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ABSTRACT

In November 2012, the Philippine Automotive Competitiveness Council, Inc. (PACCI) submitted the Philippine Automotive Manufacturing Industry (PAMI) Roadmap to the Board of Investments (BOI). The Roadmap covers Philippine Standard Industrial Classification (PSIC) 291, which is the Manufacture of Parts and Accessories for Motor Vehicles, and PSIC 292, which is the Manufacture of Motor Vehicles. The Roadmap is both a stand-alone input into the development plan for the Industry, and a contribution to the National Manufacturing Industries Strategy that BOI is crafting, together with the Private Sector and relevant Government Agencies. The Roadmap derives its mandate from the understanding between BOI and PACCI, at the Philippine Automotive Manufacturing Summit in January 2012, for PACCI to undertake this exercise. This paper is both an exposition of the Roadmap’s main points and a comment on the points at which statistical work came into play in developing the Roadmap’s thesis.

There has been much discussion between BOI and PACCI since last year. And this paper tries to capture the essence of those developments, as they are currently shaping the Roadmap beyond the original contours of the 2012 version. But this paper also recognizes that there are unresolved issues, largely due to independent cost-benefit analysis that BOI is undertaking in compliance with its own mandates. And so this paper avoids comment on the specifics of the Industry proposals as much as it avoids remarking the details of the financial assistance package that the Government has been formulating. Indeed, this paper cannot be viewed as the official position of PACCI, although it clearly states some of the main aspirations shared by the Members of the Council. That reserve notwithstanding, the authors believe that this paper is able to call attention to the need for improving the state-of-the-art for statistics in the automotive sector, sharing one of the objectives of the 12th National Convention on Statistics, which is to help develop a more responsive statistics system.

I. Strategic Value: An Industry Worth Fighting For

The Auto Industry is of great strategic value to the Philippine economy. This can be appreciated by assessing its contribution to GDP, accumulation of investments, taxes and duties paid, and its role in Philippines international trade. Moreover, the Industry contributes to technology transfer, not only in car assembly or parts manufacturing, but also in terms of developing skills that can be used in other industries.

¹ The co-authors of this Discussion Paper were involved in the drafting of the Philippine Automotive Manufacturing Industry Roadmap which was originally submitted to the Board of Investments in November 2012. The Roadmap is still a work in progress, with PACCI, BOI and other Government Agencies still working out the features of the final industry development program. Therefore this Discussion Paper cannot be construed as an official position paper of PACCI, although this Paper does remark some of the major aspirations shared by the Members of PACCI. This Paper is best viewed as a contribution to one of the themes of the 12th National Convention on Statistics, which is working towards a more responsive statistical system.

² Executive Director, Philippine Automotive Competitiveness Council, Inc
The Industry is reckoned to have contributed some 3.6% of Philippine GDP in 2011. At end-2011, the Industry is estimated to have accumulated some Php120 billion in investments, mostly in the 15 vehicle assembly facilities in the country. And that year, the taxes and duties paid by registered participants in the 4-wheel Motor Vehicle Development Program (MVDP) totaled Php 30.25 billion (Table 1).

**Table 1 Estimated Auto Industry Contributions to the Philippine Economy**

<table>
<thead>
<tr>
<th>Share to GDP</th>
<th>approx. 3.6%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accumulated Investments</td>
<td>Php120 Billion</td>
</tr>
<tr>
<td>Taxes and Duties Paid</td>
<td>approx. Php 30 billion annually</td>
</tr>
</tbody>
</table>

The Industry generates quality jobs. Vehicle Manufacturing and Parts Manufacturing (including parts for export) provides an estimated 68,000 jobs, and the Industry supports another 15,000 jobs in dealerships and 327,000 in various auto support industries upstream and downstream. These are relatively high-paying jobs. The Industry’s jobs can absorb even just trade school or high school graduates, and provide them adequate training and career path opportunities.

Moreover, the Industry contributes to Philippine international trade. In terms of vehicles, the Philippines is by far a trade deficit economy, with US$1.94 billion in import payments versus a mere US$58 million in export receipts in 2012. And Philippine exports of CBUs have been odd jobs – usually buses and trucks specially made to order for occasional importers in Myanmar, Papua New Guinea, Taiwan and Singapore. This does not really constitute a recurring business. The imports cover not only the completely built-up units (CBUs), but also the completely knocked-down (CKD) kits that are imported, largely from ASEAN, and assembled into cars in the Philippines. But trade in auto parts and components has been very positive, with imports of only US$702 million more than adequately covered by the US$3.5 billion in exports in 2012 (Figure 1).
The Industry comprises an accumulated total of PhP120B in investments, principally in 15 vehicle assembly plants, seven of which have the critical Electro-Deposition Painting systems. Total nationwide capacity is 200,000 units per annum on a two-shift basis. And where the major brands are involved, these facilities have been audited by the principals and have been rated as compliant with the relevant global standards.

II. A Highly Prospective Market

The Roadmap scenario is premised on an expectation of strong growth for the institutional core of the Philippine auto market: from the 182,000 units sold in 2012; to 210,000 units this year; 310,000 units in 2016, and on to potentially 500,000 by 2022. This market scenario was constructed using logical inferences from observed stable trends. The Roadmap recognized the waves of rapid motorization growth that have occurred in Thailand and later Indonesia, and noted that the Philippines appears poised to benefit from its own wave, having just reached the US$2,500 GDP per capita mark which was the breakthrough point for the
neighboring markets. Vehicle sales growth of 10%-12% was observed to coincide with real GDP growth of 5% to 7%, and estimates based on broad Government expectations were used as a basis for the domestic institutional sales forecasts. This simple extrapolation was used in lieu of more sophisticated modeling.

**Figure 2 Domestic Institutional Market Expectations (Volume in ‘000 units)**

![Graph showing Domestic Institutional Market Expectations](image)

Beyond the domestic market, ASEAN is expected to enjoy strong growth as well, from last year’s 3.25 million to 5 to 6 million in 2022 and up to 12 million by 2030 (Ayala-McKinsey).

On the whole, therefore, the Industry faces modest but fast-growing market prospects.

### III. An Industry Confronted by Challenges

However, the Industry falls short of its potential economies of scale, manifested in both vehicle assembly and parts manufacturing.

#### 3.1 Benchmarking Against Competitors

To begin with, though ours is a promising domestic market, it is still modest compared to our neighbors. Thailand produced 2.4 million units in 2012, with total domestic sales of 1.4 million units that same year. In 2012, too, Indonesia produced 1.06 million units and turned over a total domestic sales volume of 1.1 million units. Our competitors, moreover, are aggressive in terms of providing Government support for their auto industries (Figure 3).
Figure 3 Benchmarking Against Competitors’ Industry Support Policies

<table>
<thead>
<tr>
<th>Economy</th>
<th>Product Champion</th>
<th>Domestic Sales</th>
<th>% Share to Total Domestic Sales</th>
<th>Excise Tax Policy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>1-ton Pick-up</td>
<td>365,636</td>
<td>46%</td>
<td>3% excise tax on pick-up w/ engine displacement up to 3.25L vs. 30% - 50% std tax rates</td>
</tr>
<tr>
<td>Malaysia</td>
<td>Passenger Cars up to 2000cc</td>
<td>417,825</td>
<td>70%</td>
<td>Excise tax reduced under the IAF* scheme for passenger vehicles less than 2,000cc</td>
</tr>
<tr>
<td>Indonesia</td>
<td>Multi-Purpose Vehicle (MPV)</td>
<td>367,455</td>
<td>41%</td>
<td>10% - 20% luxury tax** on MPV vs. 30% - 40% luxury tax on other passenger vehicles</td>
</tr>
<tr>
<td>Philippines</td>
<td>none</td>
<td>–</td>
<td>–</td>
<td>Value-based taxation. No special scheme for any type of vehicle</td>
</tr>
</tbody>
</table>

1/ In Indonesia, luxury tax is instead of excise tax is applied to automotive. Luxury tax on all passenger vehicles except buses is 75%
2/ Vehicle segment with highest sales volume in 2011 – Small PC (31% or 51K units) and MPV (23% or 37K units)

*IAF – Industry Automotive Fund
**MPV – Multi-purpose Vehicle

3.2 Losing Domestic Market Share

At home, imported CBUs have come to dominate the market (Figure 4). The Philippine market turned over an estimated total of 243,000 units in 2012, including some 59,000 informal sector products. Of the 184,000 institutional market sales, locally manufactured vehicles (CKDs) accounted for 73,000 for a 39:61 split between CKDs and imported CBUs. The 73,000 units produced represented a 36% utilization of nationwide vehicle manufacturing capacity. As recently as 2002, the split was 92:8 in favor of locally assembled CKDs. As of the first semester 2013, the split has fallen to 34:66 in favor of the imported CBUs. On top of all that, the informal market flooded the market with 113,000 vehicles in 2002, even more than the institutional market sales of 86,000. The informal market has fallen to an estimated 59,000 versus institutional sales of 184,000 in 2012. And based on first semester estimates, the informal market is trending towards 56,000 this year.
3.3 Eroded Market, Truncated Supply Chain

The modest albeit promising domestic market is further eroded by the pressures of smuggling, and the poor implementation of roadworthiness and safety regulations. Too, the Philippine auto supply chain is short and is broken, with several links missing (Figure 5). This situation, incidentally, is very widely echoed across the entire Philippine Manufacturing sector. And for many industries with such problems, as is certainly the case of the automotive industry, integration with partner countries is not a sufficient solution.
The result is that in making a car, 16% of the cost in the Philippines is the assembly cost, versus only 13% in Thailand. And for the Philippines, 23% of the cost of producing a car goes to locally produced parts, while 49% is claimed by parts imported from Thailand. In lopsided comparison, only 7% of the cost of a car made in Thailand is due to parts imported from the Philippines, while a huge 67% is localized (Figure 6).
Figure 6 Comparative Costs in Thailand and the Philippines

All of these show up in a cost disadvantage, where the ex-factory price of a car made in the Philippines is more expensive than the landed cost of a comparable product imported from Thailand.

IV. The Strategy: Drive the Industry Towards ASEAN Competitiveness

In this expected robust market, despite the difficulties described here, the Industry dares envision the Philippines as a competitive manufacturing base of motor vehicles and parts and components, and a global hub for automotive-related human resource development and process outsourcing.

4.1 Increase In-Country Integration

In order to achieve this vision, the Industry must pursue a strategy of developing ASEAN Competitiveness, the natural consequence of which should be an ability to hold its own in the home market, with a larger market share that is not easily dislodged, and an ability to exploit the niche market opportunities that may present themselves in ASEAN. And in turn, this requires that the Philippine Automotive Manufacturing Industry be able to establish greater in-country integration (Figure 7).
One example of the critical parts supply gaps in the Philippines is large body parts such as stamping of vehicle “skins.” These large stamping parts are currently being imported at heavy cost, even under FTA conditions, because of their bulky cumbersomeness and the prohibitive packaging and shipping costs.

For some PACCI Members, this strategy is not applicable because of previous decisions to engage in low-volume operations and integration with the stamping plants of their affiliates in the region. For these players, who still contribute to employment-generation and increased parts production in the Philippines, some other assistance will have to be developed.

But in general, attracting investments into the Philippines to cover these supply chain gaps will help achieve a more cost-competitive solution for the entire Industry, moving the Philippines closer to the success that Thailand has achieved.

And the Roadmap recommendations may be viewed as action programs to achieve the increased in-country integration towards ASEAN competitiveness.

4.2 Roadmap Recommendations

The most prevalent recommendation among the Roadmap’s non-fiscal support measures (Table 2) is just that the Government should more strictly and consistently implement
its existing mandates for the regulations on importation, registration and operation of vehicles. A more comprehensive and efficient inter-operability amongst the data banks various agencies such as the Bureau of Customs, the Land Transportation Organization, and the Land Transportation Franchising and Regulatory Board, and the Bureau of Internal Revenue, with links to the BOI would greatly help in more accurately dimensioning the market and the industry. And this in turn would help reduce smuggling, and would reduce the number of units in operation that are really not roadworthy. The Industry also strongly advocates the reduction of the cost of doing business by cutting red tape, which can be helped along by the comprehensive and inter-operable data networks recommended here. And the Industry calls for reducing power costs.

The Roadmap also recommends a more supportive policy environment, touching on issues like: tariffs and mutual recognition arrangements; appropriate legislation; a more empowered and yet streamlined bureaucracy; and a development program for critical auto parts that may include increased support for common testing facilities.

The Industry would also like a Hearts-Minds-and-Wallets Program to support locally manufactured vehicles, and provisions for a more benign environmental impact of the Industry. In many ways, these are just the Auto Industry manifestations of the horizontal measures being recommended in the Philippine Manufacturing Industry Roadmap. And these are all issues already being addressed by existing mandates and programs. But while exhorting the Government to better implementation, the Industry also re-extends its offer of partnership in getting these things done.

Table 2 Industry-Wide Non-Fiscal Policy Support Measures

<p>| | |</p>
<table>
<thead>
<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><strong>Pursue Operational and Regulatory Reforms; Reduce Costs of Doing Business</strong></td>
</tr>
<tr>
<td>2</td>
<td><strong>Strengthen the Automotive Policy Environment</strong></td>
</tr>
<tr>
<td>3</td>
<td><strong>Hearts, Minds and Wallets campaign and government-supported financing schemes and regulations for buying locally-produced vehicles</strong></td>
</tr>
<tr>
<td>4</td>
<td><strong>Sustainability Issues: End-of-Vehicle-Life Program</strong></td>
</tr>
</tbody>
</table>
The financial assistance package that the roadmap recommends is intended to offset the estimated cost differential between the ex-factory price of locally assembled CKDs and the landed cost of the typical competing CBU imported from nearby competitors. As shown earlier, much of the handicap may be traced to factors that the industry does not control, like power costs, infrastructure bottlenecks and prohibitive logistics costs. Still another source of the handicap is the very aggressive fiscal support measures that the competition provides, which have helped car manufacturers in Thailand, Indonesia, Malaysia and Viet Nam achieve the critical mass economies of scale and reduce their per unit production costs.

Further, it is recommended that the assistance be structured so as to stimulate the development of both the vehicle assemblers and the parts makers for a cost-competitive solution.

But the Roadmap also recommends that the incentives be structured so that they are automatically passed on to the consumer rather than enjoyed by the players.

Above all, the incentives may be viewed as Government’s investment in the auto industry, a machine that generates quality jobs, additional output, household incomes and tax revenues, in addition to the very strong positive externalities of technology transfer.

**Figure 8 Investment Assistance Package**

<table>
<thead>
<tr>
<th>Investment Sharing Assistance</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>a. To cover cost handicaps due to power, infrastructure and logistics handicaps</td>
<td></td>
</tr>
<tr>
<td>b. Coordinated support for assemblers and parts makers for cost-competitive solutions</td>
<td></td>
</tr>
<tr>
<td>c. Passed on to consumers</td>
<td></td>
</tr>
<tr>
<td>d. Government’s investment with meaningful dividends</td>
<td></td>
</tr>
</tbody>
</table>
4.3 Some Dividends of the PAMI Roadmap

Depending on the strength of the stimulus package now being finalized, the development plan for the Industry is capable of delivering a significant dividend. Based on multipliers estimated by the University of Asia Pacific (Terosa, 2010), investments in the sector have the capacity to generate 3.67 times additional industrial output, and 0.27 times more household income and about 170k more new jobs for every Php100B new investment. The Industry reckons that with the Government’s stimulus package in place, the players would be induced to generate up to Php41B more new investments. The dividends would therefore come in the form of up to Php150.5B in additional industrial output, Php11.1B additional household income, and up to 70K new jobs. Exports of vehicle parts would rise from US$3.8B in 2011 to US$7B in 2022.

Figure 9 Some Dividends from the Roadmap

V. Some Remarks on the Role of Statistics in the Roadmap

For policy-making, there is clearly a need for comprehensive, reliable and timely data is very important. The collection of information and generation of statistical data about the industry is therefore the important first step. And yet this may be impeded by the competition in the corporate world. The industry associations and their members should help in the effort, but it does appear that BOI and relevant Government agencies are in a better position to be the
authority when it comes to data for the Industry, as all players have some degree of reporting responsibility to the Government, and the Government is the provider of trust and confidentiality. This has to be strengthened, and of course, it requires reallocation of resources. Another very strong argument for having the Government take charge of the data gathering and data-banking for the Industry is that good data are a very powerful tool in the implementation of regulations and the collection of the proper taxes.

The Roadmap market demand scenarios were built through “naïve forecasting.” There are good and bad reasons for having resorted to these procedures. The logic of the extrapolations used is intuitively evident, and there appears to have been no need for the application of more sophisticated statistical tools.

Finally, the cost-benefit analysis was one of the most challenging statistical features of the Roadmap exercise. This did not stem from any lack of mental acuity among the Government and Private Sector resource persons, but rather from the complexity of the inter-industry analysis as well as the complexity of the taxation and incentives regimes. The Inter-Industry (Input-Output) exercises that are often used are helpful, but there has to be a strict reckoning of the fiscal soundness of the assistance package. BOI and the Private Sector in the Industry are still debating the many permutations of that possible investment assistance package. And of course PACCI reserves all rights to its official position on the substance of the package, however, that may turn out to be. But in the meantime, it is a credit to BOI, of course, that even with such a lean force, they are doing their own cost-benefit analysis, informed by the inputs from the Private Sector, but certainly independent.