAN COMPETITIVENESS COMPARED TO THE AVERAGE OF SOUTHEAST ASIA**



100 percent equals the average of China, Malaysia, South Korea, Thailand, and Vietnam  
 Source: WEF Global Competitiveness Report, 2005–2006, Global Competitiveness Index

**DOING BUSINESS IN SOUTHEAST ASIA**

The World Bank’s Doing Business series, started in 2004, measures the specific factors that determine foreign and domestic willingness or ability to invest, formally register a business, and function efficiently in the market. Viewed against its primary competitors, several areas stand out as particular weaknesses in Indonesia (see Table A-1), including the time and cost to start a business—in days and percent of income per capita—the cost of dealing with business licenses, the difficulty and cost of hiring and firing workers, investor protection, and time and cost to enforce contracts. The legal and regulatory environment is a major culprit in raising the cost of doing business in Indonesia, deterring investors and keeping unemployment and underemployment rates among the highest in the region: 9.5 percent, compared to Korea at 3.7 percent, Thailand at 1.5 percent, and Malaysia at 3.4 percent (World Bank, Creating Jobs 2005).

**TABLE A-1: DOING BUSINESS IN 2006: CREATING JOBS**

	Indonesia	Malaysia	Philippines	S. Korea	Thailand	Vietnam	China
<b>Starting a Business</b>							
Number of procedures	12	9	11	12	8	11	13
Time (days)	151	30	48	22	33	50	48
Cost (% of income per capita)	101.7	20.9	20.3	15.2	6.1	50.6	13.6
Minimum capital (% of income per capita)	97.8	0	2	308.8	0	0	946.7
<b>Dealing with Licenses</b>							
Procedures (number)	19	25	23	14	9	14	30
Time (days)	224	226	197	60	147	143	363

	Indonesia	Malaysia	Philippines	S. Korea	Thailand	Vietnam	China
Cost (% of income per capita)	364.9	82.7	121	232.6	17.3	64.1	126
<b>Hiring and Firing Workers</b>							
Difficulty of hiring index	61	0	56	44	33	44	11
Rigidity of hours index	40	20	40	60	20	40	40
Difficulty of firing index	70	10	40	30	0	70	40
Rigidity of employment index	57	10	45	45	18	51	30
Hiring costs (% of salary)	10	13	9	17	5	17	30
Firing costs (weeks)	157	65	90	90	47	98	90
<b>Registering Property</b>							
Number of procedures	7	4	8	7	2	5	3
Time (days)	42	143	33	11	2	67	32
Cost (% of property value)	11	2.3	5.7	6.3	6.3	1.2	3.1
<b>Getting Credit</b>							
Strength of legal rights index	5	8	3	6	5	3	2
Depth of credit information index	3	6	2	5	4	3	3
Public registry coverage (% of adults)	0	33.7	0	0	0	1.1	0.4
Private bureau coverage (% of adults)	0.1		3.7	80.7	18.4	0	0
<b>Protecting Investors</b>							
Disclosure index	8	10	1	7	10	4	10
Director liability index	5	9	2	2	2	1	1
Ease of shareholder suits index	3	7	7	5	6	2	2
Strength of investor protection index	5.3	8.7	3.3	4.7	6	2.3	4.3
<b>Paying Taxes</b>							
Payments (number)	52	28	62	26	44	44	34
Time (hours per year)	560	..	94	290	52	1050	584
Total tax payable (% of gross profit)	38.8	11.6	46.4	38.7	29.2	31.5	46.9
<b>Trading Across Borders</b>							
Documents for export (number)	7	6	6	5	9	6	6
Signatures for export (number)	3	3	5	3	10	12	7
Time for export (days)	25	20	19	12	23	35	20
Documents for import (number)	10	12	8	8	14	9	11
Signatures for import (number)	6	5	7	5	10	15	8
Time for Import (days)	30	22	22	12	25	36	24
<b>Enforcing Contracts</b>							
Number of procedures	34	31	25	29	26	37	25

	Indonesia	Malaysia	Philippines	S. Korea	Thailand	Vietnam	China
Time (days)	570	300	360	75	390	343	241
Cost (% of debt)	126.5	20.2	50.7	5.4	13.4	30.1	25.5
<b>Closing a Business</b>							
Time of insolvency (years)	5.5	2.3	5.7	1.5	2.7	5	2.4
Cost of insolvency (% of estate)	18	14.5	38	3.5	36	14.5	22
Recovery rate (cents on the dollar)	13.1	38.8	4.1	81.7	43.9	19.2	31.5

## INTERNATIONAL COMPETITIVE STRATEGIES

In East Asia, the countries that have seen impressive growth in competitiveness are Korea, Malaysia, and Thailand. Important lessons can also be gained from examining the experiences of European countries that have implemented impressive reforms and transformed their economies into dynamic competitors on the world stage. Twenty years ago, Ireland was among the poorest economies in Europe, while 10 years ago the Slovak Republic had only recently made the transition to a market economy.

### PROACTIVE FOREIGN INVESTMENT STRATEGIES, PUBLIC-PRIVATE PARTNERSHIPS, COMPETITIVE INVESTMENT INCENTIVES, AND STREAMLINED INVESTMENT APPROVAL PROCESSES

#### *Malaysia's Bill of Guarantees to high-tech companies*

Since 1996, Malaysia has invested in the development of a Multimedia Super Corridor, intended to draw high-technology investment. The corridor, envisioned as a Malaysian Silicon Valley, stretches from Kuala Lumpur to the Kuala Lumpur International Airport, a strip 15 kilometers long by 50 kilometers wide. While this project is still underway, it represents the enormous ambition and commitment of the Malaysian government to move into the knowledge economy. The Malaysian strategy is based on the provision of top-notch technological and traditional infrastructure, as well as the availability of key incentives for doing business. Those incentives are outlined in the 10-point Bill of Guarantees, which ensures easy and consistent systems for investors (MDC 2006):

1. The Multimedia Development Corporation (MDC) was set up to facilitate the activities of investors, including serving as a one-stop-shop to provide legal advisors, best practices, standards, and promotion.
2. Infrastructure contracts are tendered to leading companies using the MDC as a hub.
3. Globally competitive communications tariffs.
4. No internet censorship.
5. Highly protected intellectual property and cyberlaws.
6. No income tax for up to 10 years or investment tax allowance for five years.
7. Freedom to source globally for borrowing and capital.
8. Freedom of ownership.
9. Unrestricted employment of foreign knowledge workers.

10. World-class physical and information infrastructure.

### ***Protecting investors in Malaysia and Thailand***

The World Bank's Doing Business: Protecting Investors report defines investor protection in three dimensions: transparency of transactions (extent of disclosure index), liability for self-dealing (extent of director liability index), and shareholders' ability to sue officers and directors for misconduct (ease of shareholder suits index). Poor scores on these items reflect suppressed investment and entrepreneurship.

Thailand, a top reformer in the area of improving transparency in 2004–2005, offers tax breaks to companies that comply with the Thai Securities and Exchange Commission's 15 principles of good investor protection. Malaysia, among the top 10 countries for investor protections in all three categories—along with Singapore and Hong Kong—offers an annual award to the company with the best corporate governance score as measured by the Kuala Lumpur stock exchange. On the penalty side, Malaysia has one of the strictest laws on disclosure, with a seven-year jail term for company officers who do not comply with disclosure rules on related-party transactions before they are put to a final shareholder vote.

## **STREAMLINED PROCEDURES AND REGULATIONS AFFECTING ENTERPRISES AND INVESTORS THROUGH LOW BUSINESS TRANSACTION COSTS AND CONSISTENT APPLICATION OF THE LAW**

### ***Regulatory reform in South Korea***

In the late 1970s and early 1980s, South Korea's economy became severely overregulated, creating massive inefficiencies in business transactions. Regulatory reform in that country has been ongoing since that time, but its most effective era followed the 1997–1998 Asian financial crisis. In response to the crisis, the country embarked upon “Guillotine” reforms to rapidly drive reform in the financial, labor, corporate, and public sectors. The Guillotine approach reviews regulations for effectiveness, enforceability, and impact, and then revises or eliminates regulations as necessary. In Korea, this process eliminated 4,800 regulations (43 percent) and modified an additional 2,411. It is estimated that the reforms created over 1 million jobs, reduced government costs by hundreds of billions of dollars, and contributed to real GDP growth of 8.5 percent over 10 years. The success of these reforms is attributed to the creation of an independent body for regulatory review, harmonization between policy goals and regulatory reform, transparency and predictability of regulations, and realistic requirements and standards (Kim 2000). Today Korea is a high-income country that ranks number 27 in the world for ease of doing business (World Bank, Doing Business in 2006).

### ***Legal reform in Slovakia***

Slovakia went through several phases of reform after the dissolution of the Soviet Union, including widespread privatization and cuts in corporate taxes. The 2002 elections instigated important reforms in the labor market. The Ministry of Labor overhauled the 2001 Labor Code, viewed as highly inflexible, and by 2003 a new code was implemented with the changes shown in Table A-2.

**TABLE A-2: 2003 SLOVAKIAN LABOR CODE**

Before 2003	After 2003
No part-time contracts	Part-time contracts for women, students, and retirees
Term contracts could not be extended	Extensions of term contracts possible
Limit of 150 hours of overtime a year	Limit of 400 hours of overtime, with worker consent
Approval by union for firing a worker	No requirement
Retraining before dismissal	No requirement
Union approval for flexible work time	No approval for shifting hours in a four-month period
Approval by union for group dismissals	Notification for group dismissals

Source: Jurjada and Mathernova 2005

Slovakia now ranks among the top 25 countries for least difficult hiring environments and is also a leader in terms of reform to reduce the time and cost involved in starting and closing a business. High costs and cumbersome procedures in this area often lead to investments in the informal economy, which diminishes tax revenue collected by the government, provides no health and pension benefits for workers, and renders businesses unable to obtain credit to expand their operations. Slovakia has reduced the number of procedures required to start a business to 9, reduced the time required to 52 days, and reduced the cost of starting a business to 5.7 percent of income per capita (World Bank, *Doing Business in 2005*). One important element of this reform was the removal of judicial participation in company registration—this duty can now be performed by court clerks. Judicial backlogs and excessive administrative procedures are problems in many countries; including judges in the process of company registration both slows down the process itself and impedes the other responsibilities of judges, such as addressing commercial disputes. Such reforms led to a 12 percent increase in new business registrations in 2004.

#### **EFFICIENT AND COST-COMPETITIVE INFRASTRUCTURE WITH RESPECT TO AIR AND SEA CARGO, TELECOMMUNICATIONS, INTERNET ACCESS, E-COMMERCE, AND ELECTRICITY**

##### *Modernization and expansion of port facilities in South Korea*

Defining port improvements as a strategic priority was one of the first steps in South Korea's mission to become a transport hub for the Asia Pacific region, capitalizing on its location and maximizing the benefits to be obtained from port facilities. Korean ports handle 99.7 percent of that country's export and import cargo and play a central role in waterfront industries, fisheries, and international trade sectors. A Ministry of Maritime Affairs and Fisheries was launched in 1996 to develop an integrated and efficient policy flexible enough to rapidly respond to changes in the external environment, and to draw the investment needed to complete the necessary upgrades. Facing strong competition from China, Korea will have to continue working hard to position itself and is doing so by appealing to 21<sup>st</sup> century concerns, such as environmental sustainability and knowledge-based industries. With the additional investment obtained through its promotion strategy, Korea expects to be capable of handling the 1.4 billion tons of cargo traffic expected to pass through Korean ports by the year 2011 (Asia Trade Hub 2005).

##### *Ireland's new economy*

Ireland is making a concerted effort to position itself as an e-commerce hub for Western Europe. An important aspect of its rapid and well-grounded economic growth in recent years has been investment in broadband infrastructure, passage of key public policy initiatives, and the development of an e-commerce-friendly regulatory environment. An additional €250 million (nearly \$300 million in 2006)

investment into broadband diffusion and e-commerce uptake nationwide is part of Ireland's medium-term plan. All this is taking place in an environment that would not appear conducive at first glance. Ireland currently has one of the lowest broadband penetration rates in the EU and remains low in the rankings of online business transactions and secure web servers for e-commerce. However, it is at the top of the list in e-government, with both national and state-level agencies active in the use of online tax filing and tracking large projects (Enterprise Ireland 2005).

#### **SUSTAINED INVESTMENTS IN HUMAN CAPITAL AT ALL LEVELS FROM PRIMARY TO TERTIARY AND SUPPORT FOR ENTERPRISE TRAINING THROUGH ASSISTANCE FOR EDUCATING TRAINING SMES**

##### ***Small and medium-sized industry development in Malaysia***

The Malaysian Government is responding to competitive challenges from China and others with a strategy to improve the education and skill of its labor force and to move away from a reliance on abundant low-skilled labor. One element of this approach is active support for the more than 40,000 SMEs in Malaysia, which are responsible for more than 25 percent of manufacturing output, value added, and employment (Ariff 2005). Through the Small and Medium Development Corporation, Malaysia promotes programs to build industrial linkages, developing SMEs into suppliers of parts and components for multinational corporations and other large companies in key industries; global suppliers, working directly with operations in foreign countries through skill development and mentoring activities; and skills upgrading, which enhances skills and abilities at the technical and managerial levels of SMEs in areas including electrical and electronics, information technology, industrial design, and engineering (SMIDC).

##### ***Education and training in Ireland***

Ireland's pursuit of a knowledge-based economy could not exist without prioritizing education and training. Investment in early education, skill development, training facilities, and apprenticeships are all important parts of the national strategy. Public expenditure on education increased by 150 percent between the mid-1980s and early 2000s, and economic reports estimate that the improvements in the skills of the workforce have led to nearly 1 percent of additional output per year over the last 10 years. The share of 25- to 34-year-olds with a tertiary education now exceeds that of the EU average by 10 percentage points (Enterprise Ireland 2005).



BRI II Building 8<sup>th</sup> Fl, Suite 805  
Jl. Jend. Sudirman No. 44 - 46, Jakarta 10210, Indonesia  
Tel: 021-5793-2577 Fax: 021-5793-2578  
[www.senada.or.id](http://www.senada.or.id)