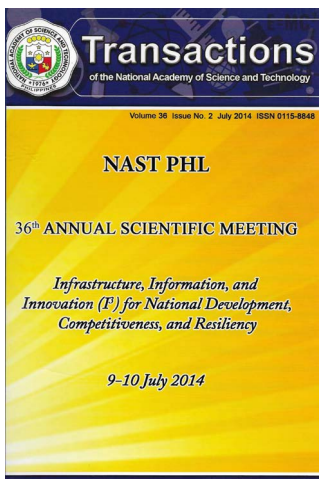


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Infrastructure, Innovation, Information for Inclusive National Growth

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**Keynote Address for the 36th Annual Scientific Meeting of the
National Academy of Science and Technology, Philippines**

**INFRASTRUCTURE, INNOVATION, INFORMATION FOR
INCLUSIVE NATIONAL GROWTH**

Ambassador Cesar B. Bautista

*Former Secretary at Department of Trade & Industry, Philippines and
Former Ambassador Extraordinary and Plenipotentiary of the Philippines to
the United Kingdom of Great Britain and Northern Ireland
Republic of Ireland, and Republic of Iceland*

I am indeed honoured to be invited as your keynote speaker in today's 36th Annual Meeting of the National Academy of Science and Technology. The Academy is composed of the country's top leaders in science and technology, which continues to be the fountain of wisdom and advocacy. These must be interesting times for many of you whose expertise is once again being tapped to pursue the country's development challenges.

Allow me to tweak the assigned subject a bit so I can share with you the broader context to the current discussions on competitiveness ratings, PPP mega infrastructures, jobless growth, *etc.* But first I would like to state that all three I's are considered co-enablers to achieve the country's transformation by means of sustainable growth that is inclusive. These are part of the eight key factors for competitiveness which were targeted for improvement in 2007 when the National Competitiveness Council was formed. Shown on the NCC organogram (Chart 2) are the champions of each Policy Improvement Project (PIP). Considerable improvements have been made in some of these factors over the years but we remain behind our ASEAN neighbours in the three Is as will be presented later. This is probably the cause of our non-inclusive growth.

The Medium Term Philippine Development Plan (2011-2016) is very clear on the need for infrastructure development to support the performance of the country's economic sectors; inadequate infrastructure in both quantity and quality is the result of low investment resources by both the public and the private sectors. The Plan talked about the usual areas of concern: Transport & Logistics, Flood Control, Communication, Energy, Water, and Food. The last three terms have increased prominence recently as the components of the stress nexus, an offshoot of climate change.

In the coming decades, the growth of population and urbanization will continue to heighten demand for energy from whatever source which will result in environmental stresses related to CO₂, further worsening climate change. Evidence in the scientific community point to the same negative trends for water and food. Pilipinas Shell reports that this looming tension between energy, water and food is becoming a major preoccupation in many countries. Bridging this growing gap or the so-called “Stress Nexus” will demand appropriate infrastructure designed creatively and coordinated efforts of informed stakeholders to moderate demand and to accelerate supply.

Let me show you some tables to see how the Philippines compares with our neighbours in Infrastructure, Information, and Innovation.

In Infrastructure, we are ranked 6th among eight ASEAN (Chart 3) countries (excluding Laos and Myanmar). With a country rating of 2.8 and the ASEAN region rating of 4.2, we have a lot of catching up to do to beat Cambodia and challenge Brunei. An MDG report said that for ASEAN to achieve its goals, it will require better road/rail transport, water supplies sanitation, electricity, ICT and urban low-cost housing. On the other hand we are highly rated in terms of telephone and mobile subscribers per 100 populations.

In Chart 4, the same trend is shown for our ICT vs. ASEAN neighbours where we are ranked 7th, ahead only of Cambodia and 86th out of 144 countries in the world. The Philippines has the poorest political and regulatory environment, business and innovative environment, the lowest social impacts, which are perhaps responsible for the poor state of our ICT.

In terms of global innovation index shown in Chart 5 the Philippines is likewise poorly placed as 7th out of eight ASEAN countries and 90th out of the 144 countries in the world. This is reflected by the low number of patent applications where we are at the bottom of the league. One can surmise that the poor institution and market business sophistication are responsible for the tepid performance of this sector which yielded low creative outputs.

Infrastructure Follows Strategy

At this point, I would like to propose that instead of tackling the wide range of horrendous problems caused by poor infrastructure such as the truck ban in Manila, NAIA the world’s worst airport, perennial flooding, the stress nexus, etc. Let us take one step back and look at the bigger picture. From my decades of experience in running business conglomerates and from equally long service in trade and industry policy setting/execution, in diplomacy, helping establish the PPP National Competitiveness

Council together with colleagues, we identified our products (including agriproducts) and services with potential for being global-players. The private sector has the pragmatism to realize that many demands for infrastructure require huge financing which is always in short supply. This imbalance between requirements and capabilities mandates us to follow the Pareto 80/20 Rule in the decision-tree planning process where the dilemma is “how best to utilize our limited resources to tackle the most immediate needs” in achieving our country’s vision of “Inclusive Growth”.

Former President F.V. Ramos used to say that it is not about how high the skyscrapers are – it is about what you see when you look down from the top – the loneliness of the poor living on the sidewalks –how people survive with leftover food, how they survive the torrential rains and the blistering sun. Infrastructure projects account for a big portion of country’s GDP at the expense of other services, such as social safety nets. They must therefore be well selected and well spent.

The doctrine structure follows strategy is often used by management gurus such as Peter Drucker and Michael Porter when they talk about appropriate structure in corporate organizations. These experts know that the success of any company depends on the choice of organization structure that best meets the needs of the business strategy. Should the structure be functional? matrix-type? decentralized? tightly-controlled?

Define your strategy first (Chart 6) they will say and let us know your resources/weaknesses and strengths before we talk about appropriate organization structure. The same approach should be observed in infrastructure development in pursuit of the country’s inclusive growth.

The country’s infrastructure priorities are well-defined in the Philippine Development Plan. It does not call for bullet trains or grand underground stations or building the tallest tower in the world or launching the most sophisticated entertainment centers, etc. There is no room for “Vanity Projects” such as London’s Crystal Palace, which flopped, the Palm Tree Islands reclaimed from the sea in Dubai, the Petronas building in Kuala Lumpur. In China, they still talk of the \$76 million musical fountain installed in Xian, despite chronic water shortage there; it is the favourite of the local princeling.

Strategic Approach

China’s impressive development in the past 30 years is attributed to a series of five-year plans, which defined each period’s desired economic outcome and the rank-ordering of infrastructure projects to achieve them. The Philippines (Chart 6) through NEDA’s PDP can make the five-year strategies as the common template to coordinate

links for sustainable progress. It is expected that some local leaders will still pursue their own Vanity Projects to build up their image but this is where the private sector, through the National Competitiveness Council, can help the cabinet economic cluster to stay the course of national strategic growth.

The Asian Development Bank in its report "Taking the Right Road" identified the government's infrastructure policy as coming in two stages.

I – Improvement of the "climate" to generate broad-based satisfaction from business and public sector. These involve "Horizontal Interventions". The first stage is where heightened interest on our country is achieved but fixed investments still remain low.

II – To provide efficiency for targeted products, including agri/industries and service sectors to realize their potentials "Vertical Interventions" otherwise known as the "tailwinds" are provided.

PIDS "Report on Enhancing Competitiveness and Empowering Business" highlighted the message as shown in Chart 7. We have successfully moved up the Stage I of our strategy, with investors, both domestic and foreign, looking at the country's prospect with greater respect, as the global ratings are up at "investment grade" with respectable growth and with greater ease of doing business.

We are now entering the second stage where the country will be generating more jobs and livelihood, as our world class services and products succeed in a realm of bigger and freer markets. Private sector is expected to take a share of the responsibility as full-partners of government in governance and investments. Once policymakers recognize the need for targeted interventions, they would have started the transformation towards a narrow income-gap and improved social climate in the country. The provision of sector-specific infrastructure will strengthen 15 sectors to realize their world potential, filling the "employment gap" of 15 million as soon as possible with local value added of 30%.

This strategic approach is actually spelled out in the Constitution under Article XII which says "the state shall promote industrialization and full employment based on sound agricultural development, etc., through industries that make full and efficient use of human and natural resources which are competitive in both domestic and foreign markets".

Productivity of Existing Facilities

Meantime, what can we do with the sorry state of our existing infrastructure? Without throwing tons of money behind it, much can be achieved by being more creative in improving productivity, with the application of science and technology. Let me cite three examples:

1. Take the case of roads and bridges. It is known that at a speed of 60 km per hour, one lane has a throughput potential of 50 vehicles per minute. Or a 3-lane highway will have a capacity of 150 vehicles per minute. Of course, this ideal situation is seldom achieved because public vehicles use the outer lane as their loading/discharge stations; certain private vehicles hog two lanes as they become impatient, vehicles stall on the road, etc. Perhaps, the productivity of the three-lane highway if measured is only 50%. The solution to these problems will be immensely simpler and cheaper than merely expanding roadways or building overpasses.
2. Take the case of airports and seaports. There is no doubt that a mounting shortage of capacity looms, so the National Competitiveness Council had a working group of experts that studied this problem dedicatedly.

The situation has deteriorated from five years ago, when construction was completed on the Batangas Port and the Subic Port but so far, capacity utilization in Batangas has been a measly 2% while Subic port is at 5.6%. We borrowed \$240 Million for the construction of these ports and another P4B for ancillary projects, such as the Star and SCTEX highways, for easy access to the ports. These shortfalls were allegedly due to self-inflicted difficulties that need to be resolved soonest. Leading practitioners on logistics, supply chain management and shippers have expressed willingness to sit down with the NCC proposed "Investors' Support Sr. Minister" to determine how 100% capacity can be reached ASAP.

The NCC team on infrastructure, championed by Engr Ito Carlos, Dr Toto Estuar and Prof. Henry Basilio, submitted three initiatives that will increase capacities without mega-spending. The first is the introduction of the RO-RO concept linking regions with minimal capital expenditure and bureaucracy. This is now adopted by the ASEAN Masterplan for Connectivity upon our proposal (Chart 8).

The second is their proposed Seamless Logistics Infrastructure Multimodal Network which maximizes productivity of the Subic-Clark-Batangas Corridor with Manila as core. Since these regions account for 50% of the country's

output, their proposal will significantly improve the country. During the course of their studies, they discovered that every office had its own Masterplan. Imagine that! So they integrated all these plans into one.

Their third proposal was for NAIA 3, which was likewise poorly utilized. The PIP champions proposed technology inputs for e-procurement, for project execution and measurement to 100% utilization. In the terminal proper, the processes in the flow of passengers and baggages were to be simplified with the use of Operation Research principles. If the above upgrades in productivity are reached, it may reduce the need to invest \$10 B on a new mega airport. It will certainly reduce the ordeal on passengers which will help tourism promotion considerably.

3. Take the case of flood control. Almost all our efforts are concerned with the design and construction of the hardwares such as gates, pumps, channels, etc. to achieve fast flow of water to catchment basins and eventually to the sea. No one seems to take into account the human factor such as the complete indifference of officials in both local and national levels. For instance, the main cause of the submersion of the once prosperous towns of Malabon, Navotas and Obando was man-made; the filling up of Dagat-Dagatan, a natural catch basin for the waters coming from the elevated neighbouring towns by Madame Imelda Romualdez Marcos. The big area was to be converted to a housing project for the poor, her "Vanity Project" which she presented to the United Nations. Despite warnings from some professional engineers such as Engineer Angel Lazaro and myself, about the disastrous consequence on flooding the suburban towns, the governor of MMC had her way; Dagat-Dagatan today is mostly occupied by warehouses and commercial establishments – no housing for the poor. Perhaps the science and technology leaders at that time should have made their objections more strongly.

In Holland, a country below sea level, has elevated flood control management to an art. They have the best equipment for handling different flood situations, but they also have in place an organization of independent water control boards. These are local government bodies responsible for maintaining the channels, pumps, pipelines, etc., free from rubbish. The "dyke meisters" are highly respected persons in the communities, who are chosen from those who benefit the most from the dikes protection. Maybe we should invite a "dyke meister" to help make our program work?

Human Dimension

Much has been said about the challenges facing us due to increasing urbanization of towns and cities, made more difficult by increasing population. But why is this crisis not considered critical in other equally dense urban populations such as Japan, China, Singapore, Hongkong? Some anthropologists say that in those countries, people show that they can live well in crowded communities by sharing facilities with others. They drive their cars following strictly the traffic rules; they live in small domiciles with facilities shared with neighbours. They are conscious that noise they create or the rubbish they generate may cause discomfort to others, hence they follow regulations faithfully.

Creativity and Productivity

The British Trade Group in its Financial Times article stated that it is creativity that really matters, doing more for less, doing more with less. It improves productivity, driving advocacy, inspiring people to create things, create ideas, and create both continuously. Filipinos are very creative people and can improve productivity of infrastructure under the right conditions.

Last month, at the Philippine Quality Award Forum with DTI, the winning organizations both private and public, shared some of their best practices which yielded performance excellence. They have common strengths – dynamic and creative people which gave them the upper hand in any service or marketing efforts locally, regionally and globally. With the application of total quality principles and with leadership that brings out the best in people, productivity rises without waiting for high capital budgets for infrastructures. We felt that we were in the company of some of the country's most innovative people, based on expertise, on information sharing and group dynamics. Some of the past winners were National Grid Corporation, United Laboratories, Mariwasa (Siam) Ceramics, Thompson Reuters, DOST Region XI, etc.