Does the Indonesian Automotive Industry Have What it Takes to Compete in Post 2015 AFTA?

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Abstract

This research sets out to examine the state of competitiveness of the Indonesian automotive Industry today; identify opportunities and challenges, facing the Indonesian automobile industry; address efforts made so far to develop the opportunities and address the challenges; and draw policy recommendations that are deemed potent and practical to address problems, obstacles, and challenges facing the automotive industry. The study primarily uses a qualitative research approach, and employs research methods including semi structured interviews, in depth interviews, literature review of government policies, reports, and statistics on automotive product production, sales volumes, contribution to the economy, exports and imports; research reports from the Agency for the Development and Application of Technology (BPPT); reports and statistics issued by the Association of Indonesia Automitive Industries (GAIKINDO), and the European Chamber of Commerce (Automotive Division).

Findings show that Indonesian automotive industry and market posted strong growth of 10 percent during the 2007-2011 period. This is reflected in production and sales figures that have showed an upward trend in line with the general performance of the economy. The Indonesian automotive industry in some respects is ready for post 2015 ASEAN. This is discernible from a number of areas such as semi-skilled and skilled labor; a supportive regulatory framework that protects domestic automotive product manufacturers from unfair competition from ASEAN and non ASEAN manufacturers; improvement in government governance as reflected in rising transparency; some major inroads in corruption control, improvement in macroeconomic management which has created a low inflation, stable exchange rate, low national debt to GDP ratio, capital inflows, and the tax regime.

Key Words: automotive, components, competitiveness, free trade area.

A. INTRODUCTION

As Indonesia, together with 9 other members of ASEAN, is gearing up to form an ASEAN free trade area in 2015, questions are being posed, albeit at the wrong time, as to whether the largest economy in ASEAN is ready to take this fundamental and game-changing milestone. As one of the founders and

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the largest economy, Indonesia's readiness and preparedness to become a full-fledged member of AFTA by 2015, is pivotal for the success of the exercise. In that context, this study will highlight and focus on the state of the automotive industry.

Indonesia's economy grew by 6.5 percent in the last quarter of 2011, performance that has been attributed to sustained consumption and investment. This makes Indonesia's economy one of the best performers in the ASEAN region, as the growth of other economies in the sub-region is slowing thanks mainly to contraction in global demand, which in turn has had an adverse impact on exports. Relatively high economic growth of the Indonesian economy, the largest part of which comes from private consumption (Figure 1), makes it an attractive market for other ASEAN member economies which rely on exports such as Singapore; East Asian economies, heavily dependent on exports such as Japan, S. Korea, Taiwan and China; and countries in the European Union which are facing economic distress as a result of national debt problems that are affecting countries in Southern Europe (Greece, Portugal, Italy, and Spain) as well as ramifications of the global financial crisis which are still evident in the UK, Ireland and Iceland. With growth of domestic economies still anemic, and amid economic slowdown, high employment, and high debt to GDP ratios, which are partly attributable to government bailout, fiscal stimulus and capitalization packages were injected into the financial sector and economies to stave off an even worse economic crisis.

Moreover, the US economy, though of late showing signs of recovery (based on the latest job figures released by the Department of Labor), is still weak as attested by the high unemployment rate (8.3 percent in January 2012[2]). There is a large number of Americans still living on welfare benefits, and the country has a low saving-to-GDP ratio, and high public debt to GDP ratio (above 75 percent). The still high foreclosure rate at a time of high household indebtedness means that many households still need government support to keep their homes.

Household sector deleveraging hampers efforts at stimulating private consumption. This means that, though the corporate sector has recovered relatively well, its ability to increase production capacity, which should increase thiring, is undermined by still low private consumption. In short, many economies, both developed and developing, are facing low domestic demand, which is forcing them to look for safety values elsewhere. This is why, thanks to its large domestic market, Indonesia has been able to maintain its relatively high economic growth path and has become the destination of various exports of agricultural commodities, manufactured goods, and thanks to its relatively liberalized financial sector, financial services as well.

Industry constitutes 47.6 percent

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[2] Payroll numbers increased by 257,000, and have shown an increase of 200,000 a month on average since September 2011. Nonetheless, Gary Burtless, notes, employment in the 25-54 age brackets is still 4.3 percent lower than during last economic expansion. Burtless, G. "Labor Market Continues to Strengthen. Economic Studies," The Brookings Institution. Available at: http://www.brookings.edu/opinions/2012/0203_jobs_burtless.aspx February 7, 2012.

Figure 1. Trend in structure Indonesia's of GDP expenditure by function, (billion Rupiah) 1990-2009

Source: ADB, 2011

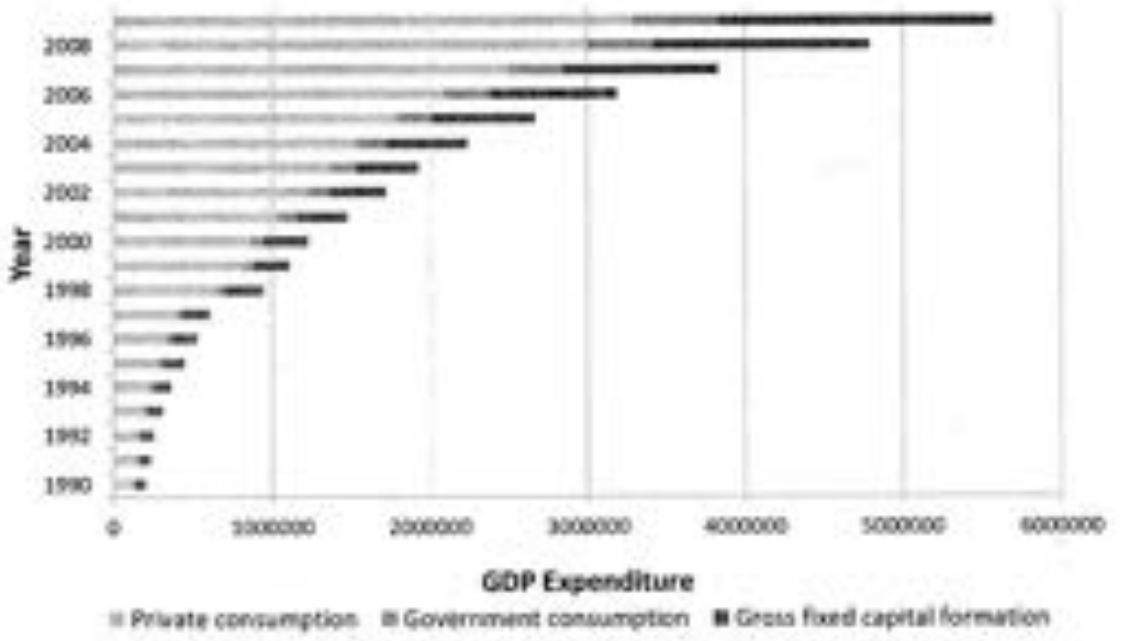


Figure 2. Structure of the economy of Indonesia by sector (%)

Source: ADB, 2011

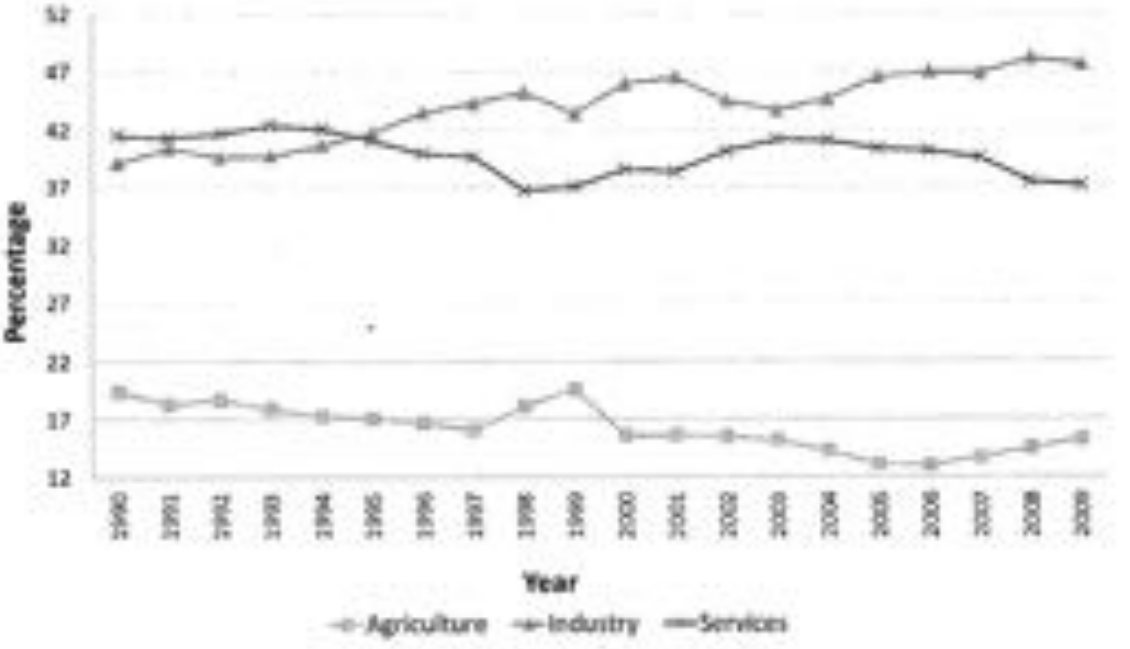
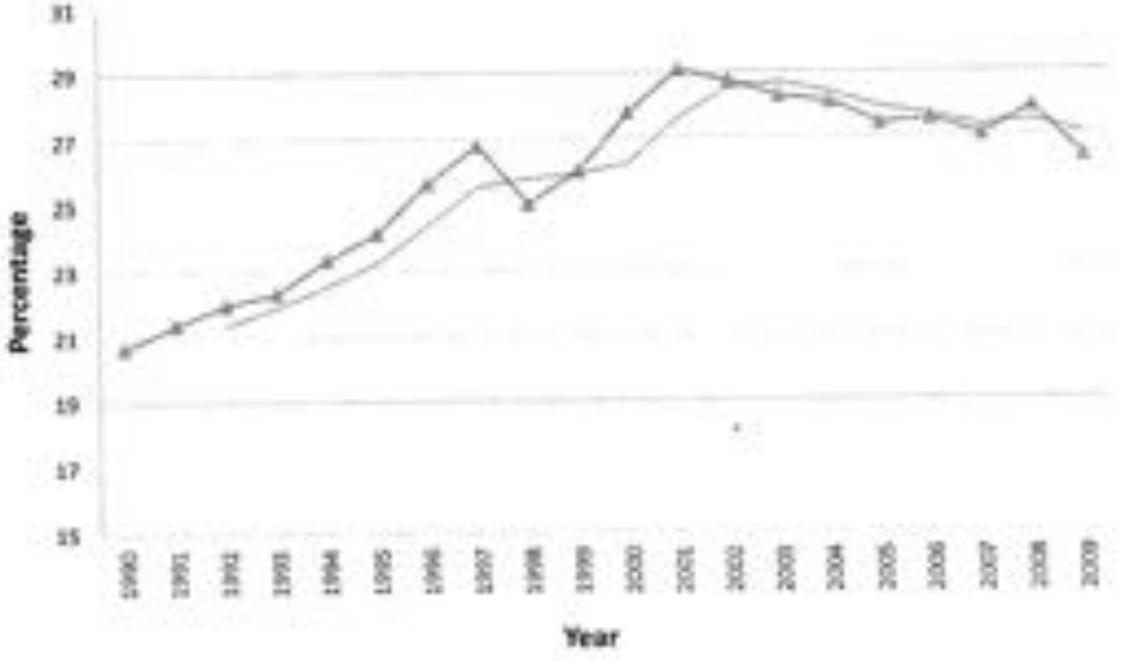


Figure 3. Trend in the contribution of the manufacturing sector to GDP, 1990-2009

Source: ADB, 2011



of Indonesia's GDP (2009), which is a significant increase from 1999 figure of 43.4 percent which marks the height of the 1997-1999 economic crisis. The statistic also shows a marked improvement from the 1997 figure (44.3 percent), which was prior to the onset of the devastating economic crisis of 1997-1999. To that end, the performance of industry has long recovered from the economic crisis and is certainly back on the long-term development trajectory (Figure 2). In other words, the structure of the Indonesian economy has changed over time from being heavily dependent on agriculture to industry and services. Manufacturing contributed 26.38 pct of GDP (at current prices) in 2009, which is slightly lower than the 1997 figure (26.79 pct). In other words, though manufacturing as a percentage of GDP showed an upward trend during the period of 1990-2001, there is little doubt that from 2002, the trajectory depicts a change in course (Figure 3).

The downward trend in manufacturing as a percentage of GDP also has complicated for the contribution of the labor force in manufacturing to total employed labor force. The labor force employed in manufacturing shows a downward trend from 29 percent in 2001 to 26.30 percent in 2009, and based on available statistics this trend is highly likely to continue (Figure 4).

Production in the manufacturing sector grew by an average of 4.45 percent in 2010, which is far higher than 1.34 percent registered in 2009 (Figure 5). Nonetheless, the manufacturing industry is exhibiting increasing variability. This is attested by high production variability on a month to month basis. Figures for January -June 2011 also show marked variability.

Factors responsible for the heighted level of variability obviously impact on

the performance of the manufacturing sector as well as the Indonesian economy if they apply to other sectors of the economy. Apparently, this may be the case if the World Bank Indicators on Doing Business 2012 for Indonesia are anything to go by (Figure 5). Indonesia lost three positions on the Doing Business Index in 2012. In 2012, Indonesia was ranked 126 out of 183 countries surveyed, but dropped to 129. With the exception of the Philippines, Laos, and Cambodia, Indonesia's close competitors in the ASEAN region such as Thailand (17), Malaysia (18), Singapore (1), and Vietnam (98), fared better.

Problem areas include the length of starting a business (rank 155), difficulties in getting electricity (rank 161), obtaining credit (rank 126), paying taxes (rank 131), enforcing contracts (rank 156), and resolving insolvency (rank 146). The relatively good areas include the number of permits required to undertake construction work (rank 71), protecting investors (rank 46), and trading across borders (rank 39) (Figure 7).

A number of problems have been cited as hampering activities of the non financial sector, ranging from physical infrastructure that needs improvement and extension (roads, terminals, railways, terminals, public facilities, frequent electricity outages due to overburdened electricity grid; acrimonious labor disputes, and high cost of hiring and firing workers; to low manpower competence and skill. With reference to manufacturing problem areas cited, there is a lack of linkage between upstream and downstream. This has created an anomaly whereby Indonesia exports iron and steel but has to import steel for use in the manufacturing sector. This creates another problem, which is becoming increasingly serious for Indonesian manufacturers: -high dependency on imports of raw materials and intermediate ma-

Figure 4. Trend in contribution of manufacturing to labor force, 1990-2009

Source: ADB, 2011

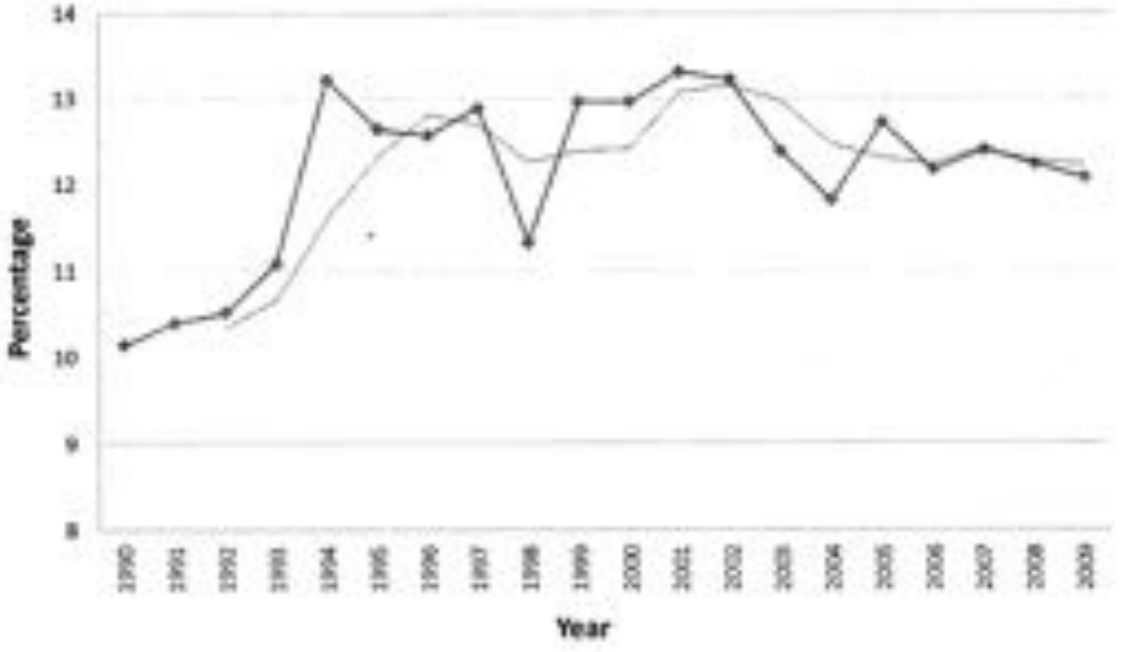
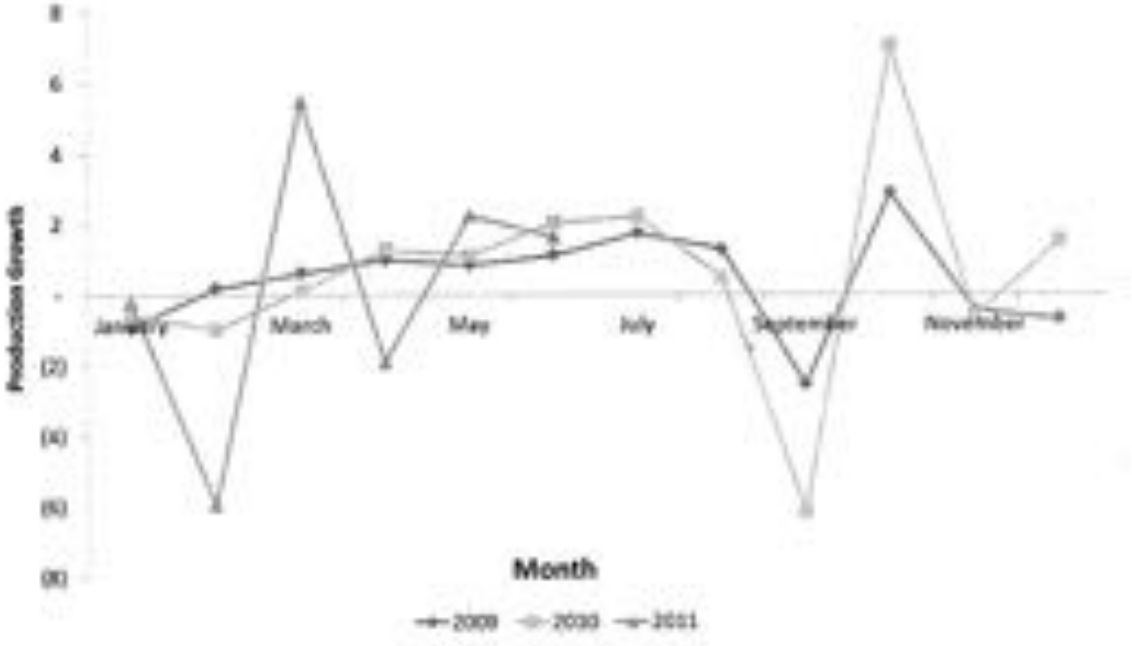


Figure 5. Monthly Production Growth of Large and Medium Manufacturing Industry, January 2009-June 2011

Source: Economic Activity Indicators, Statistics Indonesia; Monthly Socio Economic Data Report, Statistics Indonesia

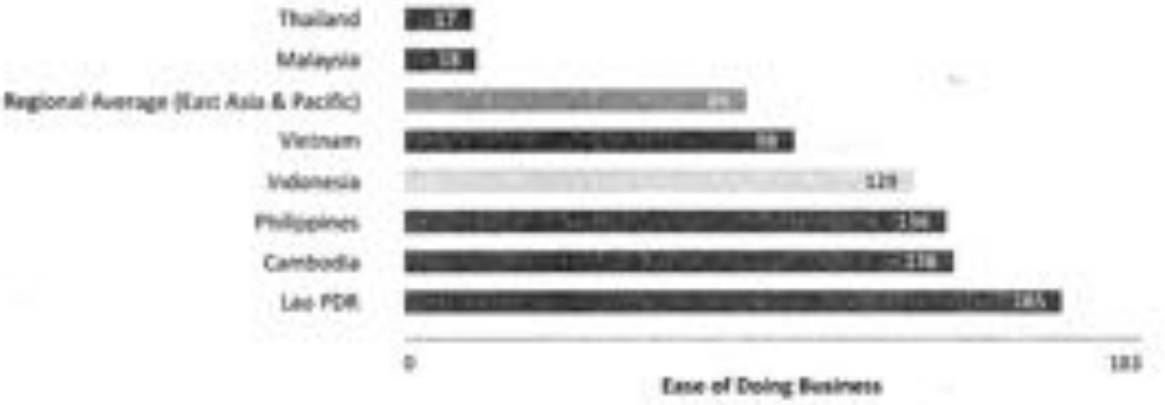


terials used in the manufacturing sector. The high percentage of imports in products manufactured in Indonesia means that the sector is highly susceptible to factors that affect the international markets (economic performance and trade policies of exporting economies of raw materials used in manufacturing sector, exchange rate movements). Exporting a good percentage of products produced in the domestic sector, while importing similar goods for the domestic sector is another problem, cited as characterizing the manufacturing sector; tenuous linkages of the manufacturing sector with other sectors of the economy; and signs of falling contribution to GDP. This directly influences the contribution of the manufacturing sector to the national economy with respect to employment, incomes, national and regional government revenues, and valued added. There is one important factor that domestic manufacturers are increasingly citing as real, irreversible and extremely devastating to their efforts: -losing domestic market to foreign manufactured imports.

Against that backdrop, the manufacturing sector, which is vital for sustaining efforts of the Indonesian government to transform the economy from a low income developing economy into a high income industrialized nation by 2030 is facing very serious problems that need to be addressed if such a vision is to be realized. The Indonesian government plans to draft a master plan that will promote the growth of the manufacturing sector by between 7 to 8 percent

Figure 6. Comparison of Indonesia, with other ASEAN nations on Ease of Doing Business Index, 2012

Source: Doing Business, 2012 The International Bank for Reconstruction and Development / The World Bank



from 2013[3] starting from 2013. With respect to the automotive industry, Indonesia as the largest economy in South East Asia constitutes the largest market for automotive manufacturers, ranging from motorcycles, cars of all types, to heavy trucks. The production of vehicles in 2011 hovered around the one million mark, putting Indonesian manufacturers' almost at par with Thailand's manufacturers. The relatively stable socio-economic and political conditions which Indonesia has enjoyed over the last five years[4] have impacted positively on the performance of the automotive industry, which shows an upward trend. Relative economic stability has translated into rising purchasing power for the Indonesian population, meaning that an increasing number of Indonesians is now able to afford an automobile, motorcycle or even truck. Low inflation has been also in important factor in the demand equation for automotive more so given the reality that many Indonesian no longer see the need to pay cash for their automotives rather make use the variety of financing services (leasing, hiring, installment, and hire purchase).

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[3] "Masterplan Ekonomi Indonesia akan Fokus Pada Industri Manufaktur," available at: http://www.voanews.com/indonesian/news/Masterplan-Ekonomi-Indonesia-akan-Fokus-Pada-Industri-Manufaktur-112682049.html Thursday, December 30, 2010.

[4] A number of automotive manufacturers have not failed to seize the opportunity, with the rising number of automotive buyers in Indonesia helping the manufactures' bottom line at a time when other countries in the sub region, let alone those in developed markets, are stagnating if not still in economic downturn. Nissan Corporation is the latest example of a foreign OEM which has earmarked to invest US$400 million between 2012 and 2015, to boost its 'production' of Nissan vehicles as well as expansion of outlets to 150. This project is estimated to generate 3,300 jobs, and increase the production of Nissan vehicles including the 'resurrected' Datsun brand to 250, 000 vehicles per annum by 2014 (Voigt, K. March 21, 2012). "Datsun is part of our company heritage and will now contribute to its future," Ghosn said. Available at: http://edition.cnn.com/2012/03/21/business/nissan-datsun-resurrection/index.html?iref=obinsite

Figure 7. Performance of Indonesia on Doing Business Index by category

Source: Doing Business, 2012 The International Bank for Reconstruction and Development / The World Bank

Category	Rank
Ease of Doing Business Rank	129
Starting a Business	155
Dealing with Construction Permits	71
Getting Electricity	161
Registering Property	99
Getting Credit	126
Protecting Investors	46
Paying Taxes	131
Trading Across Borders	39
Enforcing Contracts	156
Resolving Insolvency	146

To that end, the availability of a variety of sources of financing one's purchase means that it is in some way a buyers' market. This condition has been creating downward pressure on advance payment demand, as well as monthly payments, which can be stretched to as long four years. In fact policy makers in the Indonesian government in general, and in large urban centers in particular (for example province of DKI Jakarta) consider the rate of increase of automotives on Indonesian roads a source of problems that need to be addressed. Attendant problems cited as attributable to the what many refer to as uncontrollable rapid increase in automotives in cities, include road traffic congestion, pollution (air, sound, old tires, and old vehicle disposal yards); difficulties for the government to meet the rise in fuel consumption, which being subsidized and compounded by rising fuel prices has increased government expenditure on subsidies to the detriment of poverty eradication programs, and complicates efforts to reduce the budgetary deficit to within set limits of under 3 percent.

Going back to the dynamics of the Indonesian automotive Industry, any observer of the industry has to be enthused at the rapid progress made so far, especially if such observation is confined to number of automotives that join the busy roads every year. Nonetheless, plaudits become criticism, when on closer analysis the wider picture of the industry takes shape. Some of the problems that come to light include, but are by no means limited to, the seemingly uncontrolled increase in the number of vehicles, especially private automotives (motorbikes and cars), which adds to an already large number of automotives that serve private interests rather

than those of the general public (public transportation); the increased stress on roads, which means higher maintenance costs per year; the minimum efforts tailored toward controlling automotive pollution, reflected in the large number of old automotives, especially those used for public transportation purposes; the large number of automotive brands on Indonesian roads, most of which sell completely built up (CBU) automotives on the domestic market, which in fact means that they are in effect vendors or commission agents /distributors rather than manufacturers; generally high prices of automotives on the Indonesian market (attributable to high import tariffs but also the oligopolistic nature of the automotive market, with few companies controlling the distribution/assembly of many brands) and strong dependency on imports of auto parts for assembly plants as well as CBU units. Another problem, which though not often cited by practitioners in the automotive industry, is the recurrent problem of smuggling of automotives, both second hand or reconditioned and new, from neighboring countries, through the porous borders into the Indonesian market.

B. RESEARCH QUESTIONS

In light of that, there is a need to undertake an analysis of the automotive manufacturing industry in general and its component sub sectors in particular to identify the state of the automotive industry, the nature, composition, strategies pursued by practitioners; identify factors that are attributable to the nature, composition, and business strategies adopted by practitioners in the automotive manufacturing industry in Indonesia; delineate the micro and macro level obstacles and challenges that automotive manufactures face and that based on their perspectives are causes and possible solutions to solve them; identify measures that need to be taken to enhance the competitiveness of the Indonesian automotive manufacturing industry which will be drawn in policy recommendations. To that end, the research questions will be as follows:

1. What is the state of competitiveness of the Indonesian automotive industry today?
2. What are the opportunities and challenges of the Indonesian automobile industry today?
3. What efforts have made so far to exploit the opportunities and address the challenges the automotive manufacturing industry faces in Indonesia?
4. What policy recommendations for the practitioners and policy makers are necessary to address problems, obstacles, and challenges facing the automotive industry?

C. CONCEPTUAL FRAMEWORK

Indonesia's manufacturing sector, which contributes more than 30 percent of GDP, has experienced a decline in performance since the onset of the 1997 economic crisis. It is an important source of employment, tax revenue, exports, and inputs for other important sectors of the economy such as agriculture. It is evident from production statistics in the manufacturing sector that the sector is more vulnerable to economic shocks especially those that originate from external sources. The industrial sector registered a significant decrease in production during the 1997-1998 economic

crisis as well as during 2008 global financial crisis. The industrial sector grew by 3.7 percent, 4.1 percent, and 4.6 percent in 1997, 1998 and 1999, respectively, compared to GDP growth of 4.3 percent, 6.7 percent, and 6.4 percent, during the same period. The same trajectory seems to apply during 2008 financial crisis during which industrial sector posted growth of just 3.9 percent (2008), which was a dramatic decrease from the previous year's figure (9.5 percent).

Nonetheless, unlike the agricultural sector which apparently takes a long time to rebound from the effects of crisis, the industrial sector does not take long to do so. This is evidenced by the recovery of industrial production in the aftermath of the 1997-1998 economic crisis and 2008 financial crisis. With the exception of 2001 which was another year when Indonesia experienced the impact of a world recession, as well as 2003 and 2005 industrial production has posted a growth rate higher than the average GDP growth (6.4 percent compared with 4.4 percent (2000); 7.1 percent compared with 3.8 percent (2002); 7.4 percent compared with 8.5 percent (2003); 10.3 percent compared with 7.5 percent (2004); 9.3 percent compared with 9.5 percent (2005); 12.7 percent compared with 9.7 percent (2006) and 9.3 compared with 7.4 percent (2009). From the vantage point of the contribution of the industrial sector to GDP, the production of goods and services in the industrial sector has ranged between 25 percent and 29 percent of GDP during the 1990-2009 period with the most recent data for 2004-2009 period hovering between 28 percent and 29 percent. To that end, indications are pointing toward performance below potential output in the industrial sector.

Some of the factors attributable to such a development, as cited from International Institute for Management Development (IMD) sources, include, among others, the generally poor performance of the Indonesian economy as reflected in international trade, investment, labor and employment and price stability; inefficiency of government institutions and public service as reflected in poor management of public finances and fiscal policy inability to develop requisite regulations on the business climate; inefficiency in the business climate which is reflected in inability to manage and promote productivity and innovation resulting into low productivity, a suboptimal labor market, low access to sources of finance, and unprofessional managerial practices; infrastructural bottlenecks that are physical, technological, and basic (Tri Widodo, undated[5]). Indeed, not a few pundits have described the trend of production in the industrial sector as de industrialization. Based on the trajectory of capacity utilization the industrial sector has shown a decrease during the reformation era. This is because while in 2002 capital utilization in the industrial sector was 80 percent on average in 2002 it had decreased to 60 percent. Meanwhile from the vantage point of number of firms or enterprises in the industrial sector, indications are pointing toward a general decrease as well.

Prior to the 1997 economic crisis the number of medium and large scale enterprises n the industrial sector was

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[5] Tri Widodo, 2010. "Potret Industri Manufaktur Indonesia Sebelum dan Pasca Krisis (Suatu pendekatan fungsi produksi Cobb-Douglas)," Ministry of Finance, available at: http://webfiskal.fiskal.depkeu.go.id/2010/adoku/Tri%20wibowo_Potret%20Industri%20Manufaktur.pdf

22.997 units, which by 2002 had decreased to 1.800 units. Another indicator of deindustrialization is the general decrease in the index of production in the industrial sector. The production index for medium and large processing enterprises decreased from 126.54 in 1997 to 100.29 in 2002 (Tri Widodo, 2010). The downward trend in the performance of the industrial sector is attributable to a significant decrease in competitiveness of Indonesian processing and manufactured products, which is a result of the performance of the Indonesian economy in general on various dimensions of competitiveness ranging from problems in starting a business, getting electricity, obtaining credit, paying taxes, enforcing contracts, resolving insolvency, the state of infrastructure, performance of the bureaucracy, and regulatory certainty, among others. Economic inefficiency translates into higher production costs, which in turn lead to high product prices.

What is true of the industrial sector in general, is equally true for the automotive industry. The importance of the automotive industry is underscored by the fact that it has deep backward and forward linkages, which means that the development of the sector has high spillover effects on other sectors of the economy. As regards backward linkages, automotive production induces the demand "for steel, aluminum, copper, plastics, electronics, capital equipment, trucking, warehousing and logistics[6]," while with respect to forward linkages, the development of the automotive industry promotes or supports the development of "dealership retailers, credit and financial services, logistics, advertising, repair and maintenance, petroleum products, refueling stations, insurance and service parts."[7] The establishment of a competitive automotive industry requires among other things, trained, skilled manpower and thus huge investment in human resources; state of the art R & D centers to promote innovations (inbound foreign direct investment - FDI has been identified as an important factor in the development of automotive industries in India and China); a level playing field for automotive producers, through guaranteeing fair competition; supportive labor laws; fiscal policies that support automotive design and development, R & D, sustainable demand, and thus purchasing power derived from a rise in income per capita; good infrastructure; transportation, promotion of automotive related education; and incentives to automotive manufactures.

The automotive industry among the industries that have begome globalized thanks to globalization drivers such as transportation, information and communications technology; falling trade barriers; economic and financial liberalization; and falling transaction costs. To that end, domestic automotive manufacturers have to deal not only with domestic competitors but also foreign based OEMs. To remain competitive even in the domestic market, which in many economically liberalized economies is now the arena where international competition occurs, automotive manufactures must go global in their business strategies (leverage technologies through es-

[6] Automotive Mission Plan 2006-2016: "A Mission for Development of Indian Automotive Industry, Ministry of heavy Industries and Public Enterprises," Government of India, 2006.

[7] Ibid.

tablishing R & D, product design and development, production, marketing and branding alliances with foreign OEMs); have to deal with a changing and increasingly complex policy environment (fuel efficiency demand, pollution limits, safety and security requirements).

Studies on competitiveness have used Porter's diamond model.[8] It defines the competitiveness of an industry of country based on factor conditions sub-divided into basic (natural resources, climate, location, unskilled labor, semiskilled labor, and debt capital), and advanced (un-inherited factors such as skilled manpower); demand conditions, which refer to the extent to which consumers for the products produced by the industry are sophisticated or demanding on quality; related and supporting industries; and business context, which relates to conditions of enterprise organization and competitiveness or rivalry (reflected in firm strategy, structure and rivalry). "Each of these four determinants defines a point on the diamond and constitutes the system where each point also has influence on the others."[9] Porter's diamond model includes government and chance as exogenous variables. The extent to which an industry has competitive advantages over international competitors determines its competitiveness in the international market. The drawback in Porter's single diamond model lies in its failure to account for the role multinational companies' play in influencing the four determinants of industrial or a country's competitiveness.

To that end, various researchers on determinants of competitiveness such as Rugman and D'Cruz, 1993; Rugman and D'Cruz, 1993; Cho and Moon 2000; and Dunning 2005, cited in Sardy and Fetscherin (2009), modified Porter's single diamond model, creating the double diamond model (DDM). The double diamond model uses the determinants of competitiveness as postulated by Porter in his single diamond model, to which they supplement and complement the multinational company activities and government. Thus, the double diamond model, in addition to the four factors in Porter's diamond model, adds two factors; multinational company activities and government. The implication of the modification to the single diamond model is that while the single diamond model is not fixed as it is influenced by the four factors that determine competitiveness at the domestic level, the external diamond, which is the global diamond, is fixed.

The automotive industry is not only capital intensive but also labor intensive, which is why average labor cost serves as a good measure of competitiveness in the industry. In a study that compares the level of competitiveness between China, India, and S. Korea, Sardy and Fetscherin (2009) find that a country which has huge labor supply (low labor cost, translating into low average manufacturing wages), has a higher competitive advantage over one that has high labor cost and thus high average manufacturing wages (developed countries, including South Korea face stiff competition from China and India). Other factors that impact on the factor conditions include level of expenditures on R&D to

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[8] Sardy, M., and Fetscherin, M. "A Double Diamond Comparison of the Automotive Industry of China, India, and South Korea," Rollins College Publications, Publications online. 2009.

[9] Sardy and Fetscherin (2009). Op.Cit.

GDP, the growth competitiveness index, which is computed by combining macroeconomic, technological and government factors, adult literacy rate as a proxy for human capital investment and skill level in the labor force, and the multiplicity productivity index, which is a measure of the joint productivity of labor and capital and outbound and inbound FDI.

Meanwhile, as regards demand conditions, Sardy and Fetscherin (2009) use the size and rate of growth of demand, GDP per capita, growth rate per capita, and education attainment to proxy consumer sophistication. Large domestic demand induces investment in technology and thus promotes innovations and modern production processes and fosters the construction of large automotive plants enabling large economies of scale that generate cost advantages that in turn lead to lower product prices. Meanwhile, demand factors as viewed from an international perspective are measured by the number of units exported as well as the growth rate in number of units exported. Related and supporting industries constitute firms that coordinate or share activities in the value chain when an industry is vertically, forwardly, or backwardly integrated. Related and supporting industries generate benefits in terms of fostering "innovation, upgrades, information flow, and shared technology development which create advantages in downstream or upstream industries." This implies that a country which has a competitive advantage in industries that are related and support automotive industries is highly likely to have a high competitive advantage compared to one that does not have such advantages. Good examples are the automotive components industries, transportation and communication industries. The concentration of automotive producers (measured by Herfindahl-Hirschman Index) and the count of automotive producers producing 150,000 or more units per year (measure of efficiency in the automotive industry), are used to measure domestic factors in the business context factor, while average tariff rates applicable to imports and exports of automotives serve as international factors that influence business context.

The global landscape of the automotive industry is today characterized by global alliances or tie ups among manufacturers.[10] Those are driven by the need to have a global strategy on production, including R & D, product development and marketing; relocation and restructuring of factories and supply systems; scaling up global production by taking advantage of economies of scale, while taking account of national and regional market peculiarities, thereby cutting production costs through reduction of production platforms, rationalization, standardization, employing computer assisted engineering (CAE) and digital CADCAM[11]; out sourcing auto components supplies globally, thus facilitating benchmarking and competitive supplies at fairer prices and assured quality; increasing the ease of access to other markets, both regional and national, without

[10] Shimokawa, K., 2002. "Reorganization of the Global Automobile Industry and Structural Change of the Automobile Component Industry," TokaiGakuen University.

[11] The use of CAE and CADCAM made possible the reduction of production platforms thereby lowers production barriers between auto manufacturers. Lower barriers increase opportunities for sharing of various activities of the value chain among manufacturers production, purchasing, administration, R & D, product development (unifying basic components and transmissions for example).

the need to make huge investments in production capacity, distribution networks, and branding (Eastern European markets after the end of the Cold War, emerging Asian, Central and South America automotive markets, and rising Chinese and Indian markets); reduce operational and financial risk by diversifying production plants, auto parts suppliers, and markets; take advantage of global finance which can help to reduce fund increased R & D, product development, production and distribution.

However, other factors that have driven the undercurrent of the global automotive landscape include the need for a 'lower breakeven point for a limited production scale',[12] developing products that are tailored toward specific niche markets, developing the capacity to develop and release many new products at shorter lead times, and establishing a flexible production system with the ability to produce varied product qualities and quantities[13] for various market niches (Just in Time production system, being a good example). As result of the increasing globalization of the automotive manufacturing industry as well as other factors such as the need to increase efficiency, requirements to meet demands for 'design strength, development strength and engineering solutions' of an increasingly large number of global manufacturers. It also needs to achieve requisite product design, development and engineering capabilities to supply an expanded array of automotive manufacturers that demand high quality products, delivered quickly, at low cost, and with requisite engineering complexity. The auto components manufacturing industry has on its own undergone globalization through 'integration, merging, and network tie ups.'

One of the key features of the auto components industry is modularization, whereby component suppliers are no longer limited to supplying units for auto motives but rather modules, so they contribute to product technology used in design and development of automotives (Shimokawa, 2002). This development has contributed to the reduction in the number of suppliers as well as the production cost of automotives. It is worth noting that in this increasingly global world, there is no need to re invent the wheel, which is why establishing joint ventures between upcoming automotive players and established producers (developed world auto producers) is pivotal for accelerating technological adoption, generating innovations, upgrading production processesn and gaining managerial skills. Moreover, alliances among automotive manufactures and Chinese automotive companies have been able to make huge leaps in production and competitiveness. This is also thanks to the creation of a competitive business climate lowering tariffs on imports of automotive component parts, allowing joint ventures between Chinese manufactures and those from the developed world, a large and rising middle class that creates insatiable demand, and making huge investment expenditures in R & D. Additionally, the availability of low cost labor as well as requisite skilled labor, has also contributed to rising competitiveness.

In light of the above arguments, domestic factors which include factor conditions; demand conditions, which relates to the size and rate of growth of

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[12] Shimokawa (2002). *Op.Cit.*

[13] *Ibid.*

the domestic market, level of income per capita and the rate at which it is growing per annum, export performance (automotive units sold, and the rate of growth per annum of the same); business context (level of competitiveness or rivalry on the domestic market, business strategies, rivalry among automotive producers, and the extent to which domestic automotive manufactures are shielded from international producers; related and supporting industries to the automotive industry (steel producers, automotive components manufactures communication and transportation are important); and the role played by the flow of capital across borders (FDI) are also important, as are government trade, fiscal, exchange rate, labor relations, monetary policies, regulatory certainty and property rights.

With regards to competition, there are various ways domestic automotive producers can deal with global competition.[14] These include seeking domestic government for protection through trade policies and regulations (various restrictions on imports, establishment of foreign based automotive manufacturers in the domestic market); building capabilities to increase their competitiveness (such as was the case with the actions of the Big Three automotive manufacturers in the US in dealing with competition from Japanese,[15] South Korean,[16] and Germany[17] manufacturers during late 1980s and 2000s); and exiting the industry. The US automotive market is open to foreign competition[18] so US manufacturers were in no way shielded from then more efficient, low cost driven, and high valued added manufacturers (Japanese, South Korean and Germany automotive companies, respectively). To that end, to continue operating the Big Three automotive manufacturers opted to invest in various actions to improve and enhance their capabilities. The General Motors, Ford, and Chrysler developed various capabilities that enabled them to attain competitiveness in the US domestic au-

[14] Martin, N. B., Farrell, D., Greenberg E., Henrich, J. Jinjo, N., Jolles, M., Remes, J. 2005. "Increasing Global Competition and Labor Productivity: Lessons from the US Automotive Industry," McKinsey Global Institute.

[15] Japanese OEMs (Toyota, Honda, and Nissan) out competed the US Big Three on production process efficiency, branding, quality, fuel efficiency, and good value from entry level models to luxury offers.

[16] S. Korean OEMs (Hyundai) competed on low cost producer price offers.

[17] Germany OEMs (Daimler and BMW) competed on design and performance.

[18] This is very much in contrast with Canada, which opted to adopt protective measures of its automotive industry through imposing high import tariffs and quotas on Japanese auto imports, offered tax breaks to automotive manufactures, and increased investment in infrastructure. This, coupled with the low labor cost, highly skilled labor force available in Canada compared to the US, induced Japanese and S. Korean manufacturers to establish automotive assembly as well as auto parts plants in Canada. Manufacturing in Canada at lower cost than in US, offered a higher competitive advantage for Japanese and S. Korean producers in their bid to wrest market share on the US automotive market from the US Big Three (Yates, C. A.B., and Vrankulj, S., 2006. "Labor as a Competitive Advantage in the Canadian Automotive Parts Industry: A study of Canada and Four Local Labor Markets" (Brantford, Stratford, Guelph, Windsor) Labor Studies Program, McMaster University.

tomotive market, which in turn led them to regain some of the lost market share. Most of the actions that enhanced competitiveness were in the area of increasing efficiency and productivity in terms of valued added per employee, manifested in production process innovations, accounting for 45 percent of productivity increases; introduction of higher value added models, which accounted for 25 percent of productivity increases; shifts in market share to more efficient automotive manufacturers, improvement in existing automotive models, and changes in product mix offered to the US market.

Being a labor intensive industry, the automotive industry is considered an important sector that can both create employment and enhance absorptive capacity (as it also requires highly skilled manpower) the creation of which requires the establishment and development of requisite educational as well as research and development facilities. As the case of the Canadian auto parts sector illustrates, the industry can help to create and enhance local/regional capabilities that generate high added value, but are not easy to emulate (Yates and Vrankulj, 2006). This is what Porter, 1990 refers to as advanced capabilities (Sardy and Fetscherin, 2009). Thus, the development of the automotive industry can help in the decentralization of centers of economic growth and development, which in turn can pave the way for lower regional income disparity and foster inclusive and sustainable development.

D. CORE ARGUMENT

The current debate in Indonesia concerning whether Indonesia should have an automotive brand it calls its own, has reignited interest in this area, which has been shelved for long since the botched Mobil *Nasional* project masterminded by Hutomo Mandala Putra in the mid-1990s and early 2000s. The *Esemka*, based on tests on its emissions, failed to meet the requirements set by the Ministry of Environment. In fact, the issue and polemics over whether or not Indonesia needs to have a national automotive brand which struck the *Mobil Nasional* project this time around attest to the very deep-seated issues that have shaped the direction, composition, as well as nature of the Indonesian automotive industry. It is a tale of vast potential long left unexploited and has served as an incentive for foreign automobile producers of all types and brands, the latest being from Malaysia, India, and China, which have been able to develop their automotive industries fast enough and have now joined the fray of brands that are tapping the vast market, but still limit their engagement to importing most automotive components, which they assemble and then sell at relatively high prices.

With a GDP of US$707 billion, a population of 234.5 million, an income per capita of around US$ 3000 in 2011, Indonesia, South East Asia's largest economy, has established itself as not only one of the most attractive and lucrative markets but also one with immense unexploited potential for all manner of products and services. This is coupled with its relatively robust and resilient performance during 2008-2009 global financial crisis, highly liberalized financial sector, good macroeconomic management, improvements in labor management through the issuing of Manpower Law No.13/2003, which though not without its drawbacks, accommodates employee interests and concerns. It also gives employees more

room for maneuver with respect to hiring and firing (which can be linked to the economic performance of the organization) and the use of contract labor for certain jobs and conditions.

In light of that, it is little wonder that Indonesia has been an important country that has attracted foreign and regional enterprises pursuing long-term growth and stability in the Asia Pacific region. That said, strong performance at the macroeconomic level and policy management level, has by and large, been limited to the promotion of sectors that have long served as main pillars of the economy. These include the extractive industry (oil and gas industry, extraction of basic minerals, and coal), production of cast iron and steel, processing industries, transport and communications, primary products exports (palm oil, coffee and rubber among others), automobile assembling and completion, and financial services. With respect to the automobile industry, the Indonesian market in 2011 posted more than 900,000 units, closing the gap with Thailand, thanks mainly to the devastation caused by floods in that country in 2011. One finds all brands and types of automobile on Indonesian roads (Sport Utility Vehicles-SUVs and Multi Purpose Vehicles-MPVs) such as trucks, pickups, saloon cars, heavy tracks and earth moving equipment, and motorcycles. What surprises any auto mobile analysis is the fact that Indonesia primarily serves as a market for automobiles, with most high valued added activities carried out elsewhere. The core of activities that are carried in Indonesia include assembling some but not all automobiles, and putting final touches, which do not add as much value added to Indonesian economy as would be the case were most, though not necessarily all, key activities of manufacturing vehicles done in Indonesia. In that regard, by mainly providing finishing touches to give automotives an artificial impression of being made-in Indonesia, the economy loses out on many things, including but not limited to:

The automotive industry has deep forward and backward linkages. With respect to activities that are induced by or supply to the automotive industry (backward linkages), these include the production of steel, aluminum, copper, plastics, electronics, capital equipment, trucking, warehousing and logistics.[19] On the other hand economic activities that are promoted or induced by the level of activities that relate to the manufacturing of automotives (forward linkages) include, the development of "automotive dealership retailers, credit and financial services, logistics, advertising, repair and maintenance, petroleum products, refueling stations, insurance and service parts.

- The automotive industry has the potential to generate much needed employment, in 'various' growth points that are spread out, rather than concentrated in one part of the country. This is due to the fact that advances in transportation, information and communication technology today make it possible to produce auto components in different regions, which are then sent or converged to a single location for the final stage of assembling the vehicle.
- Absorptive capacity enhancement,

[19] Automotive Mission Plan 2006-2016: "A Mission for Development of Indian Automotive Industry, Ministry of heavy Industries and Public Enterprises," Government of India, 2006.

which would occur were key production activities established in Indonesia, rather than sourced out.

- Human resource development to support automobile production, which would enhance the capability and competence of Indonesian human resources in generating ideas related to auto conception, design, development and improvement.
- Spillover effects from acquiring skills and knowledge on auto manufacturing to other sectors of the economy.
- As the automobile industry depends heavily on a strong, competitive iron and steel industry, production of most of the components of vehicles outside the country deprives the country of the opportunity to develop industries that support the automobile industry (both forward and backward linkages). This denies Indonesia the opportunity to deepen as well as diversity its development to make it more integrated, more resilient, and less dependent on imports of components and steel used to produce cars, while at the same time exporting the same items.
- Strong disconnects between the upstream and downstream sectors of the economy undermine the emergence of a strong automobile industry.

The argument, this study makes is that Indonesia has all it takes to develop a strong, resilient and integrated automobile industry. But to date, developments in the industry are still not showing good signs of changing it from being just a vast market to sell automotives, which by and large contribute value added elsewhere, to a robust one, characterized by an integrated upstream to downstream and high value adding sectors. In other words, there is need to 'dream' about the likelihood of creating an automotive industry that owes much of its existence, survival, and trajectory largely to domestic factor conditions and demand conditions in terms of the nature and character. Indonesia also has to take advantage of the globalized, decentralized, value chain of automotive industry production to tap R & D resources, new technological developments, requisite capital investment, and management capabilities. To that end, there is an urgent need to identify the deep-seated problems that have shaped the Indonesian automotive industry to be what it is today. Weaknesses or shortcomings of the automotive industry as reflected in and induced by the business context attested by strategies, business outlook, level of competition and the state composition and performance of related and supporting industries, should shed some light as to why such a dream is still elusive, and perhaps not easy to bring to reality.

To that end, the study sets its self an enormous task of answering such difficult questions as: Why have auto manufacturing corporations adopted strategies in Indonesia which prefer to use Indonesia as a market for their products rather than a place where to both produce and sell their products (contribute more to value added, employment, spillover effects)? Are problems related to poor policy initiation and coordination among policy makers and ministries to blame? Is it the lack of sufficient incentives for investors in the auto industry? Are labor related issues to blame? Why there a disconnection between what would be backward linkages to the automotive industry (such as iron, copper, aluminum on and so on) and the automotive industry? Is there also a discon-

nect between the automotive industry, and what about related and supporting industries as well? If so what are the factors that have been responsible for that condition? Is the Indonesian automotive industry fragmented? If so, why have these situtions come about? Against that backdrop, there is a need for serious, coordinated, well thought out efforts to identify and examine the underlying problems faced by the automobile industry, and the iron and steel insdustries that have hampered the products of the latter from being used by the former, while the former relies on more expensive imports, the disconnect factor, as I prefer to call it here. It answers some of the difficult questions above and many more, which this study expects to provide by the time it is done.

E. RESEARCH METHODOLOGY

The research will try to extend possible to use mixed research methodology. This means that both qualitative and quantitative methods will be used. Nonetheless, as the thrust of the study is by and large to identify and examine issues, factors, problems that underpin the nature, composition, and direction of the Indonesian automotive industry, qualitative methods will form the backbone of the techniques to be used, with quantitative methods merely playing a supplementary, if complementary, role.

This study is largely explorative, fact finding in nature, making qualitative research methods better able to get to the source of the problem. To that end, the study used in-depth interviews with key informants who are keenly interested knowledgeable and well informed about issues and problems that affect the automotive industry in general and the Indonesian automotive industry in particular, including relations and developments in the iron and steel industry, as the key backward linkage to the industry. Informants included officials of the Ministries of Trade and Industry and a sample of small spare parts and components manufacturers. Secondary sources will be used to depict the state, composition and trajectory of the automobile industry, based on figures on production, number of producers, and production cost dynamics (if available). Correlation and cross tabulation will be used for this purpose. Meanwhile, the scope of the research covers a purposive sample of automotive and auto components manufacturers in Indonesia. Since most of these companies are spread in and around greater Jakarta, the DKI Jakarta will serve as site of field work for the study.

The assumption, which underlies the selection of greater Jakarta area and leaving out other regions with some automotive manufacturing activities such as Surabaya is that the general nature of issues, problems and dynamics that relate to the Indonesian automotive industry can be gleaned or 'extracted' from an in-depth examination of practitioners, experts, and policy makers, most of whom are based in greater Jakarta. In any case, most automotive and auto components manufacturers, like manufacturers of others products in Indonesia, have offices in greater Jakarta. It is also worth noting that as the issue under examination has been highlighted for long since the Suharto era, regional issues, which have increasingly become important since 2001 as a result of the big bang decentralization policy, no doubt play some role, fundamental issues relating to automobile industry have not changed much. In light of that, the role of regionalism in issues, prob-

lems, and dynamics which are to be investigated here is at best limited.

Meanwhile, the iron and steel industry is studied here not for its sake, but with respect to its contribution to the automobile industry. Respondents were drawn from automotive and auto components manufacturers, policy makers (Ministry of Industry and Trade, researchers/observers of the related and supporting industries for automotive industry). Primary data were supplemented by secondary data on automotive players (automotive manufacturing, spare parts and components manufacturing), developments in micro, medium and large enterprises in the automotive industry, government policy that relates to the automotive industry (in the form of laws and regulations), and government commitments in bilateral, regional and international trade agreements. Secondary data were obtained from the National Bureau for Statistics (BPS), the Ministry of Industry, and Ministry of Trade documents and statistics, The Agency for The Development and Aplication of Technology (BPPT) reports, reliable domestic and international data and statistics providers (open source) such as the Asian Development Bank, and The World Bank. Meanwhile, primary data collection employs such techniques as in-depth interviews using semi structured and unstructured questions which were carried out with Ministry of Industry officials, LIPI (Indonesian Institute of Sciences) researchers, and a limited survey of small fabricators (in Tegal, Solo, Klaten, and Magelang). With respect to data analysis, the study uses various trend and trajectory methods, both qualitative and quantitative; while identifying deep-seated, short-term and long-term issues, challenges, and problems that face Indonesian automotive industry. Appropriate data and information interpretation was used.

F. PRESENTATION OF RESEARCH RESULTS

1. The state of the Indonesian automotive industry and government policy

In the medium term (2010-2014), GOI is implementing programs that involve the development of the domestic market through various initiatives that first are tailored toward promoting domestic market development through improvement in policies that relate to automotive taxes, promote the use of local/domestic automotive products, foster policy on the development of energy efficient, ecologically friendly, and affordable price automotive products, and promote the policy on domestic automotive product development. Secondly, the programs promote export expansion, which is being achieved through providing necessary facilities for automotive components industries and raw material suppliers to producers of automotive components for export.

Thirdly, the government is promoting the harmonization of international technical standards and regulations through the ratification of UNECE 1958 international agreement and implementing regulations. Fourthly, it is enhancing competitiveness by reviewing and reforming policy on offering incentives in the form of tax holidays for raw materials for automotive components industry. Fifthly, the government is strengthening the capacity and capability of the automotive components industry through supporting and promoting the automotive components industry.

Sixthly, GOI is increasing produc-

tivity of automotive components industry through enhancing the provision of guidance and assistance on various aspects of productivity; Seventhly, human resource capabilities and capacity are being enhanced; Eighthly, the programs are strengthening/deepening technology capacity through the development of job training and skunk works/locations for automotive industry and serving centers for automotive products, and the encouragement/promotion of improvements in the tax incentives policy for human resources and research and developement. Ninthly, the government is enhancing infrastructure technological capacity through increasing research and development capacity in relation to the automotive industry, enhancing the capacity and capability of testing laboratories for automotive components, encouraging cooperation and collaboration between the business sector and research and development institutions in automotive related areas and developing design and engineering centers for automotive component products.

The implementation of the aforementioned initiatives is expected to achieve various quantitative targets in the production, sales, and exports of four wheels and two wheelers. Production of four wheel vehicles is projected to increase from 550,000 (2010), 675,000 (2011), 1,000,000 (2013), and 1,250,000 (2014). Meanwhile, sales are projected to increase from 542,000 units by 2010, to 840,000 units by 2012, and to 1,300,000 by 2014, while exports will increase from 108,000 units in 2010 to 260,000 units in 2014. Scaling up production is expected to generate Rp.81 billion in 2010, Rp225.4 billion in 2012, and Rp.584.78 billion by 2014. The performance in the two wheel segment is projected to be even more spectacular, with production expected to increase from 5.6 million units (2010) and 6.5 million in 2012 to 7 million in 2014, which will generate Rp.56.72 billion, Rp.70.31 billion, and Rp.75.74 billion in value in 2010, 2012, and 2014, respectively.

Meanwhile, in the long term, GOI has set its sights first, at first, continuing policies on improving/reforming automotive tax policies, promoting the use of domestically produced products, continuing the policy on the development of vehicles that are energy efficient, ecologically friendly, and affordable); secondly, strengthening the export base for automotive products, by increasing cooperation on standards and the harmonization of internationeal technical standards and by increasing the quality of automotive products and components; enhancing competitiveness by enhancing the policy on the provision of tax holidays for raw materials for the automotive components industry; thirdly, strengthening the components industry by continuing the promotion of investment in the automotive components industry and increasing productivity of the automotive components industry via the provision of guidance and assistance on productivity; fourthly, increasing human resources technology capacity and capability by strengthening the capacity of job/work training centers for the automotive industry and service centers for automotive products, and enhancing cooperation and collaboration between business sector and research and development institutions in the field of automotive products; fifthly, strengthening the technology infrastructure capacity by enhancing the capacity of testing laboratories for automotive components and strengthening the capacity of design and development centers of automotive products.

The implementation of the above initiatives and policies is expected to increase production of four wheel vehicles from 1.610 million units (2015), to 2.593 million units (2020) and 4.177 million units in 2025. As regards exports, in the long term, exports of four wheeled vehicles are expected to reach 622,000 units (2020) and 1.002 million units (2025). Meanwhile, the production of motorcycles is projected to rise to 7.031 million units (2015), 7.575 million units (2020), and 7.575 million units (2025).

Specifically, in the long term, the automotive industry will focus on gradually increasing the local content of motor vehicles that are sold in Indonesia; raise the quality of components and vehicles imported, manufactured and used in Indonesia; and promote energy efficiency and eco-friendly transportation industry. Some of the key regulations and measures tailored to realizing the above thrusts (some already implemented, and some are impending) include but are by no means limited to:

1. Revision of the Ministry of Finance Regulation No.176/PMK.011/2009 on Exemption of Import Duty of Machines, Goods, and Materials for the Establishment or Development of Industry in the Framework of Investment (MOF Regulation No.176/2009) (EUROCHAM, 2012.)[20] The objective of the revision of the regulation is to encourage investment in manufacturing capacity in the automotive industry as it offers investment incentives for automotive manufacturers who increase investment in existing production capacity or establish new capacity by at least 30 percent for two years. The regulation is considered good and timely for the automotive industry as it is intended toward increasing production capacity , technology and manpower capacity enhancement, all of which will contribute to higher quality products and, higher competitiveness of products both in the domestic market and abroad;
2. The revitalization of the Incompletely Knocked Down (IKD) scheme. The new IKD regime covers all types of vehicles which will face zero percent import duty (EUROCHAM, 2012). This means that the new IKD scheme, in which non-truck vehicles are subject to an import tax of 7.5 percent, will be reduced to zero percent. The new IKD scheme is intended to apply incentives that are tailored to promote local content to all types of vehicles, which in turn is expected to contribute to the development of a diversified auto components industry, assembling industry, manufacturing industry, foster varied research and development, promote the acquisition and application of a wide range of technology based on the use of vehicles, and based on various nations that are producers of vehicles that are produced and sold on the Indonesian auto market;
3. New classification of electric car, which is embodied in Ministry of Finance regulation No.213/PMK/.011/2011 on classification of products and import duty tariffs imposition, effective January 1, 2012 (EUROCHAM, 2012). The regulation

[20] EUROCHAM, 2012. "Position Paper Autoeotive 2012. European Business Chamber of Commerce in Indonesia." Available at: http://www.eurocham.or.id/joomla/index.php?option=com_rokdownloads&view=file&Itemid=127&id=306:autoeotive-position-paper

states that electric cars in a Completely Knocked Down (CKD) form with industry classification code HS Code 8703.90.13.00 will face an import duty of 10 percent, and no luxury tax(an inducement to imports and use of electric cars in the domestic market due to lower retail prices); imports of electric car in the form of Completely Built Up vehicles (CBUs), with an industry classification code HS Code 8703.90.19.00, will face an import duty of 40 percent, and luxury tax of 0 percent, which is aimed at promoting the use of electric car in the domestic market while at the same time allowing an increase in local content in the assembling of such cars.

The problem is that incentives to allow the importation of electric cars are not accompanied by efforts to promote the development of electric car recharging stations, which may hamper and dissuade potential buyers and users. Since the acquisition cost is still high, the decrease in the price of the imported cars attributable to lower import taxes, may not provide sufficient inducement to those who today use cars that use fossil fuels. In any case, the potential contribution from the increase in the use of electric cars may be tempered by the fact that the source of electricity in many Indonesian cities still comes from fossil fuels (petroleum oil, natural gas, and coal). Efforts to increase investments in hydro-electric power plants, geothermal plants, and bio fuel, if they were to accompany such a measure or be carried out in simultaneosly are likely to convince pessimists that the Indonesian government is very serious in promoting clean energy initiatives rather than a gimmick to show other nations that Indonesia too is following suit when it comes to promoting green economy programs;

4. Regulation of the Minister of Industry No.11/M-IND/PER/1/20/1/2012 (MOI Regulation No.11/2012), issued on March 1, 2012 with almost immidiate effect, which requires the placement of an SNI label on tires by embossment or permanent stamp rather than sticker as had been the practice. The regulation gave only 30 days for adjustment (EUROCHAM, 2012). The substance of the regulation, though commendable imposed a stringent time limitation on automotive manufacturers as it had to be implemented almost immediatelly. The time needed for tire manufacturers to change from the old system to the new, and attendant cost, were taken into consideration in the formulation of the regulation. This reflects noninvolvement of automotive representatives in the formulation of the regulation. Disquiet among auto manufacturers with the measure was reflected by the working group on automotive industry (representatives of European manufacturers in Indonesia) to request the date at which the regulation was to come into effect be extended from March 1 to July 1, a suggestion that the Minister of Industry agreed to (EUROCHAM, 2012);

5. Minister of Trade Regulation No. 39/2010 on Import of Finished Goods by Manufacturer, which was revoked by Supreme Court Decision No. 19P/HUM/2011 on June 2011 (EUROCHAM, 2012). Subsequently, the Minister of Trade issued Regulation No. 27/M-DAG-PER/5/2012

on Import Licenses ("MOT Regulation No. 27/2012"). The regulation imposes limitations on importers with respect to the nature of imported finished goods (limited to goods of complementary nature as well as those meant for testing purposes); limitation of the definition of the relationship between domestic automotive industry importers and source of imports abroad; and limitation of automotive importers to specific sections, meaning that not all imports that are needed by the manufacturer can be imported). The regulation imposes limits that hamper importation of goods that may be crucial in the production process, complicates licensing of importation due to the provision's ambiguity on technical licenses and does not give manufacturers time to change from the old regime to the new;

6. Revision of Government regulation No.52/2011 on Income Tax Facilities for Investment in Certain Business lines and/or Specific Areas. This regulation excludes car assemblers from enjoying income tax deduction, while car components manufacturer still do (contrary to Government regulation No.62/2008, in which both car assemblers and automotive components manufactures enjoyed such an investment incentive (automotive industry should be eligible for in come tax allowance facility);

7. Minister of Trade Regulation No. 48/M-DAG/PER/12/2011 on Importation of Second Hand or Used Capital Goods, which in effect nullifies Minister of Industry and Trade Regulation No.756/MPP/Kep/12/2003 on Importation of Used Capital Goods, which banned the importation of CBU used trucks. The regulation has had no effect as imports of used trucks continue despite the new regulation (EUROCHAM, 2012);

8. Minister of Finance Regulation No.147/PMK.04/2011 on Bonded Zone as amended by Minister of Finance Regulation No.44/PMK.04/2012 introduces a major change in the sale of goods from customs bonded zones to domestic customers. The regulation raised the limitation on the threshold of goods produced in bonded zones from 50 percent to 25 percent of the value of exports achieved in the previous year. Meanwhile, Minister of Finance Regulation No.44/2012 allows the importation of capital goods imported prior to the issuing of Minister of Finance Reg. No.147/2011 to be delivered from customs bonded areas to other customs areas. The maximum limit was raised to 50 percent until December 31, 2012 as long as such produced goods require further processing, cannot function properly without further combination with other goods, or cannot be used directly by final consumers (EUROCHAM, 2012);

9. The impending regulation which is aimed at promoting the development and manufacturing of a low cost environmentally friendly car. While the regulationis considered pivotal for promoting investment in fuel efficient and eco-friendly vehicles (transmission, engines, and aerodynamics), the regulation will have the adverse effect of putting the cart before the horse. In other words, the regulation will have the effect of promoting the development of vehicles with fuel efficient and eco-

friendly technologies at a time when Indonesia still allows the production, sale, and use of high sulfur content (low quality)fuels. This means that even if technologically efficient and eco-friendly cars were to be available, customers will be hesitant to buy them because it will cost them more in terms of sunk investment cost, and relatively higher operational cost as they will have to buy low octane, marked indexed fuel, which is far more expensive than the subsidized high sulfur fuel. The demand for vehicles in Indonesia, like other ASEAN auto markets, is still driven by low cost, passenger and commercial vehicles;

10. The requirement by the Indonesian government that auto components and vehicle manufactures must comply with Indonesian standards certification, even if they fulfill the international standards. Some of the automotive components which require Indonesian certification include braking systems and rear view mirrors; and in the not too distant future CBU cars and components will follow (rear view mirrors, tires, windscreen, safety belts, plastic seats, brake systems, safety glass, battery, noise level and emissions). While application of Indonesian certification is considered vital for ensuring the quality of auto components and vehicles that are used on Indonesian roads, the imposition of such a measure on producers of components and vehicles with higher standards than SNI is considered counterproductive as is likely to increase costs and delays. The other problem is that Indonesia has yet to develop state of the art testing laboratories, which is a hurdle that Mr Prabowo and Maryu[23] highlighted as a major constraint in efforts to raise the quality of components and vehicles produced in Indonesia.

Paradoxically, decentralization and democratization decried by detractors of reform as beckoning national disintegration have been effective in mitigating most of the sources of conflicts that characterized the country since the fall of Suharto in 1998. Political stability improved significantly in 2002, a year after regional decentralization policy, and stability has been sustained. In comaparison, Thailand in 2010/2011, showed prolonged and acrimonious public demonstrations which wreaked havoc in that country prior to the election of YingLuck Shinawatra as the country's premier adversely affected the country's political stability. On top of that, floods which battered the country in 2011 took their toll as well. Nonetheless, Indonesia's performance continues to lag Malaysia, and given the current political new lease on life the country enjoys, puts Indonesia on the back foot as a laggard in political stability in the region.

On government effectiveness, the "legislature-heavy" political system has had serious implications for the performance of the bureaucracy, local governments and central governments, including the President. This is because; most key policies that are made by the executive arms of government have to be made with either the consultation or approval of the legislature. Such a

[23] The two personalities are officials of the Leading Sector in the Transportation and Engineering Department of the Ministry of Industry, Indonesia.

process has led to a situation whereby interests of members of the legislature and not those of the public take center stage when it comes to approving public policy decisions. The consequences that have become widespread include gridlock in deliberations on key policy issues as local government and central government budgets (efforts by members of the legislature to ensure that programs and projects in their constituencies receive ample budget allocations); and politicization of public policy decisions, including but not limited to recruitment, training, and promotion in the bureaucracy. Indonesia's ability to promulgate good laws suffered a dramatic setback in 1998, hit it the lowest point in 2002, a year that marked the first anniversary of the implementation of the big bang decentralization policy. The decentralization policy devolved authority to enact local regulations on most public service delivery issues with the exception of finance, foreign affairs, defense and security and religious affairs to regional assemblies.

The problem has been the poor institutional capacity of local governments to exercise the right to effect local regulations[22] that improve public service provision without jeopardizing interregional trade, conducive business climate, and social security. Many local regulations came into being, which were in the main tailored to promoting the well-being of one regional government, without considering the adverse impact they have on other regions. Weak (in terms of quality and quantity) human resource capacity to formulate laws is found among politicians who are members of regional and national legislatures, a problem that is rooted in political party recruiting process of its cadres, which in the main puts more emphasis on the capacity of the individual to contribute to the party support base and financial resources than competence to contribute to national issues, including enacting laws and regulations. Weak capacity of members of legislature at both the national and sub national level, has meant that at the core, the old players with their mentality of being served and self-important rather than servants of the public are more keen on entrenching their positions and perks than facilitating higher and better access of the general public and the economically disadvantaged in particular, to public services are still very much in control.

Moreover, with the collapse of a highly centralized, authoritarian administration system, the public bureaucracy, having a well established, internal organizational structure, is having a field day as they have the chance to play other players in government against one another (political elites, regional and national; members of civil society, national, local, and international). Comparison of the performance of Indonesia with other neighboring countries shows that Indonesia is still a laggard on government effectiveness and is lower than Singapore, Malaysia, and Thailand.

On regulatory quality, Indonesia still faces an uphill task to make significant improvement. This is because

[22] In a wide-ranging interview on October 16, 2010, Dr. Kristiadi, notes the lack of grand design in the formulation and enacting of both national laws and regulations, as well as local regulations and rules. This has resulted in overlapping, complicated regulations that are prone to change overtime even before they 'ink' gets dry. With ever changing laws and regulations, uncertainty gains foothold, which is not good for business, public service and private sector operations.

in comparison with other key South-east Asian nations, Indonesian still lags behind in regulatory quality. This is due the onset of a fledgling democracy which was compounded by the implementation of decentralization of most of the authority to administer and manage the delivery of basic services, including the formulation of regulations, from the experienced tried and proven central government bureaucracy to the inexperienced, human resource deficient sub national units. Lacking sufficient human resource capabilities and working in a weak institutional environment that still lacks clear-cut definitions and delineations between devolved authorities and powers and those that remain with the center helped to aggravate regulatory uncertainty in all aspects, including starting and operating a business.

The pursuit of higher local government revenue at all cost has plunged many regional governments into issuing all manner of ordinances on local government levies, jurisdiction over contentious border areas, especially where these are endowed with abundant resources, management and exploitation of natural resources, including forestry, mining rights, labor, and tourism attractions, among others. Law enforcement has been weakened relatively as local government elites attempt to twist rules in their favor (recruitment of civil servants, issuing of mining rights, issuing of logging rights in local forestry estate, recruitment and management of local government enterprises, procurement of goods and services for various local government offices, among others). Moreover, direct elections for local assembly members and local government heads, have added to the already fragile and fuzzy situation with respect to rule of law, over which local assemblies and *bupati* and provincial governors, have little if any substantive control, a misgiving that has spawned new corruption opportunities as well as aggravating those already in place.

To that end, it is very clear that with respect to regulatory quality, Indonesia lags Thailand and Malaysia, which is cause for concern given the fact that the two countries are Indonesia's competitors in ASEAN in the realm of attracting investment dollars in the automotive industry. Moreover, such differences in regulatory quality, which are compounded by the still pervasive uncertainty in rule of law, have put Indonesian automotive industry at a disadvantage vis-a-vis Thailand and Malaysia. European investors in the automotive industry prefer to invest their money in Thailand and Malaysia as they consider the business climate in the two countries better and guarantees policy certainty, which is of crucial importance in business (EUROCHAMB, 2012).

With regards to controlling corruption, the Indonesian government has been on the upward curve since 2003, an indication that measures ranging from the establishment of the powerful, sufficiently financed, Corruption Eradication Commission, the establishment of anti-corruption courts that are separate from general courts at the central and regional government level (albeit growing evidence that local corruption courts are as susceptible to corruption as general courts, which is based on several magistrates of local anti-corruption courts having been caught in the act of receiving bribes related to cases they are handling, passing lenient sentences to individuals accused on corruption, oracquitting those accused of corruption accusations). However in with com-

parison other countries the undeniable fact emerges that despite achievements made so far, Indonesia still lags its key competitors in attracting investment and capital such as China, South Korea, Malaysia, Thailand, and Singapore.

Thus, Indonesians have the task of pushing the performance of Indonesia on virtually all dimensions of governance with the exception of voice and accountability, albeit to varying degrees, back to their pre-refomation levels (1996). The trajectory of most indicators points to that direction, albeit at a slow pace, given the fact that the country is no longer ruled by decree but governed by the will of the people. In other words, the performance on other dimensions of good governance at the national and local government level has been woefully wanting. Government effectiveness has yet to regain the performance it once had prior to the onset of the reformation era, the same applies to the rule of law, regulatory quality, control of corruption, and political stability.

As regards manpower issues, Indonesia has the requisite quality and quantity of manpower both skilled and otherwise for automotive industry. However, the obstacles lie in Indonesian labor laws, whisch are considered too rigid, allow much leverage for the government in trade unions in setting minimum wages (which are set once every year), and allow frequent worker demonstrations that disrupt operations, all of which make labor costly and in turn production costs high for employers. With respect to research and development, Indonesia's research and development expenditures as a percentage of gross domestic products are still below the East Asia and Pacific region average, let alone the world average. Such performance will complicate efforts by Indonesia to compete with China and India, which are showing an upward trend in R & D. Other concerns point to a rise in the tax burden for employers, a problem which has been witnessed since 2007. Specifically, Indonesia has higher tax as a percentage of value added of goods and services to revenue regime than in regimes in Singapore, India, Malaysia, and the Philippines. However, the upside is that Thailand and China have higher tax regimes on goods and services. This means that on this score, Malaysia out performs Indonesia, but Indonesia is well positioned to outcompete Thailand, which is the main direct competitor as regards automotive industry components and CBU production.

On finance and development, it is very apparent from statistics on market capitalization that Indonesia still lags other countries in the East Asia and Pacific region. As market capitalization measures the volume of stocks traded on a country's capital markets times the average prices of such shares, the indicators gauge the depth of the capital market as a source of funds for investment. On that score, Indonesia continues to be overshadowed by its direct competitors in the automotive industry: Malaysia and Thailand. Thus, if all other factors are considered not as vital in influencing an automotive producer to locate the production line in a country as raising funds from the capital market, then Indonesia would lose out to its regional neighbors. The hurdles faced in raising funding in Indonesia are compounded by the high variability of the Indonesian stock market, It is very apparent from statistics on market capitalization that Indonesia still lags other countries in the East Asia and Pacific region.

On ease of doing business (2012), Indonesian's performance seems to trail by a wide margin that of key competitors in the automotive industry such as Malaysia, China, Japan, Thailand, and South Korea. Thailand is Indonesia's direct competitor in the automotive industry in South East Asia, which is why a comparison of the performance of the two countries on the index provides extremely useful and relevant information. Taking a closer look at Thailand as Indonesia's direct competitor in the automotive Industry, it is evident that while the former is ranked in the top notch at 17 out 183, the latter is in lowly rungs of the ease of doing business ladder, 129 out of 183. Problem areas that hamper doing business in Indonesia include difficulty of getting electricity (rank 161), obtaining credit (rank 126), paying taxes (rank 131), enforcing contracts (rank 156), resolving insolvency (rank 146). The relatively good areas include the number of permits required to undertake construction work (ranks 71), protecting investors (rank 46), and trading across borders (rank 39).

On logistics performance, with the exception of timeliness, all indicators of logistics management show deterioration between 2007 and 2010. Poor logistics management and administration, increase the cost of doing business, which in turn translates into high production cost, and loss of customer trust and loyalty to firm products, all of which play well into the hands of competitors.

When it comes to human development performance, the Human Development Index value for 2010 and 2011 shows an improvement in Indonesian's human development (literacy, income per capital, life expectancy) from 0.6 to 0.617. Indonesia' rank decreased from 108th to 124th (16 places) from 2010 to 2011. An adequately educated labor force and disposable income (effective purchasing power to buy goods and services) have the potential to provide returns for investors (through saving and time deposits, purchase of financial instruments such as securities, bonds, commercial paper, company stocks, and so on). To that end, a decrease in HDI rank from 108 (2010) to 124 (2011) is not just a value but a testament to serious problems in some basic fundamentals that underpin education and health service provision; and the modes, types, and composition, of economic activities and share of factors of production thereof, which should influence how production gains are distributed among the population of 237 million (the degree to which economic growth is both inclusive and sustainable).

Raising private equity, based on a comprehensiveness and inclusive VCPE index, serves as a gauge of the performance of an economy with respect to how it is viewed as a place to start, do and, if one likes, close business. The index shows that since 2008, the venture capital and attractiveness index for Indonesia (ranked 55 on 2012 PVCE index) has only been able to improve its rank by five positions. Malaysia starting from an already high position (ranked 25) lost one slot during the same period; Thailand (ranked 34) gained a position; Singapore (ranked 5) the highest among ASEAN members in 2012, gained a position; South Korea (ranked 18) gained four positions; and India (ranked 32) gained 2 positions during the 2008-2012 period.

On competitiveness, based on the Global Competitiveness Index 2011-2012 Indonesia registered a decrease in

its rank from 44 to 46 while the average score remained unchanged. Performance of Basic Requirements showed an upward trend from rank 60 to 53. Improvement in infrastructure was reflected by a rise in the rank from 82 to 76. A better macroeconomic environment registered a significant improvement in the rank from 35 to 23, though this was tempered by the performance of institutions, which showed a decrease from rank 61 to rank 71. Health and primary education deteriorated from rank 62 to 64. With regard to the efficiency sub category, Indonesia's performance showed a decrease from 51 to 56, while scores remained unchanged. This was attributable to a decrease in the performance of higher education and training, goods market efficiency, labor market, and financial market development. The upside was limited to technological readiness (which may corroborate findings on a surge in the cost of communications and information technology imports registered since 2007). In the area of innovation and sophistication, Indonesia registered a decrease in the rank from 37 to 41, attributable to a deterioration in the rank on business sophistication. Problem areas that hamper global competitiveness include infrastructure impediments, policy instability, inadequacy of the educated labor force, work ethic in the national labor force, and taxation (tax rates).

Findings of the global competitiveness index are confirmed by the World Competitiveness Index which indicated that Indonesia experienced a decrease in competitiveness during the 2010-2011 period, falling from rank 35 to 37. Based on the Enabling Trade Index 2011, Indonesia registered a decrease in its rank from 62 to 68, which was attributed to deterioration in market access (signs of protectionism, border administration, transport and communications infrastructure, and no change in the business environment). What is interesting, however, is the fact that Indonesia posted improvement in all but one of the indicators used to compile the Enabling Trade Index (market access, border administration, transport and communications infrastructure), but this performance fell short of the achievements made by other 67 nations in 2010, which relegated Indonesia to a lower rank. This underscores the importance of benchmarking performance on indicators by either using best practices as guidelines or emulating the performance of those best in the 'field' within the same regional setting or sharing a similar level of economic development. Problem areas cited include inefficient government bureaucracy (ranked number one on the list of major huddles); inadequate supply of infrastructure; difficult access to financing; policy instability (high unpredictability); signs of rising inflation; poor work ethic in national labor force; and government instability.

2. Diamond Model Findings

a) Factor Conditions

With regard to factor conditions, the Indonesian automotive Industry has vast potential as reflected in:

- The large captive market of 240 million population; relatively low inflation, abundant semi skilled, unskilled labor, and increasingly skilled labor; availability of raw materials such as iron and steel, rubber/tires/; plastics and paints/petrochemicals, electronics industry (production of additional features to vehicles); and textiles and so on, which can reorient

to support the production of domestic cars;

- Principal auto manufacturers have a monopoly over research and development, standards on specifications and quality; automotive technology, auto-components, and spare parts, and control financing of auto purchases.
- Current government initiatives on boosting investment in infrastructure, product standardization, quality improvement, have increased the attractiveness of the Indonesian automotive market.
- Moreover, the still low car ownership level coupled with rising income per capita and low cost of purchasing automotive products makes the Indonesian automotive market attractive and gives it a lot of unexploited potential. Though likely to prove a headache in the short run, new regulations such as the one that requires exporters of certain mineral products to undertake processing in Indonesia prior to export should prove beneficial.
- Relatively low cost of energy (electricity, diesel, coal), which makes production cost low.
- The regulation on certification of automotive products, including those embedded in CBU vehicles.
- Lower import duties on a wider range of IKD and CBU vehicle imports.
- Investment incentives for investors who increase production capacity by 30 percent over two-year period and establish new production capacity, using clean and efficient technology.
- Rising local content, and buy-Indonesian initiative, will in the long term enhance and diversify the production capacity, human resource skills and competence, thus helping to deepen and widen forward and backward linkages with other sectors of the economy, while at the same time strengthening the captive market.
- There is no doubt that projected investment to the tune of USD 470 billion, by the private sector and through government and private partnership in the six- corridor-Master Plan for the Acceleration and Expansion of Economic Development 2015-2025, which is complementary to projected annual increases in state expenditure on infrastructure, education, health service facilities, and the military, will contribute to high economic growth that will sustain income growth through private consumption.
- The problematic labor laws that have become a source of contention, disputes, and threats of relocating labor intensive industries from Indonesia due to rising cost amid low labor productivity

b) Demand conditions

- Has a strong, economy growing at an average of 6.4 percent, which has made the automotive market grow at 10 percent per year during the last five years.
- Growing components industry, which is a vital supporting industry for vehicle assembling and production as well as a vital source of exports.
- Rising incomes and rising middle class, growing national wealth and low vehicle ownership create favorable conditions for a buoyant automotive industry in the foreseeable future.

- Stable currency. The value of the Rupiah in terms of hard currencies has been stable within a band of IDR 8600-9650 per USD, which is good for manufacturers who are importers or exporters; also being branches of parent companies abroad does not create serious translation exposure for them.
- Rising income per capital (USD 3000 per person in 2010 and rising), which has contributed to an increase in the ranks of middle income earners (estimated at 140 million), mainly young, urban consumers.
- The automotive industry produced more than 830.000 units in 2011 (from 500,000 units in 2009) and is projected to produce 1,250,000 by 2015. 890,000 units of four wheeled vehicles were sold in 2011, as where 8 million two wheelers.
- Exports showed an annual increase of 7.66 percent during 2007-2011 period from USD 2.0 billion to USD 3.0 billion attributable to the high growth of imports of vehicles which has contributed strongly to export increases of by 27.41 percent per year. CKD four wheelers by 36.16 percent), millitary vehicles (77.47 percent), auto components (4.59 percent), two wheelers (motorbikes) 23.47 percent, and motorbike components (6.19 percent).
- Imports, on the other hand, showed an annual growth of 28.75 percent per year during the 2007-2011 period from USD 2.8 billion to USD 9.3 billion (2011). The growth in imports was attributable to the high growth in the importation of special vehicles, which increased by 27.41 percent. CKD four wheelers by 28.00 percent, non CKD vehicles by 34.15 percent, military vehicles by 80.93 percent, automotive components by 28.32 percent and motorbike components by 16.49 percent.
- High demand, though tempered by recently implemented policies aimed at curbing excessive credit sales (larger advance payment of between 25-30 percent of the price of the vehicle/motorbike); likely to face stiff competition from foreign imports as ASEAN AFTA takes effect in 2015.

c) Related and supporting industries

- Emphasize of increasing local content of the car body production, including tires.
- Use engines that are outsourced from other sources (by and large imported).
- There is little if any linkage with auto components producers. There is a problem of quality/unreliability of auto components and spare parts (including body units).
- Not enough support from BPPT, which is charged with applied research and development, technological development and application. Most of its research is basic, which means that applying it requires a very long process (regular input into the product development process of automotive manufactures is not evident).
- Little support from the financial services sector in providing auto insurance and auto credit. The regulation which once issued will ensure the provision of incentives for automotive manufacturers who invest in energy efficient and clean energy tech-

nologies in either new or expansion of existing production facilities or both by at least 30 percent of existing production capacity is seen as a major blow to local, low technology (energy inefficient), low cost producers, as they lack the human resource, technology, and financial capacity to meet the requirements of the regulation. Moreover, the regulation, once issued, is likely to crowd out local automotive brands, which emphasize functionality and low cost in their product offers.

- There is little linkage between upstream (iron and steel), tire manufacturing, domestic paints, components, and spare parts and the downstream sector (especially firms that are not part of the supply chain for principal automotive manufacturers). In other words, the automotive industry is highly segmented first based on size of automotive companies (large principal manufacturers are vertically integrated as they own or determine standards, of suppliers through the backward linkages, own, operate and control financing of automotive industry sub sectors such as spare parts production, components, vehicle purchase and leasing (automotive finance companies/houses). The retailer/distribution chain is controlled or influenced by principal manufacturers. Small, mainly local manufacturers, such as those in NUSA, and other independent operators follow their standard, which are based on national guidelines, have tenuous if any linkage with principal manufacturers. They thus have limited opportunities to benefit from technology transfer which principal manufacturers have.
- The principles of operating and running businesses used by principal manufacturers must comply with those of parent companies, which influence their cooperation and collaboration with other principal automotive manufacturers and domestic spare parts and components fabricators. The relations between principal and small domestic automotive players is complicated by the fact that many local spare parts and components manufactures are by and large free riders who derive benefits from "hot selling" automotives and components (which constitute intellectual property and trademarks of principal manufacturers), by reverse engineering them and selling them without permission from rightful rights owners. This problem creates suspicion between the two groups.
- Infrastructure is still a problem that hampers the realization of the huge market potential Indonesia has (though roads are in good condition on Java, this is not the case on islands outside Java). Electricity is still a problem due to outages that are increasingly frequent, liable to short circuits, leakages (and theft) and rising charges, which will come into effect in line with the proposed phased increase in electricity charges to take effect in future. Effluent disposal is still problematic and can causes tensions between local communities, factory workers and local governments.
- Regulations on operations, land acquisition, employee working conditions which differ from one local government to another are a source of uncertainty. Regulations on imports-exports and applicable taxes

have become a major source of concern for practitioners in the automotive industry.

- Coordination among ministries such as Ministries of Industry, Trade, Transportation, Research and Technology, State Owned Enterprises, Finance, Energy and Mineral Resources, Manpower and Transmigration is very vital to ensuring that operations of automotive manufacturers, assemblers, spare parts and components manufacturers and fabricators, and activities of distributors go on without disruption, that raw materials needed are available in the quality and quantity required. In practice this is easier said than done. Policies issued by different ministries, have often led to confusion and delays in operations due to high unpredictability of policy (public policy unpredictability).

d) Firm Strategy, Structure, and Rivalry

- The automotive market is dominated by large, principal brands that are well connected, vertically integrated, well financed principal manufacturers, who represent global value chains. There are few forward and backward linkages between large principal automotive and component manufacturers and independent, small producers of similar products This creates a dichotomy in production methods, technology sophistication, market segment served, product quality, and orientation of final products.
- The largest assemblers are Japanese owned, and linked to Japanese automotive manufactures through joint ventures (EUROCHAM, 2012).
- 80 percent of the automotive market is for commercial vehicles and multipurpose vehicles (EUROCHAM, 2012).
- Small, domestic producers, use technology that can be learned by trial and error, and increasingly via the internet, while large manufacturers have well established, regular, systematic R & D activities that are financed and supported by parent companies.
- Moreover, key players have world renowned track records in production, connected, both domestically and internationally, and are well financed and leaders in quality, technology, distribution channels, and R & D. The automotive market is dominated by Japanese, Korean, and European brands, and slowly but surely, Malaysian, Indian, and Chinese manufacturers. Malaysia is likely to benefit greatly from the ASEAN AFTA as it is the only nation that has a significant locally initiated and owned automotive industry.
- The business climate strongly favors principal established players due to strong financing, access to technology, and access to centers of power (including ministries in case there is need to convey complaints about certain policies), while small operators just follow policies as they are issued without any leverage in influencing the content, direction and targeting. Rivalry among domestic producers means that it is difficult for each of them to mobilize sufficient investment needed to establish production lines, increase research and development, fasten lead time between concept development and

product release on the market.

- Ever stiffening competition from new entrants into the domestic auto industry (Malaysia's Proton; China's Panda; India's Tata Motors), which is on top of strong dominance Mercedes Benz, Mitsubishi, Hyundai, and Astra International of established automotive producers and distributors.

e) Government

- The Indonesian government has provided a strong macroeconomic framework to support economic growth of between 6.0-6.4 percent in 2012-2017; annual growth in investment amid low inflation; relative policy predictability since 2004-2014, and is likely to remain that way due to supranational commitments which Indonesian entered into with the ASEAN regional framework from 2015 onwards.
- Government has issued regulation intended to promote the use local of content in automotive products; the Ministry of Industry is involved in efforts to bridge the gap between the banking sector as lenders and small, domestic spare parts and components and body manufacturers, as well as providing technical and practical guidance on improving the quality of products.
- The government issued regulation on promoting products produced in the domestic economy rather than imports; another driving factor is the Master Plan for the Acceleration and Expansion of Development of Indonesian Economy (MP3EI) launched in May 2011, which serves as a starting point for domestic auto producers (corridor based promotion of economic growth, harmonized and synchronized through strengthening sectoral, regional and national connectivity; the short term and long term development plans (2010-2014 and 2015-2025, respectively) lend a lot of support for local competence and potential enhancement and development of potential based economic growth and development.
- Also to become an incentive for automotive manufacturers, once underpinning regulations are in place is the Low Emission Carbon Project (LECP) (OTO.COM, Nov 22, 2012), which is aimed at providing incentives for manufacturers in the form of reduced valued added tax for luxury vehicles for low carbon emission, hybrid energy use, and pure electric energy technology to Indonesia and a zero value added tax on luxury vehicle imports if such manufacturers transfer their energy efficiency to levels that will be determined by the Indonesian government.
- However, regulations on reducing car sales such as reducing car emissions and increasing the efficiency of energy use, have created formidable obstacles for nascent local car industry; the regulation on restricting auto buying (larger advance payment) has reduced demand. Impending regulation on energy efficiency and clean, which once issued will give automotive manufacturers who invest in producing energy efficient and environmentally friendly cars, as well as the widening of IKD automotive segments that can enjoy low import duty, while tailored toward promoting an increase in the proportion of local content in manufactured

vehicles sold in the domestic market, will no doubt impose limits on the nascent, weak, diverse, highly segmented local brand vehicle manufacturers.[23]

- The government shows its commitment to strengthen the valued added capacity of the automotive industry through the issuing of the Minerba Law in 2009 and tax incentive based local content requirement.
- Ministry of Finance Regulation No.176/PMK.011/2009 on Exemption of Import Duty of Machines, Goods, and Materials for the Establishment or Development of Industry in the Framework of Investment.
- MOF regulation No.213/PMK/.011/2011 on Classification of Products and Import Duty Tariffs Imposition, effective January 1, 2012, which in effect reduces import taxes on imports of electric cars both IKDs and CBUs, is likely to boost local demand for electric cars as well as the transfer of technology to the domestic automotive industry, which will have immense spillover effects on the economy.
- Regulation of the Minister of Industry No.11/M-IND/PER/1/20/1/2012(MOI Regulation No.11/2012) on certification of automotive components, intermediate goods, and vehicles while sound in principal, its implementation is likely to increase costs to producers and other players in the industry, and lead to delays in production as the red tape involved in testing various components parts in Indonesia and paying visits to offshore locations where necessary, may end up increasing the attractiveness of Malaysia and Thailand *vis a vis* Indonesia as the destination of future investment in the automotive industry despite the huge market potential Indonesian has to offer. Minister of Trade issued Regulation No. 27/M-DAG-PER/5/2012 on Import License ("MOT Regulation No. 27/2012"), which revoked the Minister of Trade Regulation No. 39/2010 on Import of Finished Goods by Manufacturer on Import of Finished Goods by Manufacturer was revoked by Supreme Court Decision No. 19P/HUM/2011 in June 2011, imposes restrictions on the imports of manufactured goods tailored toward production processes, assembling and manufacturing automotive products.
- The insistence by the Ministry of Manpower and Transmigration to lend government support to the workers' demand on banning outsourcing (though in fact the Ministerial instruction is a reconfirmation and reiteration of the provisions in the regulation to that effect) is seen by employers as another blow to their efforts to reduce the impact of the provisions of Manpower Law No, 13/2003 on the cost of hiring, paying and firing workers, which is unduly high and rigid.
- The low cost green car (LCGC) program has its critics too. The problem with the low cost green car lies in the fact that it is seen as telling manufacturers to strip off various features and functions of a modern car which helps to reduce both cost of produc-

[23] Dewa Yuntardi, "Excerpt of TV Kompas TV with National secretary of NUSA," on September 25, 2012.

tion and energy consumption. In other words, the low cost green car is easier to realize if low cost technology is used, and the green concept used is limited to reducing energy consumption rather than using high quality, low carbon emission technology (as has been shown by rising interest in then program by principal vehicle manufacturers in Indonesia such as Toyota, Daihatsu, Suzuki, Nissan, Honda who have so far pledged nearly US$2.1 billion in investment to develop and market vehicles that meet low cost green car program. Thus the problem mainly lies in the combination of two concepts which are contradictory in terms. While low cost cars are often associated with low technology, hence meant to produce a cheap car (a policy that should be adopted if the problem is the high cost of vehicles (increase car ownership)), the green car concept, is tailored toward the use of technology that both makes possible high energy efficiency (high fuel efficiency, and low emissions of CFCs), which is still expensive and highly protected and patented technology. The result may be development of a low cost low horse power car (≤1500 cc) that does not use air conditioning and is therefore efficient on energy use (but uncomfortable). The LCGC program thus will encourage the production of cheap cars, which though uncomfortable will be welcome news for individuals who do not own cars, but very much in contradiction with current government policy on promoting the use of public transport and thus discouraging private car ownership. Moreover, the LCGC program would contribute significantly to emissions if the program is preceded by efforts at reducing the use of high sulfur gasoline which is the cause of high emissions. Even if manufacturers were to manufacture green cars for the domestic market, the fact that gasoline that is still being used has high sulfur content would increase the cost of using such cars due to a mismatch between gasoline used and low sulfur and low carbon emission technology.

- Another program, which awaits inauguration, is the Low Emissions and Carbon Project (LECP). The program entails the provision of investment incentives to principal manufacturers to import which is aimed at providing incentives for manufacturers in the form of reduced valued added tax for luxury vehicles for low carbon emission, hybrid energy use, and pure electric energy technology to Indonesia and zero value added tax on luxury vehicle imports if such manufacturers transfer their energy efficiency to levels that will be determined by the Indonesian government. This program, attests to the fact that the Indonesian government will depend on principal manufacturers who are expected to respond to investment incentives that will be laid out in regulations to the effect of bringing their low carbon, engine and transmission hybrid, and electric technology.
- The problem is that the domestic market, both with respect to purchasing power and infrastructure (high quality gasoline EURO 3 and EURO 4), has yet to become the standard in Indonesia (EURO 2 is in use). This means that manufacturers , even if they have the capacity to respond positively to the Low Emis-

sions Carbon Project, given the huge investment they must make into the project, will think twice before any concrete plans take shape (demand conditions not favorable, as are infrastructure, supporting services for instance quality gasoline, electricity charging stations for electric cars. The high price of vehicles, given the high investment cost made into their production, will make them unaffordable to most Indonesians, who still do not own a car). This project also underscores the reality that the government of Indonesia considers low cost green car program as merely tailored toward producing a low cost, energy efficient car based on conventional /generic technology, while the low emission carbon project is tailored toward reduction in response to climate change concerns (vehicle technology that makes possible low carbon emissions and low energy use (from any source)).

G. FINDINGS ON SMALL, DOMESTIC PRODUCERS AND SELLERS OF AUTOMOTIVE PRODUCTS

In general, local fabricators of automotive components and spare parts face various problems that include:

- Increasingly burdensome taxation regime.
- Inability to obtain support on product standards, and prevailing regulations from government officials charged with such responsibility.
- Difficulties obtaining access to financial support from the banking sector.
- Workers who have relevant degrees but do not have the knowledge needed to undertake work or tasks and thus require additional training which increases costs for employers.
- Influx of cheap foreign products.
- No advice on improving product quality (never had the opportunity to host any official charged with improving product quality).
- There is no indication that micro operators see the need for better idea generation for their products. This is because, many of them fall into the me-too category, which implies that they do not see the need for planning in advance what they will produce in two or three years to come simply because big producers out there do such work for them. What will be produced in the future will depend on what will be selling well on the market.
- Lacking ample knowledge about the importance of producing products that have requisite standards (some follow national standards, others use their own standards, but most do not see the importance of standards because what they do is to produce products that are found to be selling well on the market so they buy the product, reverse engineer it, and reproduce the same).
- Related to the aforementioned is the fact that although Indonesian automotive industry practitioners are on the verge of entering ASEAN AFTA, which among other things will require member countries to comply with standards and guidelines on product quality, which for automotive products will be based on UN-ECE 1958 standards, at the micro level, there are indications that such information has been disseminated to those who need it most. Many fab-

ricators of automotive products, for instance, do not see anything wrong with reverse engineering an automotive component or spare part that is selling well on the market, as a means of producing replicas of the same and enjoying higher revenues as a result. Yet such a practice is in contravention of prevailing law on intellectual property rights, which the Indonesia government has in place.

- Financing to improve product quality, expand their businesses, or diversify their business lines is not easy to come by. This is because of difficulties small businesses face in meeting the stringent requirements of banks, such as streamlined firm management, book keeping practices, separating issues and activities that relate to the business from household concerns (keeping separate accounts for household and business and lack of adequate collateral security to obtain sufficient loans for working, and investment purposes, among others).
- There is no indication that small firms see the need for collaboration as they consider the virtues and benefits of preserving the independence of the family firm to outweigh benefits of forging cooperation with others (easier to acquire external financing due to enhanced collateral security capacity; sharing ideas on improving product quality and marketing; easier to obtain practical guidance on running their businesses from external sources (regional government, automotive association, experts on automotive industry); information on current trends of the automotive industry in Indonesia, other ASEAN members, and the world.

1. Producers /fabricators who sell products on the domestic market:

This category offers interesting insight because:

- They do not see any problem with the market. This is because what they produce is by and large, driven by what sells on the market.
- Business climate is percieved as having no impact on their businesses (perhaps because of point one above).
- They do not see any problem with the gamut of requirements they are required to fulfill in the process of running their businesses.
- Though some showed indications that raw materials were a problem, many did not see it as such.

But like others, they perceive:

- Taxation as increasing the burden they face.
- Rising energy costs attributable to frequency of outages.
- Difficulties in financing their operations.
- Rising labor cost, seeing the flood of cheap inputs as a problem that needs handling if their businesses are to remain going concerns.
- Lack of efforts from local government to support them in improving product quality and standard.

2. Producers of automotive products that sell at home and abroad

See advantages in the Indonesian auto-market:

- See the importance of producing

products that are based on either national or international standards.

- Consider the Indonesian domestic market as profitable but under serious 'attack' from cheap foreign imports, hence call for government measures to control and curb such imports.
- See benefits in establishing collaboration with input suppliers, large automotive producers (with whom they have working collaboration in designing and supplying automotive components, other small firms in the industry (to share ideas on strengthening their business line, product quality, exploit existing market opportunities), and the local and central government (sources of technical guidance on product standard, existing market opportunities, expanding financing opportunities, training of workers, which would help in reducing costs they incur in increasing readiness and capabilities to contribute to firm operations and performance)

Meanwhile, highlights of problems this category faces include:

- Business climate is considered to be fraught with challenges emanating from:
  - rising competition from imports of cheap products;
  - burdensome taxation regime;
  - burdensome regulatory requirements (having to deal with many offices); increasingly burdensome labor laws; difficulties faced in raising funds to run their businesses;
  - difficulties in obtaining raw materials (steel and intermediate products); fluctuating exchange rate of the local currency, which means higher translation exposure;
  - difficulty in recruiting ready-to-use workers, meaning that oftentimes, they have to spend more money to train graduates from technical colleges and universities before they can contribute to the performance of their firms;
  - Difficulties to acquire land are also problematic when they need to expand their operations.
- Price of energy is considered a problem that affects the profitability of their businesses, as is the frequency of outages which has induced many to buy generators at high cost.
- Product standard is considered a problem that needs support from the government if they are to gain a strong foot hold on the domestic market.
- Some use domestic standard in producing their products which are meant for the foreign market (need for technical support from relevant authorities in areas of standardization, product quality, and worker training).
- Many see their market prospects as fraught with uncertainty.

H. CONCLUSION AND RECOMMENDATIONS

1. Conclusion

The Indonesian automotive industry in some respects is ready for post 2015 ASEAN. This is discernible from

a number of areas such as semi skilled and skilled labor; a supportive regulatory framework that protects domestic automotive product manufacturers from unfair competition from ASEAN and non-ASEAN manufacturers (buy-Indonesia product policy, local content requirement, compulsory certification requirements based on Indonesian standards); improvement in government governance as reflected in rising transparency, some major inroads in corruption control, improvement in macroeconomic management which has created a low inflation, stable exchange rate, low national debt to GDP ratio, and capital inflows, (FDI and portfolio investment). This is coupled with the rapid growth of the automotive market, which is supported by high private consumption, low financing cost for vehicle purchases, government commitment to increase investment in infrastructure in the medium and long term (2010-2014 medium term development plan and 2015-2025 long term development plan), as well as in the multitrillion dollar Master Plan for Acceleration and Expansion of Economic Development in Indonesia.

Nonetheless, weak areas remain, which makes the high potential domestic automotive market an easy target for other key ASEAN automotive manufacturers (Malaysia and Thailand), as well as non ASEAN countries such as China, India, European Union members (especially Germany, France, England, and Sweden), thanks to bilateral agreements as well as ASEAN-based agreements to which Indonesia is a signatory. Such weaknesses include among others, some components of the regulatory framework that increase the cost of operations, production, distribution, import-export, hiring and firing workers; compulsory certification based on Indonesian standards even as Indonesia (though not yet a signatory) like other ASEAN members reached an agreement in principle to base quality standards of automotive products on the UNECE 1958 agreement which are recognized and in some aspects used in determining quality of automotive products (vehicle emissions). Another area that is becoming a cause for concern is the tax regime. Though in some areas, the tax regime shows a tendency of coming down, indications are that the tax rate based on valued added and revenue, is on an upward trend, at a time tax regimes among key rivals are on the way down.

To that end, given the highly lucrative and relatively liberalized Indonesian automotive market[24] (USD500 billion economy, 140 million middle income and rising, growing by 10 percent on average over the last five years), make competition from manufacturers which have their operations based in other countries (Malaysia, Thailand, South Korea, China, India, and even the European Union) difficult to beat. It is perhaps because of this realization that the Indonesian government has over the last few years taken to protectionism (albeit mildly) of the industry, which some of the regulations strongly point to.

2. Recommendations

- There is a need to strengthen regulatory certainty and predictability. In that light, there is a need to implement as soon as possible regulation on low cost green car (LCGC) and low emission and carbon project (LECP). This is because the two programs are

[24] Compared with Malaysia and Thailand

game changers as far as the future direction of the Indonesian automotive industry is concerned. On the other hand, there is a need to review or if possible rescind regulations that oblige all automotive manufacturers, irrespective of their track record in manufacturing automotive products, to undertake certification based on Indonesian standards.

- Indonesia as a member of ASEAN has in principle expressed commitment to use UNECE 1958 standards as reference in determining technical standards of automotive products. To that end, instead of re inventing the wheel, which will cost a lot of time, energy, and financial resources, to develop its own certification standards, the Indonesian government, should embark on laying the groundwork on developing and implementing UNECE 1958 measures, developing requisite facilities such as testing laboratories, establishing linkages with EU and Indonesia educational institutions, technical colleges, and the BPPT to train manpower on certification techniques and necessary streamlining procedures.
- UNECE 1958 standards are already internationally recognized, which means were Indonesia to adopt the same that will make imports and exports of automotive products not only among ASEAN members but also between Indonesia and Europe and other parts of the World easier. Considering the growing importance of the components industry at both home and in export trade, adopting an internationally recognized certification is highly recommended as it will provide quality assurance for importers of Indonesian automotive products. Indonesian certification will mean that exports of Indonesian automotive products will have to undergo testing in destination markets, which will increase cost, and lower competitiveness in a market that is marked by small operating and net profit margins.
- Nonetheless, given the stark difference in technology capacity and capabilities, the implementation of the certification should allow some forbearance , with established and foreign based manufacturers and exporters of automotive products to Indonesia, required to adopt the certification immediately, which is not a problem as they are already required to do so in their countries of origin, while small, domestically based and market focused manufactures of spare parts and components would be required to implement such measures gradually, and with the support of the government in strengthening their product quality assurance, production process improvement, R & D capabilities, and providing product testing facilities.
- Labor law issues. Inflexible labor law and implementing regulations have been cited by experts on competitiveness, the World Bank, and members of the Indonesian employers association. There is a need to resolve the now very contentious issue of outsourcing. The current law does not allow employers to use contract workers for work or tasks that are core in the production of goods and services but rather in tasks that are of supporting nature such as cleaning services, security, catering and so on. However, employers have used it as a way to reduce on the wage bill,

with the result that employers have shown growing preference of employing temporary workers to permanent workers. The irony is that both permanent and contract workers, for different reasons, agree on one thing that all workers must be employed on a permanent terms. Contract workers want to enjoy the munificent terms permanent workers enjoy, while permanent workers do consider the use of contract workers by employers as detrimental to their interests as they reduce their bargaining power for better working conditions and is intended to circumvent compliance with labor law. The setting of wages should be left to the wages committee, which includes representatives of employers and workers, and be submitted to the local government only for implementation. In addition for predictability purposes and to reduce the disruption to production caused by annual setting of wages, wage levels should be indexed automatically with inflation which will avert the problem of setting wage levels every year.

- On strengthening linkages in the automotive industry. While the government has issued regulations that are intended to increase value added of exports from Indonesia, the current regulations do not provide sufficient incentives to producers in the upstream sectors (iron and steel producers, glass, energy producers, plastics, copper, electronics, rubber/tires, textile and so on) to serve as suppliers to automotive product manufactures. It is also worth noting that the fact that a factory is located in Indonesia, the products it produces are meant for the domestic market. This is because, based on the workings of a global value chain, all issues that relate to product R & D, production, distribution, and marketing are not determined in one location but as a whole taking into account all issues that relate to maximizing value added, competitiveness, and company profits for shareholders.
- To that end, this is an issue that is not easy to resolve, given the nature and composition of Indonesian automotive manufacturers, who are by and large representatives of multinational companies which have production centers spread in various parts of the world, using global supply chains as their production model, can only engage domestic suppliers as long as is interested in doing so, meets the requisite product quality standards set by parent companies, and sell products based on decisions that are not made in the domestic market but in corporate headquarters abroad. However, what can be done is for the government to do its role of putting in place requisite institutions that ensure products in all sectors of the economy meet international standards. As long as the quality of inputs meets international standards, the task of establishing stronger linkages between the upstream sector, producers/manufacturers and the downstream sector will be easier. Government policy on meeting domestic requirements as a priority which producers in the domestic economy must meet prior to meeting foreign export commitments must be put into operational permits which both local and foreign incorporated producers of goods and

services must comply with.[21]

- There is a need to strengthen the focus on the development of the components industry. The components industry has shown strong growth and has contributed significantly to the increase in exports of automotive products. This may be a result of the workings of the global production and supply chain as well as individual efforts by domestic manufacturers to increase the value of their sales by selling to the more lucrative foreign market. Considering the importance of the components industry in the Indonesian automotive industry as a source of inputs and intermediate products for vehicle manufacturers as in the domestic economy seen from the contribution to employment, skill enhancement, technology advancement and spillovers, and export revenues, there is a need for the government to implement plans that are tailored to develop the components as one of the sectors oriented for the export market, as well as an integral part of the domestic automotive industry.
- Research and development. The dichotomy of R & D between large, principal manufacturers (regular, advanced, well financed, integrated into product production, distribution, and marketing); and small, domestic niche market producers (sporadic, inadequate financing). There is little if at any transfer of technology between large manufacturers and small producers, which is understandable given the fact that large principal manufacturers have no obligation to share and support small producers who are in any case their competitors and reverse engineer their hot selling products prior to selling them without paying any loyalty to them. However, there is a way the government can induce technology transfer from large manufacturers to small producers. One way is to set up a research and development fund which is given to manufacturers that have a technical collaboration and cooperation agreement with small, domestic manufacturers. This can take the form that is similar to the nucleus-out growers' scheme in the palm oil industry, which obliges large firms to help small ones stand on their feet by offering training and development, financing of operations, market quality assurance and marketing. Another way is to insert a requirement in the operational permits given to large companies with operations in Indonesia or selling automotive products on the Indonesian market, to set aside some seeding money (part of their corporate

[21] The case of Indonesian companies experiencing electricity outages due to lack of natural gas supplies for the national electricity company is an interesting one. Natural gas companies have no obligation to prioritize meeting domestic demand, for as profit maximizers they sell to buyers who pay the highest price. Moreover, given their commitment to supply natural gas to foreign buyers uninterruptedly for certain periods, at prices that are lower than current market rates given the long term nature of such supply arrangements; makes it unlikely and costly for natural gas producers to divert some of the natural gas supplies to meet a dramatic increase in domestic demand. Consequently, PLN is forced to load shade power supplies to users, including manufacturers, and use a more costly gasoline to produce electricity. Manufacturers resort to using diesel generator engines which is more costly source of energy, unreliable, while as a result of using gasoline in producing electricity, manufactures are forced to pay higher electricity bills, which increases their cost of production.

social citizenship responsibility) to promote small spare parts and components manufacturers.

- Yet another way of persuading large automotive firms is to provide generous investment incentives for automotive firms that are ready to form joint ventures with small spare parts and components and vehicle manufacturers, which is underpinned by the requirement to transfer technology, management practices, and product quality assurance. It should also be noted that the development of technology on automotive products quality and production processes is not only confined to the walls of laboratories that belong to automotive companies, but is also in laboratories that are located in universities and stand-alone, independent research centers. What is needed is for the government to identify either the universities, independent research centers or both with the capacity and competence to conduct R & D, provide training and development on product development, production, and marketing to small, domestic spare parts, components and vehicle manufacturers. To support local research centers, the government can forge ties between local experts and international automotive experts either on an individual or institutional basis or both.
- Financing. It has become common knowledge that one of the key obstacles hampering business development and expansion is lack of sufficient financial resources. Shortage of financial resources is also a major constraint that hampers R & D, human resource development, product quality improvement and upgrading, technology adoption, development and improvement. To that end, workable solutions are required to deal with this problem which is increasingly becoming a key differentiator between leaders in competitiveness and laggards, me-too product developers and custom tastes and preferences driven, core business based, difficult to emulate products, and success and failure. With special reference to the automotive industry, measures that need to be taken include intensifying efforts by Ministry of Industry to bridge the gap between manufacturers, vendors and providers of auto purchase and leasing finance for automotive products tailored toward domestic market based producers and marketers.
- The playing field should be made more level between large, principal manufacturers, who by and large operate their in-house financing and insurance services that are tied to automotive purchases and independent automotive product manufactures who have to struggle to finance their products as they depend on the fluctuations of credit market. The government, should provide limited guarantees (in the form of operational and product risk insurance) to support for manufacturers of automotive products that are considered pivotal to the development of other sub sectors of the automotive industry (components industry, suppliers of raw materials, and intermediate products, among others), as well as having proven spillover effects on other sectors of the economy. The existence of such guarantee will help in reducing the operational and product marketing risk associated with new and innovative products that are

produced by small and upstart domestic manufacturers. Consequently, as contingency risk decreases, commercial banks and leasing companies will not impose stringent covenants in their lending agreements with potential customers and manufacturers of automotive products coming from various skunk works (bengkel) that are spread in many parts of Indonesia.

- Another way is to foster closer linkage between activities of numerous small, independent manufacturers of automotive products with large, principal manufacturers. This can be done through collaboration between the large and small manufactures right from the start, so that products that are produced by small producers are based on specifications, standards, and pricing of large components and vehicle manufacturers. This will help small players have a captive market for their products, while at the same time giving ample room for large players to influence volume, quality and standard, and timing of components they need for their operations (one form of *Keiretsu* network).
- Facilitating joint venture operations between domestic small players and large automotive manufacturers is not only good in fostering easier and quicker transfer of technology (China's policy on this shows that a country with a large market can dictate terms for those interested in investing in the economy), but the fact that large manufacturers have better access to financial services (banking, insurance and reinsurance), reduces the burden for small players to look for investment and working capital for their activities. As the conditions faced by automotive product manufacturers, both large and small, are different from those of other sectors of the economy (huge investment in R & D, high risk of emulation of products, which reduces profitability of product lines, requires updating technology in production process, additional of an increasingly sophisticated assortment of features (entertainment, GPS for better navigation purposes, devices to reduce noise, emissions, safety enhancement features, and so on), the establishment of an industrial development bank *may* be a good idea.
- Flood of cheaper imports (illicit and legal). The influx of cheaper automotive products ranging from spare parts and components to CBU units into the domestic economy has created serious problems for manufactures who have production plants in the country, have production plans based on medium term and long term market projections of the domestic market (total demand, projected supplies from legal competitors, level of per capita income and its growth, monetary policy parameters (interest rate, inflation, exchange rate) and undertake huge investment based on such factors considerations. To that end, the entry of illegal imports as well as unanticipated legal imports complicates production plans for domestic producers, adversely impacts on return on investment, and undermines the predictability of the investment and business climate in the economy. Based on such considerations, there is need for the government to tighten border crossing 'points' from neighboring countries such as Singapore and Malaysia, as

well as more intensified monitoring of imports from China to reduce illegal imports of components and vehicles (IKDS or CBUs but dismantled to facilitate easier entry). Stringent measures on illegal imports should not only be made at entry points but also at various police centers where registration of new vehicles and motorcycles is made. Registration must be made upon presentation of proof of legal import certificate, import duty payment receipt, and valued added payment receipt. Checking vehicles and motor cycles in display in show rooms is also another effective way, which prevents the conversion of illicit imports into legal products.

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