

# ASEAN Macro View

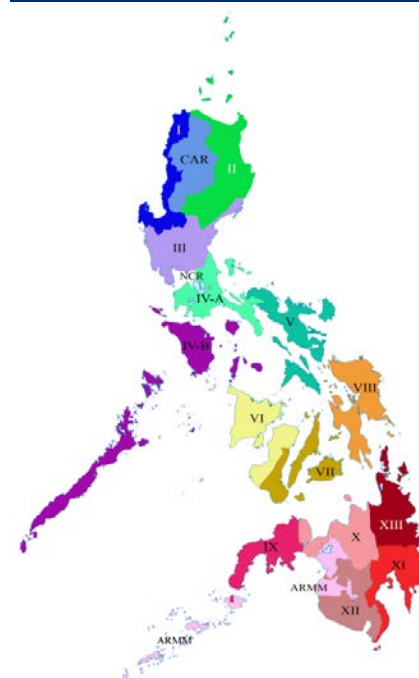
## Philippines Long View: The Regions That Could Roar

- **Look to regions as next growth engine in Philippines** — In this third edition of the ASEAN Long View series, which identifies macro themes we expect to shape ASEAN economies medium-term, we discuss why we expect an upsurge in regional economic activity in the Philippines. Rising spending on infrastructure, especially to widen access to electricity and water, will have numerous and self-reinforcing economic benefits, including creating new and competitive industrial clusters. Continuing cash transfers and social investment will alleviate poverty, raise education standards and help create sustainable consumer demand.
- **Electricity and water: the biggest bang for the regional buck** — Regions with more than 80% of households enjoying electricity access have the highest GDP per capita – higher than for regions with more extensive networks of concrete roads and better literacy rates. On our analysis of infra spending, a 1% rise (decline) in the regions' share of the central government's public-works budget could increase (decrease) regional GDP growth by 0.36% and household consumption by 0.11%.
- **What regions can grow fastest?** — With real per capita incomes in excess of P50,000, Central Luzon, Central Visayas, and Southern and Northern Mindanao (what we term as "Cluster 1") are the regions likely to have the strongest growth momentum, supported by central-government outlays, regional economic zones and adequate business/social infrastructure. Abundant natural and labor resources underpin regional prospects in the next economic cluster (eg, Eastern Visayas), where per-capita income averages P37,000. Poorer regions could surprise on the upside, although a sustained take-off would hinge on an infrastructure overhaul.
- **What industries are likely to thrive in the regions?** — Industries likely to flourish in the regions are labor-intensive manufacturing, agricultural businesses, and IT parks, which dominate existing and in-development PEZA (Philippine Economic Zone Authority) zones. Access to adequate and stable supplies of electricity is a pre-requisite of an industrial reboot.

### Philippine Regions By Citi Growth Tiering (see adjacent map)

| Cluster 1                              |             | Cluster 3                       |             |
|--|-------------|---------------------------------|-------------|
| Real per-capita income of >P50K (2012) |             | Real per-capita income of <P37K |             |
| Central Luzon                          | Region III  | Autonomous Region of            | ARMM        |
| Central Visayas                        | Region VII  | Muslim Mindanao                 |             |
| Northern Mindanao                      | Region X    | Bicol                           | Region V    |
| Southern Mindanao                      | Region XI   | Cagayan Valley                  | Region II   |
| Cluster 2                              |             | CARAGA                          | Region XIII |
| Real per-capita income of P34-40K      |             | Western Mindanao                | Region IX   |
| Ilocos                                 | Region I    | Western Visayas                 | Region VI   |
| MIMAROPA                               | Region IV-B |                                 |             |
| Central Mindanao                       | Region XII  |                                 |             |
| Eastern Visayas                        | Region VIII |                                 |             |

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Note: NCR = National Capital Region; CAR = Cordillera Administrative Region; Source: NSCB

### See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

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## Contents

|   |           |
|---|-----------|
| <b>Executive Summary</b>  | <b>3</b>  |
| <b>The Aquino Agenda: An Interim Scorecard</b>  | <b>8</b>  |
| <b>Fiscal Strategy Impact on Regional Growth</b>  | <b>10</b> |
| Still Worlds Apart...   | 17        |
| <b>Regional Budget Breakdown of DPWH and DoTC as Spending Catalysts</b>                             | <b>18</b> |
| Quantifying the Impact of Fiscal Intervention   | 21        |
| <b>Which Regions Will Lead/Lag Growth?</b>  | <b>23</b> |
| Does Infra Spending Lead to Higher Regional Market Size/PEZA Zones – Or Is It the Other Way Around? | 24        |
| Broad Social and Business Service Indicators Support the Case for Regional Selection                | 25        |
| What Would It Take to Raise the Share of Regional GDP per Capita By 1%?                             | 28        |
| Key Macro Implications of Regions on the Rise   | 29        |
| <b>Industries Likely to Thrive in the Regions</b>   | <b>31</b> |
| Regional Inflation Appears Hostage to Weather Shocks  | 31        |
| <b>Risks to Regional Growth Story</b>   | <b>32</b> |
| <b>Appendix A-1</b>   | <b>37</b> |

## Executive Summary

Third report in ASEAN Long View series, which identifies macro themes we expect to shape ASEAN economies medium-term. See also:

[Indonesia: En Route to a Top-10 World Economy by 2025](#)

[Singapore Swing – Refocusing on ASEAN Regionalization](#)

**Vision of investment-driven growth across the regions.** Investment-led growth from the Philippine regions could ease the economic over-concentration in Metro Manila (or the National Capital Region, NCR) and the country's existing manufacturing capital of CALABARZON (consisting of the Southern Tagalog provinces in the outskirts of Metro Manila). We believe the following factors are likely to spur regional economic growth over time:

- rising regional shares of the budgets of the Public Works & Highways Department (DPWH) and the Transport & Communication Department (DoTC);
- PEZA (Philippine Economic Zone Authority) zones acting as crucibles for new industries and services; and
- fiscal cash transfers/social spending to alleviate regional poverty.

**Regional data underscore growth benefits of public investment.** In 2012, public investments contributed to elevating construction in key regions, which enabled them to outpace national GDP growth in that year of 6.8%. Prime examples were Cagayan Valley (+8.2%), Western Visayas (+7.5%) and regions comprising Mindanao (eg Western Mindanao's GDP rose 12.4%). Public construction in Bicol, Western and Eastern Visayas and Davao grew in excess of 40%.

**Over 2010-12, business capital spending in various regions expanded in double digits, eclipsing the national average.** Aside from 'fiscal crowding-in' effects, we think robust capital spending across the regions has been driven by 277 PEZA-approved zones, which are focused on export-oriented industries/services spanning manufacturing, tourism, IT and agri businesses. PEZA zones are most prevalent in NCR (125), Central Visayas (40) and CALABARZON (39). IT parks/centers driven by BPO (business process outsourcing) activities are concentrated in NCR (114 out of such 178 sites) while CALABARZON accounts for 30 of 65 manufacturing-related industrial zones.

**A further 108 PEZA zones are under development, 68 of which are dedicated to IT parks/centers for offshoring/outourcing activities.** New manufacturing sites account for 25 of the PEZA-approved projects currently under development. Until fairly recently, Socsargen and Zamboanga did not have a PEZA zone between them; the former now plays host to one IT park/center while the latter boasts two manufacturing sites (out of three approved zones).

PEZA Zones Currently Under Development in the Regions, By Type of Business Activity

|                  | Ilocos | Cagayan | Central Luzon | MIMA-ROPA | Bicol | Western Visayas | Central Visayas | Eastern Visayas | Northern Mindanao | Davao | Socsargen |
|------------------|--------|---------|---------------|-----------|-------|-----------------|-----------------|-----------------|-------------------|-------|-----------|
| Agro-Industrial  |        |         | 1             | 1         |       |                 | 1               | 2               |                   |       |           |
| IT Parks/Centers | 1      | 6       | 6             | 7         | 16    | 1               |                 | 5               | 1                 | 1     | 22        |
| Manufacturing    | 1      | 3       | 6             |           | 1     | 2               | 2               |                 | 1                 |       | 1         |
| Tourism          | 1      |         | 3             | 1         | 1     |                 |                 |                 |                   |       | 1         |
| Medical Tourism  |        |         |               |           |       |                 |                 |                 |                   |       |           |
| Total            | 3      | 9       | 16            | 9         | 18    | 3               | 3               | 7               | 2                 | 1     | 24        |

Source: PEZA, Citi Research

**Regions being allocated rising shares of public-works and transport budgets.** Higher shares of the DPWH and DoTC budgets are being allocated to underdeveloped regions – among them, Bicol, Central Visayas and Mindanao – resulting in an upsurge in public construction. The DPWH's budget is 3.5x the size of the DoTC's. We estimate that a 1% rise (decline) in the regions' share of the DPWH budget could increase (decrease) regional GDP growth by an average of 0.36%. That same 1% rise (decline) could elevate (diminish) regional HH

consumption by 0.11%. For the DoTC's regional budget, a 1% change would impact regional GDP by 0.17%.

**Top three economic regions are NCR, CALABARZON and CAR; we tier other regions into three clusters based on real per-capita incomes.** Regions comprising Cluster 1 are Central Luzon, Central Visayas, and Southern and Northern Mindanao. With per capita incomes roughly averaging Php50,000, economic growth in these regions will probably accelerate the fastest. Their shares of the regional budgets of DPWH and DoTC exceeded the regional average in 2010-12. If regional budget allocations from the key infra agencies were to remain favorable for the Cluster 1 areas, alongside their existing higher per-capita incomes, they would almost certainly leap-frog the rest of the archipelago, barring natural disasters or internal political shocks.

#### Philippine Regions By Citi Growth Tiering

##### Cluster 1

Central Luzon  
Central Visayas  
Northern Mindanao  
Southern Mindanao

##### Cluster 2

Central Mindanao  
Eastern Visayas  
Ilocos  
MIMAROPA

##### Cluster 3

Autonomous Region of Muslim Mindanao  
Bicol  
Cagayan Valley  
CARAGE  
Western Mindanao  
Western Visayas

Source: Citi Research

#### **Other regions enjoy a 'natural edge' while lacking the infra budget 'bias'.**

Regions in Cluster 2 are Central Mindanao, Eastern Visayas, Ilocos and MIMAROPA. While these areas do not benefit from the "bias" in the regional DPWH/DoTC budget enjoyed by Cluster 1, the following factors have supported the setting up of PEZA zones in these regions: 1) nearness to relatively cheap inputs such as labor and raw materials, 2) availability of arable land, and 3) beaches/landscapes that attract tourism-related investment. In Cluster 3, Bicol and Western Visayas seem best positioned economically to vault to Cluster 2.

#### **Socio-economic data, eg household access to electricity and water, support concept of regional clustering.**

Regions in which more than 80% of households have access to electricity have the highest GDP per-capita income. Likewise, where at least 40-50% of households have access to a community water system, household incomes tend to be higher than the regional average. By contrast, an area's network of concrete roads has little correlation with income generated. For example, the NCR's concrete roads account for less than 3% of the national total of 15,867km. BICOL and MIMAROPA account for a larger share of concrete roads than the NCR, but make a smaller contribution to the nation's real output (even on a per-capita basis).

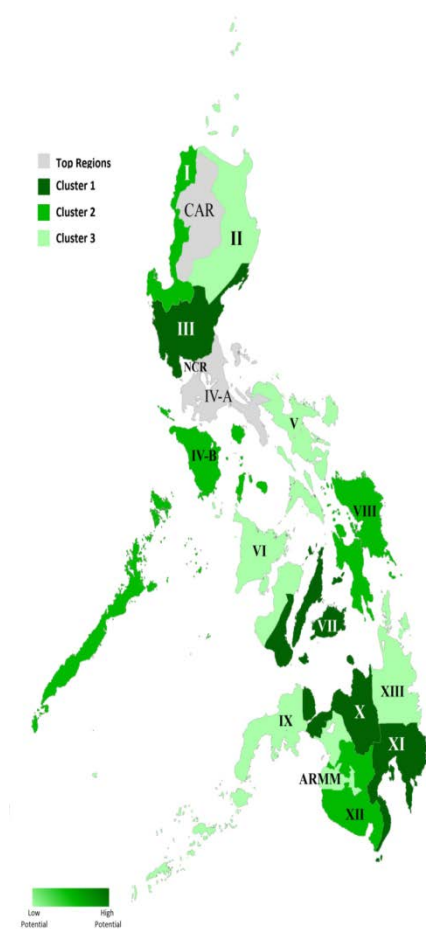
**Fiscal cost of hiking regional share of GDP/capita by 1%.** We estimate how much the combined budgets of DPWH and DoTC would have to rise for just a 1% hike in the share of regional GDP per capita for each of the three regional clusters. For Cluster 1, the required fiscal intervention would be Php5.9bn (1.7% of average regional GDP), with Php5bn (3.4% of average regional GDP) needed for Cluster 2, and Php7.9bn (6.7% of average regional GDP) for the poorer regions in Cluster 3.

**Breakdown of PEZA zones signals what industries would thrive in our regional clusters: manufacturing, agri-business, IT parks and eco-tourism.** We believe that labor-intensive manufacturing industries will do well in these regional clusters, examples ranging from food processing, garments, furniture & fixtures to construction materials.

**Risks to infra-driven regional growth: i) fiscal backsliding by the government/bureaucracy; ii) security issues (eg, the recent takeover of Zamboanga by a separatist faction); iii) hitches with PPP projects; iv) natural disasters (eg, Bohol earthquake, Typhoon Yolanda); and v) power constraints in Mindanao.**

**Key macro implications:** Income improvements in any of the regional clusters would help ease the concentration risk of Philippine economic growth. Breaking the vicious circle of economic stagnation and poverty will require fiscal intervention by the central government, which we believe could be enacted by larger budgets for, and greater operational efficiencies among, key infra agencies, in particular DPWH and DoTC. **If regional incomes generally rise beyond subsistence levels, a shift to discretionary spending would have profound (positive) implications for the overall Philippine economy.**

Figure 1. Regional Ranking by Growth Potential



Source: NSCB

Figure 2. Regions of the Philippines and Key Provinces/Cities

|          | Region  | Population (mn) | RGDP per capita (PHP) | NGDP per capita (USD) | Key Cities/Provinces                                  | Highlights   |
|----------|---|-----------------|-----------------------|-----------------------|---|--|
| LUZON    | National Capital Region<br><i>NCR</i>               | 12.28           | 183,614               | 7,392                 | Makati<br>Manila<br>Quezon City<br>Pasay<br>Taguig    | NCR's share of national GDP at 36%; Services sector comprises 81% of NCR output  |
|          | Cordillera Administrative<br><i>CAR</i>             | 1.67            | 73,532                | 3,004                 | Baguio City<br>Benguet                                | 41.2% of GDP from manufacturing  |
|          | Ilocos Region<br><i>Region I</i>                    | 4.87            | 39,816                | 1,587                 | Ilocos<br>La Union                                    | Services underpin regional growth, primarily through transport, storage and communication  |
|          | Cagayan Valley<br><i>Region II</i>                  | 3.32            | 34,362                | 1,340                 | Batanes<br>Santiago, Isabela<br>Cagayan               | Farm output accounts for 41% of GDP while 48% comes from services. Cagayan economic zone as catalyst to regional industrialization           |
|          | Central Luzon<br><i>Region III</i>                  | 10.58           | 54,970                | 2,151                 | San Fernando City<br>Tarlac City<br>Bulacan<br>Bataan | Contributes 9% of national GDP. Bulk of regional GDP still attributable to manufacturing   |
|          | CALABARZON<br><i>Region IV-A</i>                    | 13.40           | 81,944                | 3,147                 | Cavite<br>Laguna<br>Batangas<br>Rizal<br>Quezon       | 42% of Philippines manufacturing output and host to 30 out of the 65 manufacturing zones; manufacturing accounts for 53% of CALABARZON's GDP |
|          | MIMAROPA<br><i>Region IV-B</i>                      | 2.84            | 38,479                | 1,502                 | Mindoro<br>Palawan                                    | Contributes 36% of national mining & quarrying output. Mining comprises 24% of regional GDP  |
|          | Bicol Region<br><i>Region V</i>                     | 5.58            | 22,311                | 920                   | Naga City<br>Legazpi City<br>Camarines                | Regional economy driven by services sector; battered yearly by typhoons  |
| VISAYAS  | Western Visayas<br><i>Region VI</i>                 | 7.30            | 35,560                | 1,369                 | Iloilo City<br>Bacolod<br>Kalibo, Aklan               | Services sector accounts for 57% of regional GDP   |
|          | Central Visayas<br><i>Region VII</i>                | 7.04            | 52,402                | 2,242                 | Cebu City<br>Bohol                                    | Hosts the most IT parks outside NCR  |
|          | Eastern Visayas<br><i>Region VIII</i>               | 4.21            | 34,311                | 1,284                 | Tacloban City<br>Leyte                                | 38% of economic output traced to industrial sector   |
| MINDANAO | Zamboanga Peninsula<br><i>Region IX</i>             | 3.54            | 37,244                | 1,452                 | Pagadian City<br>Zamboanga City                       | Fastest growing region in 2012 primarily driven by the manufacturing and construction  |
|          | Northern Mindanao<br><i>Region X</i>                | 4.48            | 53,545                | 2,170                 | Bukidnon<br>Cagayan de Oro                            | 27% of total output attributable to manufacturing and construction   |
|          | Davao Region<br><i>Region XI</i>                    | 4.65            | 52,133                | 2,162                 | Davao City<br>Compostela Valley                       | Richest and most populous region in Mindanao; Economic output mostly from services   |
|          | Socsgargen<br><i>Region XII</i>                     | 4.31            | 39,929                | 1,650                 | Cotabato City<br>Gen. Santos City                     | 24% of output from manufacturing; home to 5 of the 17 agro-industrial economic zones   |
|          | CARAGA<br><i>Region XIII</i>                        | 2.50            | 30,944                | 1,159                 | Butuan<br>Agusan<br>Surigao                           | Second poorest region in Mindanao contributing 1.2% to total GDP; mining & quarrying main contributors to regional GDP                       |
|          | Autonomous Region of Muslim Mindanao<br><i>ARMM</i> | 3.36            | 14,318                | 659                   | Basilan<br>Isabela City<br>Lanao del Sur<br>Sulu      | Poorest region in the country with GDP accounting for 0.76% of national total  |
|          | <b>Total</b>  | <b>95.91</b>    | <b>51,730</b>         | <b>2,612</b>          |   |  |

Source: CEIC, NSCB, Citi Research. Note: As of end-2012.

Figure 3. Philippine Economic Regions: Growth Drivers, Impacts and Risks

| Growth Drivers  | Sector Winners   | Regional Winners  | Risks/Challenges   |
|---|--|---|--|
| Rising regional budget shares of infra agencies: DPWH and DoTC                                | <ul style="list-style-type: none"> <li>➤ <b>Construction:</b> Regional construction activity would be given a hefty boost as already flagged by 2010-12 data. Demand for cement and construction materials would be enhanced as construction activities escalate.</li> <li>➤ <b>Agri-business:</b> Regional market access with a better road network, improved irrigation, and other transport infra would unlock market and investment potential of farm sector activities.</li> <li>➤ <b>Banks and financial services:</b> More impetus for big local banks to establish more regional branches as potential for business and employment rises. BSP's HH financial services survey indicated regions outside Metro Manila are 'unbanked'.</li> <li>➤ <b>Transport services:</b> Retail and business demand for efficient transport services (land, inter-island shipping, and air) would follow increased regional production and investments as basic regional infrastructure improves.</li> </ul>  | <ul style="list-style-type: none"> <li>➤ Regions hosting PEZA zones, particularly Cebu, would bask in the government's regional infra bias.</li> <li>➤ Public investments likely to target ecotourism areas would benefit regions in Cluster 2 particularly MIMAROPA, which includes Palawan and Mindoro.</li> <li>➤ Agri-business sectors in the Davao region, Northern Mindanao, Socargen and CARAGA with abundant land assets and adequate population stand to benefit with bigger budgets for rural-based infrastructure including access to stable power and water.</li> </ul>   | <ul style="list-style-type: none"> <li>➤ Corruption and local politics in regions with weak institutional support would stall development and progress from the government's infra program.</li> <li>➤ Political aspirations for autonomy/self-rule by Muslim and ethnic minority groups could complicate land use and derail private investments.</li> <li>➤ Power and water supply constraints in parts of the Visayas and in Mindanao have to be addressed to ease production constraints and improve the investment setting. Subsidies for power, water and other key infra services would be appropriate in the poorest regions.</li> </ul>   |
| Construction of PEZA zones that support manufacturing, agri-business, ecotourism and IT parks | <ul style="list-style-type: none"> <li>➤ Manufacturing enterprises, agribusiness, accommodation &amp; food services, transport &amp; logistics and BPO (call centers) would be enhanced by private (foreign and local) investments in PEZA zones.</li> <li>➤ Second tier of industries likely to benefit from having more PEZA zones in the regions would be: banks and financial services, electricity, gas and water utilities, and retail services. New local/foreign business enterprises would need basic financial support, adequate electricity/water supply from the regional cooperatives, and retail establishments that cater to food and other requirements of workers in the different zones.</li> <li>➤ Real estate sector would get a lift from rising land values as industrial/tourism zones are established. This could spur more commercial/residential property development in areas near the zones.</li> </ul>  | <ul style="list-style-type: none"> <li>➤ Regions belonging to Cluster 1 stand to attract more PEZA zones including investments/ development of new PEZA zones. Cebu, with infrastructure conducive to private investment, would be at the center of PEZA investments. Real estate and building boom is likely to persist for as long as the public and private investment cycle remains upbeat.</li> <li>➤ Fledgling gains in Cluster 2 that would benefit from agri-business and eco-tourism investment initiatives.</li> <li>➤ Regions likely to be transshipment points for commodities and passengers as they serve as gateways to Luzon, Visayas and Mindanao: Cebu, with a planned new international airport, would continue to serve as the gateway to Zamboanga peninsula and Northern Mindanao; Davao city, which hosts an international airport and water ports, would be the transshipment point for agribusiness &amp; mining activities in the Davao region as well as in Gen. Santos city.</li> </ul> | <ul style="list-style-type: none"> <li>➤ Key provinces of Visayas and Mindanao are vulnerable to weather shocks and, in some cases to earthquakes. The government's disaster mitigation plans continue to improve with local gov't assistance &amp; support, but more needs to be done.</li> <li>➤ Decades of poverty and neglect (inadequate civil, political and judicial authority) have fermented high levels of crime and tribal conflicts. Other than infrastructure, social spending and institution building in the poorest regions are urgently required to break the cycle of poverty, inequity and conflict. Central government support for regional and local governments remains essential to strengthen the investment climate.</li> </ul> |
| Awarding/initiation of PPP projects   | <ul style="list-style-type: none"> <li>➤ Transport network including air services &amp; logistics: With the PPP and other BoT projects: Tarlac-Pangasinan-La Union expressway, new Mactan international airport (soon to be bidded out), extension of LRT1 to Cavite and modernization of LRT lines (to be bidded out), NAIA Expressway and NLEX-SLEX connections (to be initiated) would translate into better transport system strengthening Luzon's logistical base as well as the Cebu gateway. Over time these big-ticket items would reduce logistics costs across the industrial zones and commercial/residential areas of Luzon and other regions.</li> <li>➤ <b>Banks</b> to benefit from potential project financing opportunities for PPP projects which could boost loan growth.</li> <li>➤ <b>Real estate</b> to benefit from increased dispersal of property development projects outside the urban centers.</li> <li>➤ <b>Conglomerates</b> engaged in infrastructure and construction sectors could be the lead proponents for PPP projects.</li> <li>➤ <b>Transport companies</b> (i.e. airlines, port operators) to benefit from PPP projects involving regional airport/port rehabilitation and expansion.</li> </ul> | <ul style="list-style-type: none"> <li>➤ Ilocos region would be the first beneficiary of the school building project under PPP.</li> <li>➤ Modernization of transportation networks to lower cargo and passenger transportation costs in the Luzon area with NCR, CALABARZON, CAR and Central Luzon likely beneficiaries.</li> <li>➤ Key regional transshipment points led by Cebu to benefit from region-based PPP projects.</li> </ul>  | <ul style="list-style-type: none"> <li>➤ Need to ensure that PPP framework contains risk mitigation mechanisms in cases of legal/judicial intervention, eg land or contract disputes.</li> <li>➤ Government agencies should stand ready to intervene and assist project proponents in disagreements/disputes with local governments and/or surrounding communities.</li> <li>➤ Ensure local governments would be ready to implement sound business practices and view private investors as partners in development.</li> </ul>   |



| Growth Drivers   | Sector Winners   | Regional Winners  | Risks/Challenges   |
|--|--|---|--|
| Lifestyle shifts/changes in consumer preferences as regional incomes/employment improve over the medium-term with start of industrial modernization/development in the regions | <ul style="list-style-type: none"> <li>➤ As regional per capita incomes shift up, consumer confidence would buoy demand for food and basic consumer necessities, spilling over into demand for transport, utilities and education services.</li> <li>➤ Lifestyle shifts would be apparent with rising demand for cars and appliances, to be followed by demand for owner occupied dwellings.</li> <li>➤ <b>Retailers</b> to benefit from accelerated shift to modern retail trade.</li> <li>➤ As regional incomes improve, more HH can afford restaurant/ recreational &amp; leisure services.</li> <li>➤ Gov't subsidized health and other social services would continue until regional incomes are strong enough to pay for modern, private services.</li> <li>➤ Consumer financing would also be in demand in the prosperous regions, coincident with lifestyle shifts.</li> </ul> | <ul style="list-style-type: none"> <li>➤ Those in Cluster 1 and others likely to experience accelerated development/modernization would go through these shifts in lifestyle and consumer preferences.</li> <li>➤ Central Luzon, CALABARZON and other regions comprising Luzon and linked to NCR would stand out as well if inter-regional economic activities escalate eg local tourism demand enhanced by these new transport networks that can result in higher incomes &amp; employment within the Luzon grid.</li> </ul> | <ul style="list-style-type: none"> <li>➤ Need for urban planning in these upcoming regional towns/cities to ensure appropriate land use, zoning, traffic management and infrastructure development.</li> <li>➤ Option to privatize provision of basic infrastructure services to regions with improving incomes that can afford to pay while gradually reducing fiscal subsidies.</li> </ul> |

Source: Citi Research

## The Aquino Agenda: An Interim Scorecard

In previous research,<sup>1</sup> we have focused on the need for infrastructure expenditure to lift medium-term growth and employment in the Philippines and in turn accelerate per GDP capita income to US\$5,000.

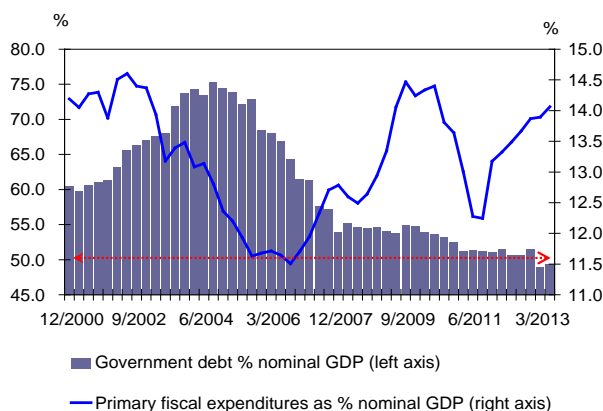
**Social and infrastructure spending consistent with a stable fiscal deficit path of roughly 2% of GDP**

Three years of Pres. Aquino's agenda has led to peak GDP growth of 7.7%YoY (1Q13), thus far driven largely by a bigger share of fiscal expenditures to output and with governance reforms to budget and revenue operations providing greater spending efficiency and stronger revenue collection. Government priorities are social and infrastructure spending consistent with creating a stable fiscal deficit path over the medium-term of roughly 2% of GDP.

Key indicators of a sustainable fiscal agenda are:

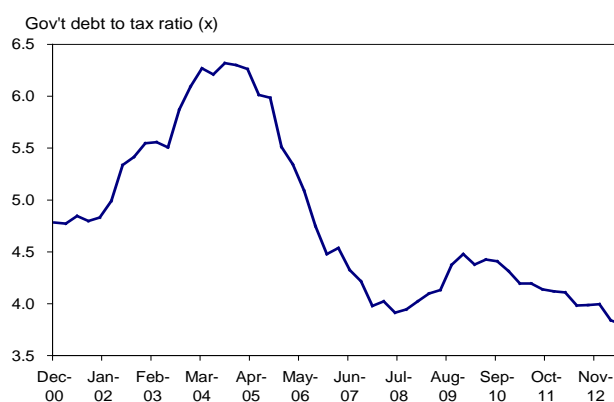
- Infra (and broader capital) outlays have been taking a bigger share of the national budget since 2011 (from 15.9% to 18.7% in 2013), eclipsing the share of the interest bill in 2013 (which eased over the same period from 17.7% to 16.6%).
- Tax collections continue to improve, evidenced by a tax to GDP ratio testing 13.5% in 2013.
- As of 1H13, the (gross) government debt ratio to GDP had fallen to less than 50%<sup>2</sup>. Of government debt, the share of FX liabilities has declined to 36% and more than 80% of the total is long-term debt. If this profile is sustained, more resources will be available for social and infra spending.

Figure 4. Larger Contribution of Primary Spending to GDP as Government Debt to GDP Wanes



Source: Bureau of the Treasury, CEIC, Citi Research

Figure 5. New Low for the Gov't Debt to Tax Ratio



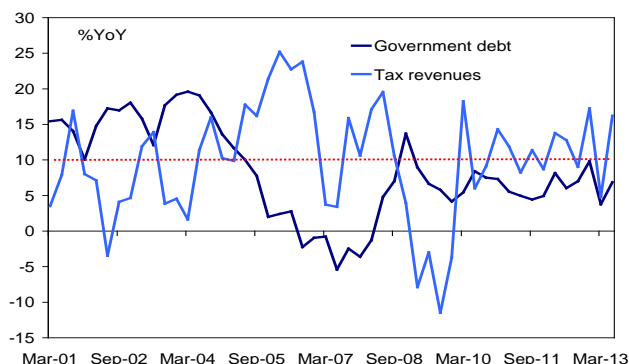
Source: Bureau of the Treasury, CEIC, Citi Research

<sup>1</sup> [Philippine Strategy - The Medium-Term Game Changer – Public Infrastructure](#), 9 November 2012

<sup>2</sup> [Philippines Macro View - Lower Share of Government Foreign Debt Eases Debt Service](#), 19 August 2013

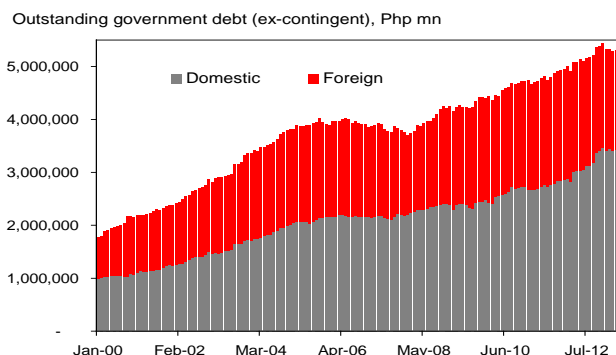


Figure 6. Tax Revenue Out-grew Nominal GDP (10% vs. 8-9%) While Government Debt Expanded Below Nominal GDP



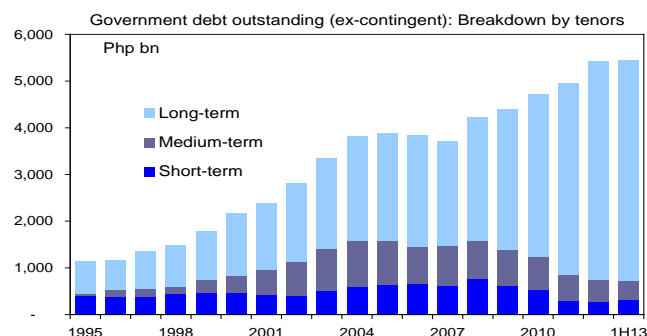
Source: Bureau of the Treasury, CEIC, Citi Research

Figure 7. Rising Share of Domestic Debt Relative to Total Government Debt Reduces FX Vulnerability



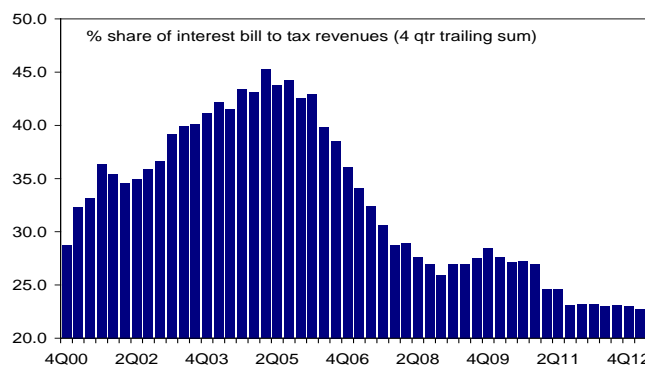
Source: Bureau of the Treasury, CEIC, Citi Research

Figure 8. Rising Share of Long-Term Debt Resulting in Restructuring of Government's Domestic Debt



Source: Bureau of the Treasury, CEIC, Citi Research

Figure 9. Lower Share of Interest Payments to Taxes Suggests Improved Debt Maturity Profile, Freeing Up Resources For More Infra and Social Spending



Source: Bureau of the Treasury, CEIC, Citi Research

## Fiscal Strategy Impact on Regional Growth

Fiscal strategy over the past three years has contributed to regional growth in a number of ways, as discussed below.

**In 2012, many regions posted GDP growth ahead of the national rate of 6.8%.**

**From Cagayan up north to the provinces in Mindanao, regional GDP growth eclipsed the national average in 2012.** In 2012, many regions outside Metro Manila posted GDP growth ahead of the national rate of 6.8%. Cagayan Valley GDP grew 8.2%, from 5.6% in 2011. Western Visayas (Iloilo region) grew 7.5% in 2012. Except for ARMM (Autonomous Region of Muslim Mindanao), most of the regions comprising Mindanao outpaced national GDP growth (*see chart below*). Western Mindanao region grew 12.4%, from 0.1% in 2011. Also exceeding the national average were Northern Mindanao (7.4%), Central Mindanao (8.1%), Southern Mindanao (7.4%) and CARAGA (10.6%).

**Concentration of regional GDP contributions mirrors under-development in the lagging regions.** Despite strong regional gains, regional contributions to national GDP are highly concentrated geographically (only a few regions are relevant in determining national GDP). The main contributions to national GDP come from: 1) National Capital Region (NCR), which has a 36% share of GDP; 2) CALABARZON (comprising the provinces of Cavite, Laguna, Batangas, Rizal and Quezon), the country's manufacturing capital, which has a 17.4% share of national output; and 3) Central Luzon (dominated by key provinces Tarlac, Pangasinan and Pampanga), with more than a 9% share of GDP.

The other regional contributions to total output are in the mid to low single-digits. Northern Luzon (consisting of Cordillera Autonomous Region, Ilocos and Cagayan Valley) has a share of GDP that is slightly above 7%, but on average each key province contributed 2.4%. Poorest regions in Luzon – Bicol and MIMAROPA (Mindoro, Marinduque, Romblon and Palawan) – contributed 2% and 1.7% to GDP, respectively. Visayas had 12.2% of GDP but, on average, each of the three key regions contributed 4.2%. Mindanao's GDP was 14.4% of the national total but, on average the six key constituent regions (including ARMM) made a 2.4% contribution.

Figure 10. Regional Real GDP Growth: Those Comprising Mindanao (Except ARMM) Exceeded National GDP Growth in 2012

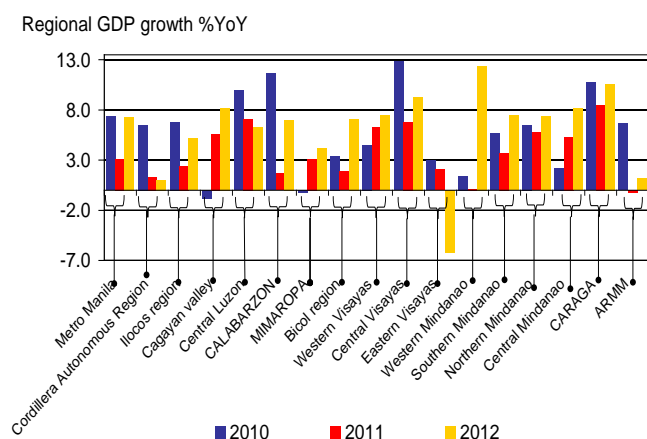
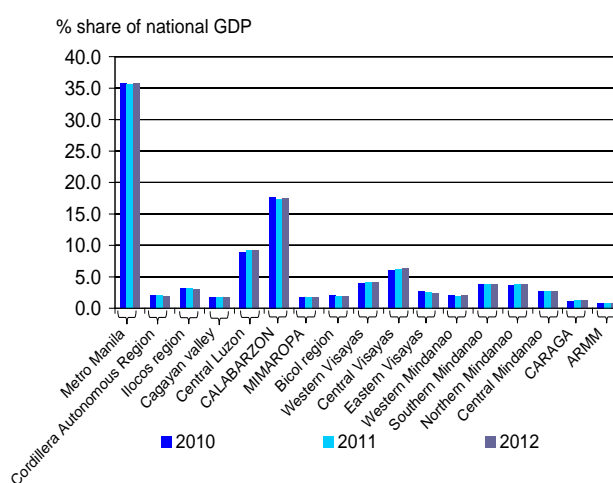


Figure 11. Concentration Risk in Regional Contributions to National GDP



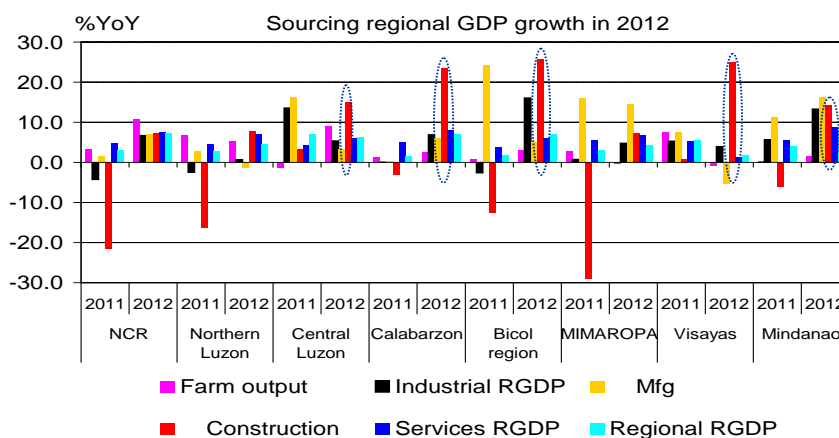
Source: NSCB, Citi Research

Source: NSCB, Citi Research

**The key catalyst for regional GDP growth (excluding NCR) has been construction.**

**On the supply side, construction output led regional GDP growth in 2012.** The key catalyst for regional GDP growth (excluding NCR) has been construction. As shown in the chart below, construction growth exceeded 20% for some of the poorest regions, such as Bicol and Visayas, and was over 10% in Central Luzon and Mindanao. CALABARZON posted over 20% growth in construction, which may have been driven by private construction including real estate development as urban sprawl continues in regions where infrastructure may rival that of NCR (regional construction GDP is not broken down into private and public in published data). **For regions where real estate development has just begun, such as metropolitan urban enclaves like Metro Iloilo, we believe public construction led by infra spending was largely the reason for strong construction growth in 2012.**

Figure 12. Construction Boomed in Some of the Poorest Regions in 2012

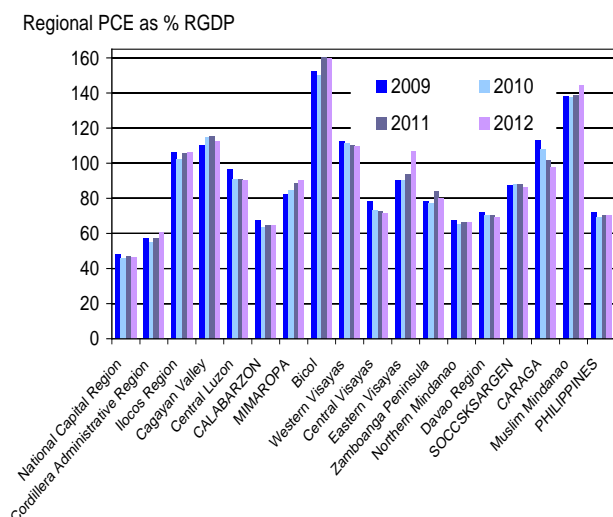


Source: NSCB, Citi Research

**When consumption accounts for 80% or more of a region's GDP, income levels are too low to generate savings that can fund regional investments.**

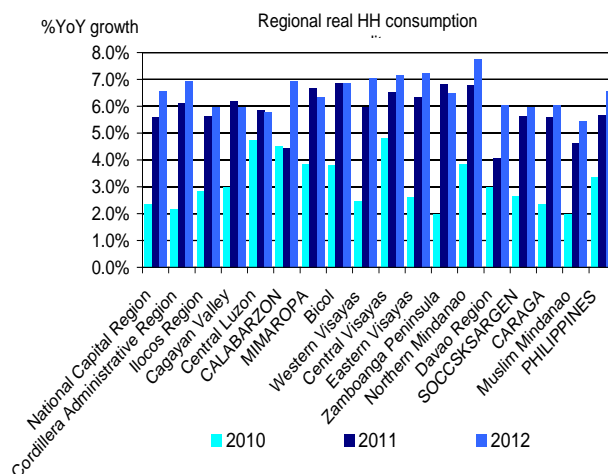
**In terms of personal consumption expenditure (PCE), household consumption in some of the poorest regions was higher relative to local GDP than the national average of 70%.** When consumption expenditures account for 80% or more of a region's GDP, income levels are too low to generate the savings that can fund regional investments. As shown in the chart below, HH consumption in Ilocos, Cagayan Valley, Bicol, and Muslim Mindanao exceeded 100% of respective regional GDPs over the 2009-12 period. However, we note that regional HH consumption in 2012 grew strongly in nearly all regions, exceeding the pace in 2011. Only a few regions, mostly comprising Mindanao, recorded HH consumption growth that lagged the national average of 6.6% in 2012.

Figure 13. Poorest Regions, eg Bicol, Posted HH Consumption >100% of Regional GDP



Source: NSCB, Citi Research

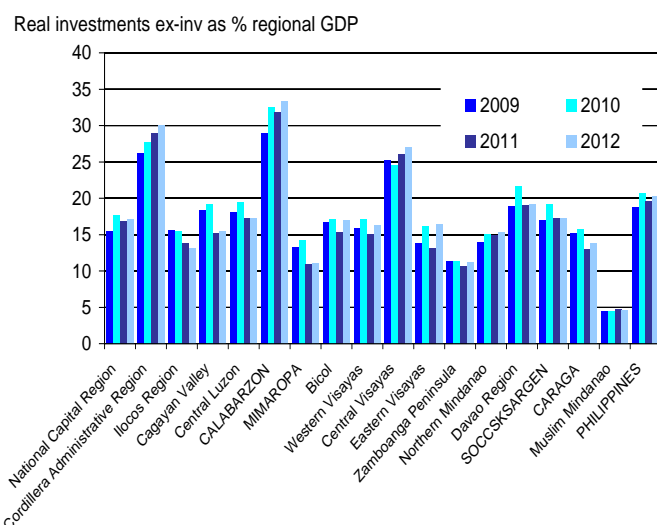
Figure 14. HH Consumption in Most Regions Grew Faster in 2012 With Only A Few Regions Lagging the National Growth Average



Source: NSCB, Citi Research

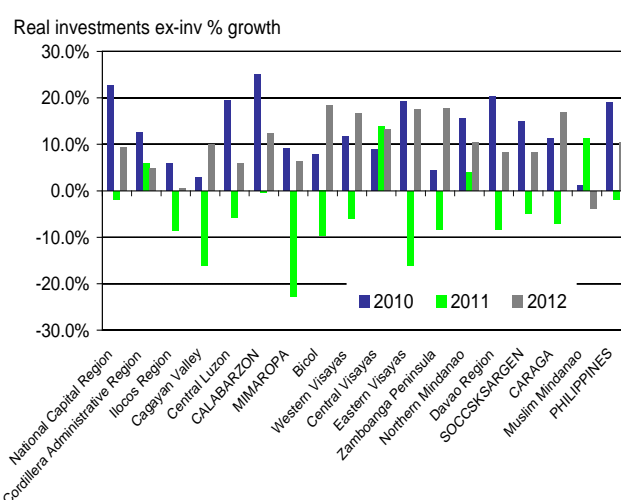
**CALABARZON, Central Visayas and CAR are the only three regions whose real investment (ex-inv) share of regional GDP was consistently higher than the national average of 20% in 2009-12.** NCR's 3-year average real investment share to GDP was 3ppt short of the national average. Common to CAR and CALABARZON was that manufacturing output exceeded their respective GDPs by 40%. Both regions host export processing zones. Other regions' inability to attract major investments stunted their creation of jobs and growth in per-capita incomes, thus entrenching poverty. Vulnerability of some regions to natural disasters – eg Bicol stands in the path of typhoons – makes it more urgent that sturdier defenses are built through public spending on infrastructure.

Figure 15. Only 3 Regions Posted Average Share of Real Investments to Regional GDP That Were Higher Than the National Average in 2009-12



Source: NSCB, Citi Research

Figure 16. Nine Regions Posted 2-Digit Gains In Real Investments in 2012, Some Eclipsing the National Average of 10.4%

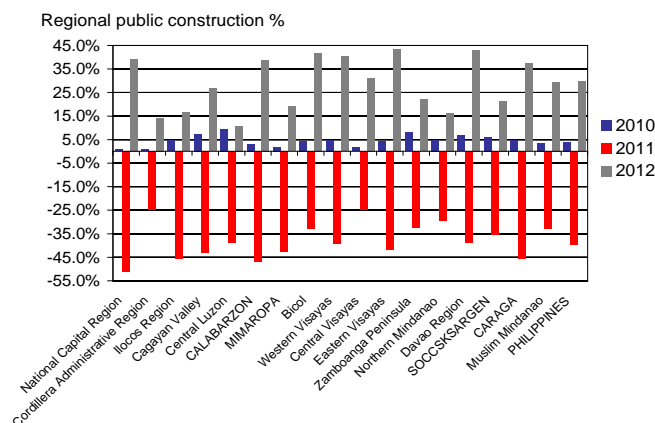


Source: NSCB, Citi Research

Following declines in 2011, real investments (ex-inv) grew for most regions in 2012, in some cases at a faster pace than the national average. Among the 9 regions that posted 2-digit investments, Bicol (18.4%), closely followed by Zamboanga (17.9%) and Eastern Visayas (17.5%), led the others in the growth league table.

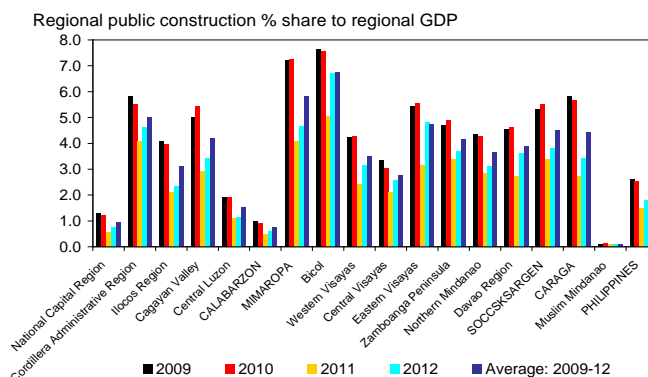
**Strong recovery of public and private construction in 2012, led by fiscal spending, elevated regional real investment gains.** Public construction posted hefty gains exceeding 40% in 2012 (vs significant losses in 2011) in the Bicol, Western & Eastern Visayas and the Davao regions. Strong public investments in these regions resulted in larger contributions of public construction to respective regional outputs and also exceeded the national average of 2.1% over 2009-12. Meanwhile, real estate developments, industrial construction and higher public construction have supported upbeat private construction since 2010, particularly for Central Luzon (15.5% growth in private construction in 2012), CALABARZON (21.8%), Bicol (11.5%), the whole of Visayas, Zamboanga (33.8%) and CARAGA (15.9%). Visayas and Zamboanga have posted 2-digit gains since 2010.

Figure 17. Strong Recovery of Public Construction in 2012 Across Most Regions



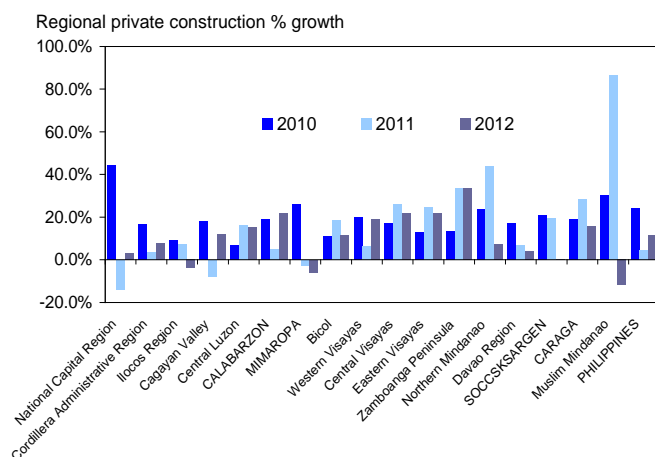
Source: NSCB, Citi Research

Figure 18. Public Construction as % of Regional Output Was Higher in Some Regions Than the National Average of 2.1% (2009-12)



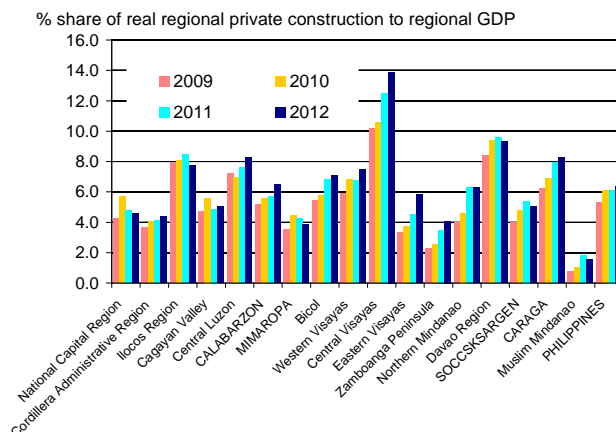
Source: NSCB, Citi Research

Figure 19. Regional Private Construction Was Also Robust in 2012



Source: NSCB, Citi Research

Figure 20. Private Construction as % of Output Was Higher in Ilocos, Central Visayas, Davao and CARAGA Than Nationally

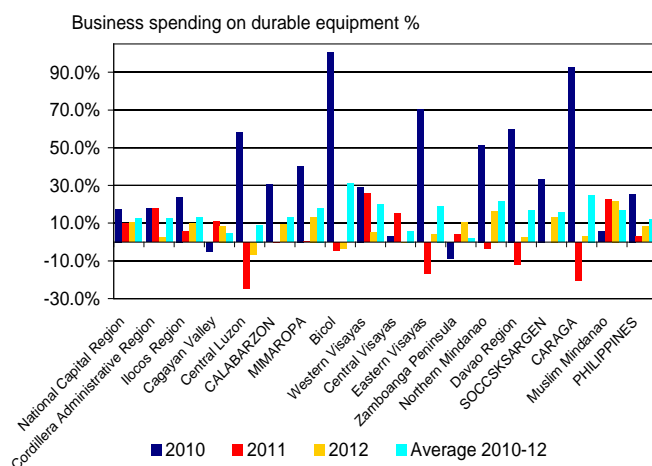


Source: NSCB, Citi Research

**Other than NCR, regions delivering 2-digit gains in business capital spending over 2010-12 (and eclipsing the national average) were Ilocos, CAR, CALABARZON, MIMAROPA, Bicol, Western & Eastern Visayas and Davao.**

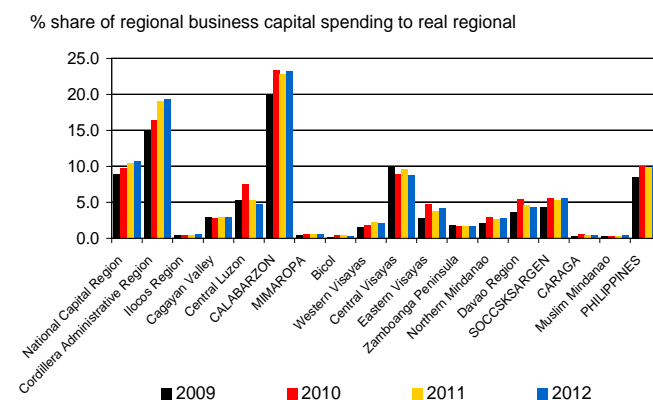
Aside from 'fiscal crowding-in' effects, we think robust durable goods investments could also be connected to the 277 operating PEZA-approved manufacturing, tourism, IT, and agro-industrial centers spread across the regions. Of the operating PEZA zones, the largest number of export-oriented industrial/services sites are in NCR (125 zones), Central Visayas (40) and CALABARZON (39).

Figure 21. Regional Private Construction Was Also Robust in 2012



Source: NSCB, Citi Research

Figure 22. Share of Regional Business Capital Spending to GDP Was Highest in NCR, CAR, CALABARZON and Central Visayas



Source: NSCB, Citi Research

Figure 23. PEZA: Operating Zones Across the Regions

|                  | Ilocos | Cagayan | Central Luzon | CALA-BARZON | MIMA-ROPA | Bicol | Western Visayas | Central Visayas | Eastern Visayas | Northern Mindanao | Davao | Socsargen | NCR | CAR | TOTAL |
|------------------|--------|---------|---------------|-------------|-----------|-------|-----------------|-----------------|-----------------|-------------------|-------|-----------|-----|-----|-------|
| Agro-Industrial  |        | 1       |               |             |           |       |                 | 3               | 2               | 2                 |       | 5         |     |     | 17    |
| IT Parks/Centers | 1      |         | 5             | 7           |           | 2     | 14              | 28              | 1               | 1                 | 4     |           | 114 | 1   | 178   |
| Manufacturing    | 1      |         | 10            | 30          | 1         | 2     |                 | 7               | 1               | 4                 | 1     | 1         | 6   | 1   | 65    |
| Tourism          | 1      |         |               | 1           | 3         | 1     | 1               | 2               |                 | 1                 |       |           | 4   | 1   | 15    |
| Medical Tourism  |        |         |               | 1           |           |       |                 |                 |                 |                   |       |           | 1   |     | 2     |
| Total            | 3      | 1       | 15            | 39          | 4         | 5     | 15              | 40              | 4               | 8                 | 9     | 6         | 125 | 3   | 277   |

Source: PEZA, Citi Research

By type of economic activity, IT parks/centers driven by BPO activities were concentrated in NCR (114 out of 178 approved sites) while CALABARZON accounted for 30 of the 65 manufacturing-related industrial zones. We suspect a thriving PEZA site supports not just private construction in the locality but also strong growth in investments in durable equipment. Other than ARMM, Zamboanga and CARAGA have failed to establish PEZA zones due to weak infrastructure, security issues and limited availability of technically competent labor.

**Moreover, 108 PEZA-approved zones are under development with 68 dedicated to IT parks/centers, highlighting the impact of offshoring/outsourcing activities.** Manufacturing sites account for 25 of the PEZA-approved projects under development. We believe development of the industrial/IT/tourism/agro-industrial sectors contributes to more investments in capacity and private construction. Better infrastructure, particularly in Bicol, Ilocos, Central Luzon, the Visayas and Mindanao, would be a definite advantage in



attracting more private investments. A track record of hosting export-oriented activities with conducive infrastructure enabled CALABARZON to host 16 approved PEZA projects, mainly in IT and manufacturing, while Central Visayas would be a haven to 16 IT parks. NCR continues to attract the bulk of IT project sites at 22. Until fairly recently, Socsargen and Zamboanga did not have a PEZA zone between them; the former now plays host to one IT park/center while the latter boasts two manufacturing sites (out of three approved zones).

Figure 24. PEZA Zones Under Development

| No. of Operating Zones | Ilocos   | Cagayan  | Central Luzon | CALA-BARZON | MIMA-ROPA | Bicol     | Western Visayas | Central Visayas | Eastern Visayas | Northern Mindanao | Davao    | Socsargen | NCR      | CAR      | TOTAL      |
|------------------------|----------|----------|---------------|-------------|-----------|-----------|-----------------|-----------------|-----------------|-------------------|----------|-----------|----------|----------|------------|
| Agro-Industrial        |          |          | 1             | 1           | 1         |           |                 | 1               | 2               |                   |          |           |          |          | 6          |
| IT Parks/Centers       | 1        | 6        | 6             | 1           | 7         | 16        | 1               |                 | 5               | 1                 | 1        | 22        | 1        |          | 68         |
| Manufacturing          | 1        | 3        | 6             | 2           |           | 1         | 2               | 2               |                 | 1                 |          | 1         | 2        | 4        | 25         |
| Tourism                | 1        |          | 3             | 2           | 1         | 1         |                 |                 |                 |                   |          | 1         |          |          | 9          |
| Medical Tourism        |          |          |               |             |           |           |                 |                 |                 |                   |          |           |          |          | 0          |
| <b>Total</b>           | <b>3</b> | <b>9</b> | <b>16</b>     | <b>6</b>    | <b>9</b>  | <b>18</b> | <b>3</b>        | <b>3</b>        | <b>7</b>        | <b>2</b>          | <b>1</b> | <b>24</b> | <b>3</b> | <b>4</b> | <b>108</b> |

Source: PEZA, Citi Research

**Another clear regional trend in 2012 was elevated government fiscal intervention through social spending ie higher conditional cash transfers.** For most of the under-developed regions, government social expenditures have consistently provided the spark to growth, alongside household spending. Growth in the government's non-infra spending (but excluding interest payments) also made a large contribution to GDP for some of the poorest regions which otherwise lack spending catalysts. As shown in the table below, government consumption to local GDP in 2009-12 exceeded the national average of 10.1% in Bicol (18.1% share), Cagayan (14.2%), Eastern Visayas (12.1%), Zamboanga (11.8%), CARAGA (15.3%) and Muslim Mindanao (22%).

Figure 25. Regional Profile of Real Government Consumption Expenditures

| (at 2000 prices)    | 2010        |                         | 2011        |                         | 2012         |                         | Average 2009-12         |
|---------------------|-------------|-------------------------|-------------|-------------------------|--------------|-------------------------|-------------------------|
|                     | % growth    | % share to regional GDP | % growth    | % share to regional GDP | % growth     | % share to regional GDP | % share to regional GDP |
| NCR                 | 3.8%        | 14.5                    | 2.1%        | 14.4                    | 10.4%        | 14.8                    | 14.7                    |
| CAR                 | 3.5%        | 8.6                     | 2.3%        | 8.7                     | 16.8%        | 10.0                    | 9.0                     |
| Ilocos Region       | 5.2%        | 10.4                    | 2.4%        | 10.4                    | 13.9%        | 11.2                    | 10.6                    |
| Cagayan Valley      | 4.2%        | 14.5                    | 1.9%        | 14.0                    | 13.3%        | 14.7                    | 14.2                    |
| Central Luzon       | 4.7%        | 6.0                     | 2.9%        | 5.8                     | 13.5%        | 6.2                     | 6.1                     |
| CALABARZON          | 3.5%        | 3.1                     | 2.9%        | 3.1                     | 12.8%        | 3.3                     | 3.2                     |
| MIMAROPA            | 4.2%        | 10.7                    | 1.3%        | 10.6                    | 13.7%        | 11.6                    | 10.8                    |
| Bicol               | 3.7%        | 17.6                    | 2.3%        | 18.0                    | 11.6%        | 18.8                    | 18.1                    |
| Western Visayas     | 4.7%        | 10.9                    | 2.5%        | 10.4                    | 11.5%        | 10.8                    | 10.7                    |
| Central Visayas     | 4.0%        | 5.6                     | 0.5%        | 5.3                     | 15.0%        | 5.5                     | 5.6                     |
| Eastern Visayas     | 4.5%        | 11.7                    | 0.2%        | 11.4                    | 13.6%        | 13.8                    | 12.1                    |
| Zamboanga Peninsula | 4.1%        | 11.5                    | 3.5%        | 12.2                    | 11.7%        | 12.1                    | 11.8                    |
| Northern Mindanao   | 4.4%        | 7.2                     | 1.9%        | 6.9                     | 15.5%        | 7.5                     | 7.2                     |
| Davao Region        | 3.7%        | 6.7                     | 1.2%        | 6.5                     | 15.2%        | 7.0                     | 6.7                     |
| SOCSARGEN           | 4.1%        | 8.8                     | 1.0%        | 8.4                     | 20.9%        | 9.4                     | 8.8                     |
| CARAGA              | 4.0%        | 15.6                    | 1.6%        | 14.2                    | 19.3%        | 15.3                    | 15.3                    |
| Muslim Mindanao     | 4.1%        | 21.4                    | 2.7%        | 21.1                    | 16.3%        | 24.3                    | 22.0                    |
| <b>PHILIPPINES</b>  | <b>4.0%</b> | <b>10.0</b>             | <b>2.1%</b> | <b>9.9</b>              | <b>12.2%</b> | <b>10.3</b>             | <b>10.1</b>             |

Source: NSCB, Citi Research

**Government consumption combined with public construction is a strong factor in regional growth, particularly in under-developed areas.** Over the four years to 2012, total fiscal expenditures as a proportion of regional output averaged 24.8% in Bicol, 18.5% in Cagayan, nearly 20% in CARAGA and 22.1% in ARMM.

These and other regions had exposure to total fiscal expenditures that exceeded the national average of 12.2%.

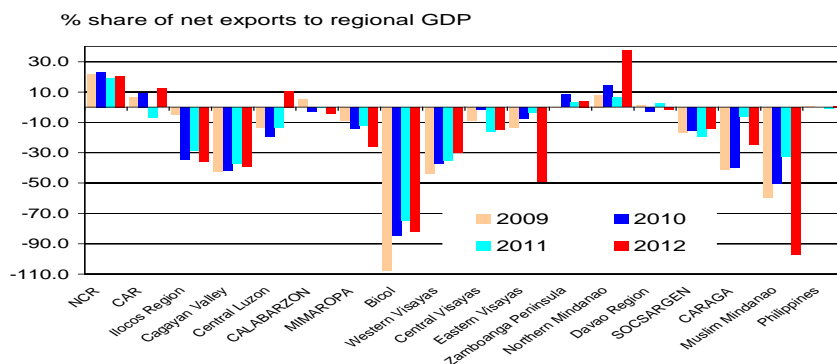
Figure 26. How Exposed Are the Different Regions to Fiscal Expenditures?

| Total fiscal spending (Gov't consumption + public construction) (at 2000 prices) | 2010     |                         | 2011     |                         | 2012     |                         | Average 2009-12         |
|--|----------|-------------------------|----------|-------------------------|----------|-------------------------|-------------------------|
|  | % growth | % share to regional GDP | % growth | % share to regional GDP | % growth | % share to regional GDP | % share to regional GDP |
| NCR  | 3.58     | 15.7                    | -1.98    | 15.0                    | 11.51    | 15.5                    | 15.6                    |
| CARAGA   | 2.41     | 14.1                    | -8.22    | 12.8                    | 16.00    | 14.7                    | 14.1                    |
| Ilocos Region  | 5.02     | 14.3                    | -10.87   | 12.5                    | 14.30    | 13.6                    | 13.8                    |
| Cagayan Valley   | 5.08     | 20.0                    | -10.39   | 16.9                    | 15.62    | 18.1                    | 18.5                    |
| Central Luzon  | 5.79     | 7.9                     | -7.16    | 6.9                     | 13.03    | 7.4                     | 7.6                     |
| CALABARZON   | 3.37     | 4.0                     | -8.43    | 3.6                     | 16.28    | 3.9                     | 3.9                     |
| MIMAROPA   | 3.23     | 17.9                    | -16.53   | 14.7                    | 15.18    | 16.3                    | 16.6                    |
| Bicol  | 3.94     | 25.2                    | -8.32    | 23.0                    | 18.25    | 25.4                    | 24.8                    |
| Western Visayas  | 4.73     | 15.2                    | -9.19    | 12.9                    | 16.91    | 14.0                    | 14.3                    |
| Central Visayas  | 3.16     | 8.7                     | -8.40    | 7.4                     | 19.64    | 8.1                     | 8.4                     |
| Eastern Visayas  | 4.47     | 17.3                    | -13.40   | 14.5                    | 20.04    | 18.6                    | 16.8                    |
| Zamboanga Peninsula  | 5.27     | 16.4                    | -7.23    | 15.5                    | 13.95    | 15.8                    | 16.0                    |
| Northern Mindanao  | 4.59     | 11.4                    | -9.74    | 9.8                     | 15.77    | 10.6                    | 10.9                    |
| Davao Region   | 4.95     | 11.3                    | -15.16   | 9.2                     | 23.41    | 10.6                    | 10.6                    |
| SOCSARGEN  | 4.83     | 14.3                    | -13.12   | 11.8                    | 21.06    | 13.2                    | 13.3                    |
| CARAGA   | 4.23     | 21.3                    | -11.04   | 16.9                    | 22.27    | 18.7                    | 19.7                    |
| Muslim Mindanao  | 4.15     | 21.5                    | 2.50     | 21.2                    | 16.30    | 24.4                    | 22.1                    |
| PHILIPPINES  | 4.02     | 12.5                    | -6.31    | 11.3                    | 14.49    | 12.1                    | 12.2                    |

Source: NSCB, Citi Research

**Net trade (real exports minus real imports) was massively in deficit for the regions overall in 2009-12, particularly in the poorer areas (see chart below).** Weak regional production capacity, perhaps due to inadequate infrastructure, and a shortfall in private investment in under-developed regions meant output was insufficient to meet local needs or was not competitive enough to be sold overseas. Over 2009-12, net imports to GDP were 87.3% for Bicol, 25.9% for Ilocos, 40% for Cagayan Valley, 36.7% for Western Visayas, and 60% for ARMM. Meanwhile, *NCR had net exports of 21.2% of its GDP in 2009-12*, presumably from strong foreign exchange revenues generated by its IT parks/centers and manufacturing zones, for a net export ratio of 16.6%. Nationally, the Philippines had average net trade of 0.1% of GDP over 2009-12.

Figure 27. More Regions With Net Imports Than Net Exports Over 2009-12



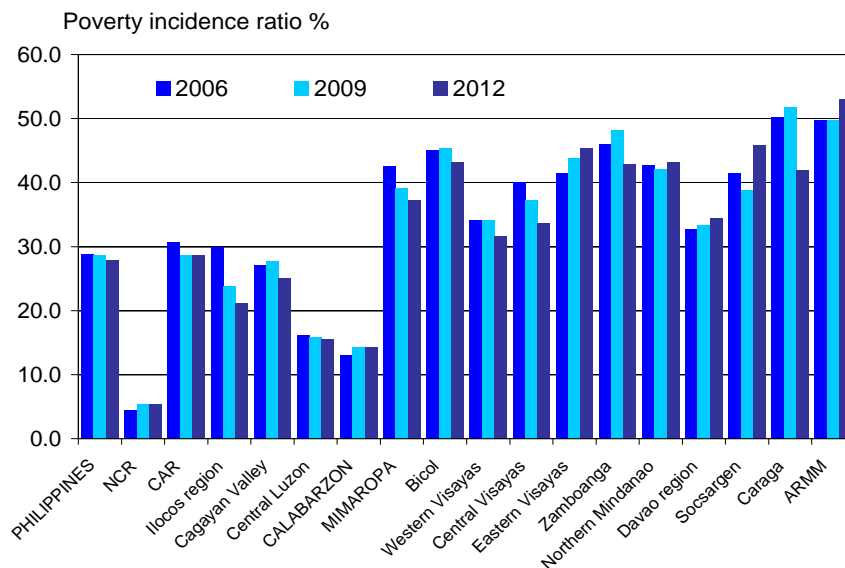
Source: NSCB, Citi Research

## Still Worlds Apart...

On average, the Philippines' poverty incidence ratio – or the percentage of the population with incomes below a certain threshold – has not changed materially since 2009. Perhaps this is the underlying reason for the government's medium-term focus on regional development led by social and infra spending. (Note: Poverty incidence ratios are estimated every 3 years over the 2006-12 survey period.)

Poverty incidence ratios by regions capture the country's economic polarity (thereby creating more fiscal urgency to address the imbalance). As shown in the chart below, while a few regions are relatively affluent, in the majority more than 40% of the populations are officially living in poverty. In 2012, poverty incidence ratios declined in CAR, MIMAROPA, Bicol, Zamboanga, Western Visayas, and Caraga, though they mostly were still stubbornly high in the 20-30% range. Moreover, these localized gains were not enough to make a significant difference overall in 2012.

Figure 28. Poverty Incidence Ratios Are High (>20%) in 14 Regions and Are Less Than 20% in Only 3 Regions



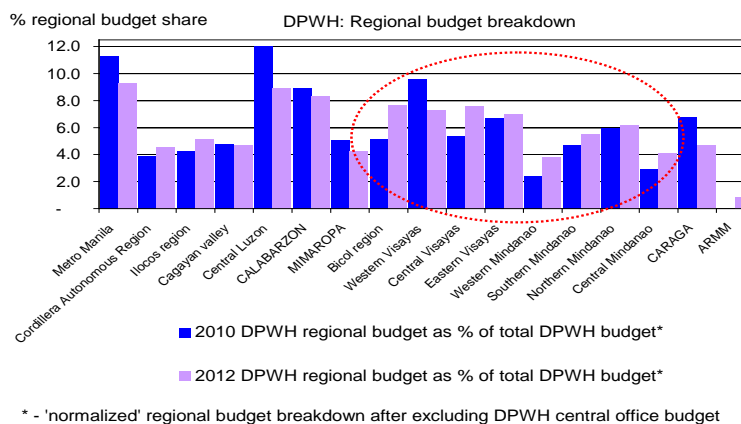
Source: NSCB, Citi Research

## Regional Budget Breakdown of DPWH and DoTC as Spending Catalysts

Regional GDP's material exposure to fiscal spending strongly suggests the rising/declining regional budgets of the DPWH (Department of Public Works & Highways) and DoTC (Department of Transport and Communications) – the primary infra spending agencies – are the key swing factor in the respective growth outlooks.

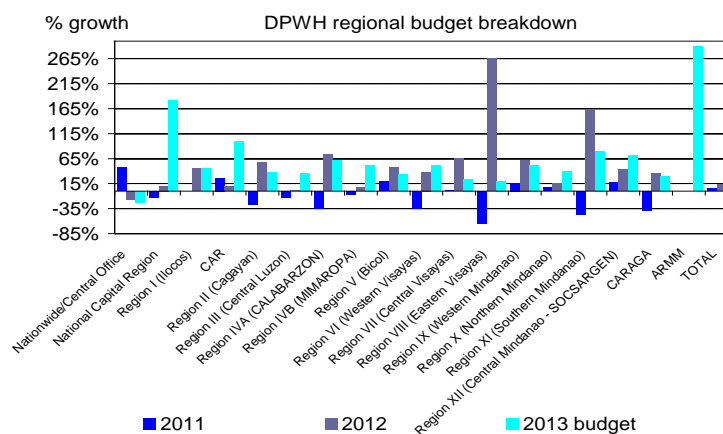
**Rising budget share of DPWH and DoTC for under-developed regions has supported strong contribution of public construction.** DPWH's budget is 3.5x that of DoTC. Over the 2010-13 budget cycle, DPWH's regional budgets (relative to its total budget) indicated a rising share for the Cordillera Autonomous Region (CAR), Bicol, Central Visayas and to most of the regions comprising Mindanao, which implied more infra spending in these areas. As shown in the charts below, faster budget growth for DPWH has led to higher allocations for key regions.

Figure 29. DPWH: Regional Breakdown Shows Rising Budget Shares for Some of the Poorest Regions Outside Metro Manila



Source: Department of Budget and Management, Citi Research

Figure 30. DPWH: Regional Breakdown Shows Hefty Gains in 2011-12 Budget Cycle



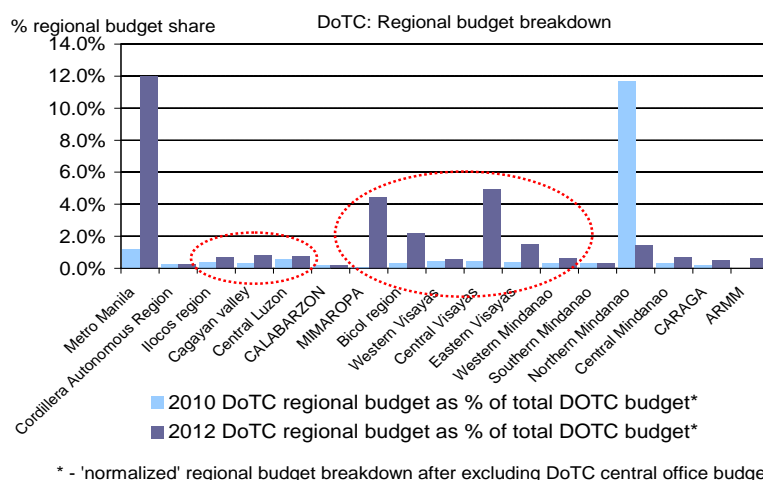
Source: Department of Budget and Management, Citi Research

**Regional allocations also rose from the DoTC's budget, with growing shares for CAR, Ilocos and Central Luzon, although still less than 1% of DoTC's total budget.** Significant budget allocations by DoTC were earmarked for Bicol and MIMAROPA as their respective regional shares rose to 4.5% and 2.2%, in 2012, respectively, from 0.3% and practically zero in 2010. The other regions with rising DoTC budget allocations were Central Visayas, with Cebu as the key regional hub, and Eastern Visayas, which consists of Samar and Leyte and is characterized by deep-seated poverty.

**For both DPWH and DoTC, regional budgets posted 2- to 3-digit gains over 2011-12.**

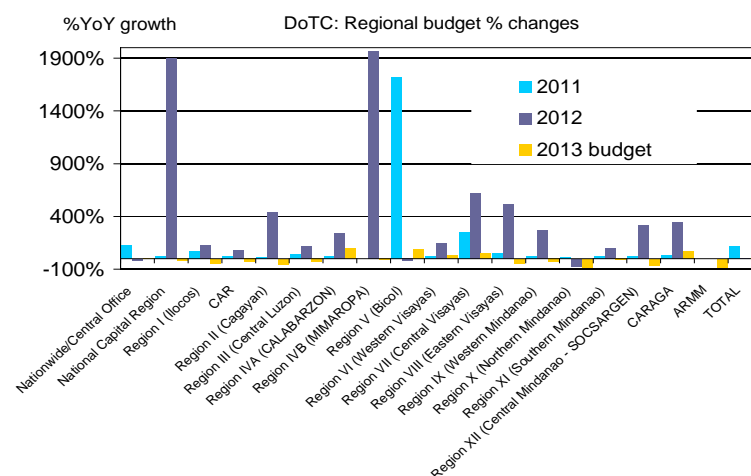
For both DPWH and DoTC, regional budgets posted 2- to 3-digit gains over 2011-12 (see charts), underscoring how fiscal disbursements have supported public infrastructure, particularly in the poorest regions.

Figure 31. DoTC: Regional Breakdown Shows Similar Pattern to DPWH As Budget Shares Rise in Some of the Poorest Regions



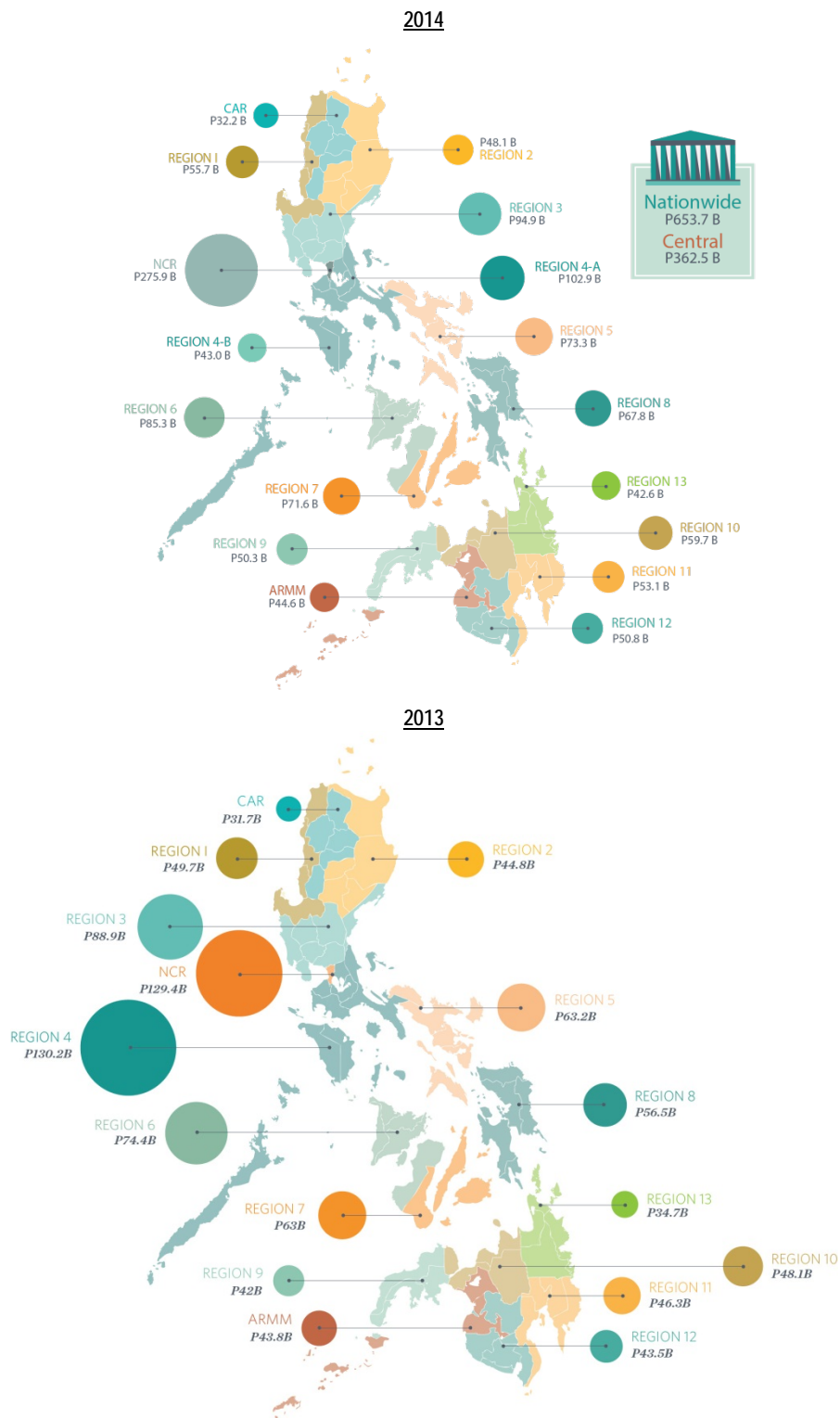
Source: Department of Budget and Management, Citi Research

Figure 32. DoTC: Regional Breakdown Shows Significant Budget Gains in 2011-12



Source: Department of Budget and Management, Citi Research

Figure 33. Government Budget: Breakdown by Region: 2014 vs. 2013



Source: Department of Budget and Management



## Quantifying the Impact of Fiscal Intervention

**A 1% rise (decline) on average in the DPWH budget share (ex-NCR) increases (decreases) regional GDP growth (ex-NCR) by 0.36%.**

**We find empirical evidence that regional growth responds to regional DPWH budget shares.** Using real regional GDP growth as a dependent variable in a cross section-time series regression (2010-12), regional DPWH budget share (ex-NCR) has a statistically significant impact on regional GDP (ex-NCR). A 1% rise (decline) on average in the DPWH budget share (ex-NCR) increases (decreases) regional GDP growth (ex-NCR) by 0.36%. DoTC's budget share and regional inflation were not statistically significant explanatory variables in the regression equation. The  $r^2$  stat (or coefficient of determination) did not register highly to suggest other relevant explanatory variables may have been left out.

Figure 34. Regression Results: Regional GDP Growth vs DPWH/DoTC Budget Shares

| Dependent Variable:  | Regional GDP growth       |             | Regional GDP growth excluding NCR <sup>A</sup> |             |
|--|---------------------------|-------------|--|-------------|
| Sample period/no of observations [cross section time series] | 2010-2012/50 observations |             | 2010-12/47 observations                        |             |
| Explanatory variables  | Coefficient               | t-statistic | Coefficient                                    | t-statistic |
| Constant   | 4.7321                    | 3.12        | 4.0285   | 2.96        |
| Regional DPWH budget share ( <sup>A</sup> excluding NCR)     | 0.3201                    | 1.66        | 0.3621**                                       | 1.90        |
| Regional inflation ( <sup>A</sup> excluding NCR)             | -0.0149                   | -0.54       | -0.2483  | -1.37       |
| Regional DoTC budget share ( <sup>A</sup> excluding NCR)     | -0.3757                   | -2.71       | -0.0074  | -0.27       |
| R-squared  | 0.18                      |             | 0.16   |             |
| Adjusted R-squared   | 0.11                      |             | 0.07   |             |
| F-statistic  | 2.48                      |             | 1.93   |             |
| Durbin-Watson stat   | 2.06                      |             | 2.12   |             |

Source: Citi Research using EVIEWS \*\* statistically significant at the 5%-10% level. Method: Least Squares with residual adjustments

**Regional HH consumption is impacted by 0.11% from a 1% change in DPWH budget share and by 0.02% from a 1% change in DoTC budget share.**

We broke up regional GDP by expenditures and used two separate regressions to derive the impact of DPWH and DoTC's regional budget shares (sample period 2010-12) on regional household consumption and private investments. For household consumption, the impacts were statistically significant. A 1% increase (decrease) in DPWH regional budget share potentially elevates (diminishes) regional HH consumption by 0.11%. In terms of DoTC budget share, a 1% change has a 0.02% impact on HH consumption. While the regional consumption effects are not huge, they are evidence of a direct positive correlation with fiscal spending. Regional inflation has a muted impact on regional HH consumption, while we noted a larger  $r^2$  test.

Larger empirical impacts, although not statistically robust, were obtained for regional DPWH and DoTC budget shares on regional private investments ex-inv. Regional budget shares of DPWH and DoTC could elevate (ease) regional private investments by 0.64% and 0.097%, respectively, although the DPWH's impact had limited statistical significance.

**Regional private investment (ex-NCR) is impacted by 0.17% from a 1% change in DoTC budget share and by 0.9794% from a 1% change in DPWH budget share.**

If we exclude NCR in the regression equation explaining regional investments, we obtain a better set of statistical results. A 1% increase (decrease) in DoTC's regional budget share ex-NCR, could potentially yield a 0.17% rise (decline) in regional private investments, ex-NCR. Meanwhile DPWH's regional budget ex-NCR would potentially add (reduce) 0.9794% to regional private investments ex-inv, ex-NCR. These results provide empirical proof that fiscal spending by DPWH and DoTC has an impact on regional private investments, particularly outside NCR.

Figure 35. Regression Results Assessing Impact of DPWH/DoTC Budget Shares on HH Consumption and Private Investments Ex-Inv

| Dependent Variables:   | Regional HH consumption   |             | Regional private investments |             | Regional private investments ex-NCR <sup>A</sup> |             |
|--|---------------------------|-------------|------------------------------|-------------|--|-------------|
| Sample period/no of observations [cross section time series] | 2010-2012/50 observations |             | 2010-12/50 observations      |             | 2010-12/47 observations                          |             |
| Explanatory variables  | Coefficient               | t-statistic | Coefficient                  | t-statistic | Coefficient                                      | t-statistic |
| Constant   | 4.8277                    | 9.24        | 5.4869                       | 1.42        | 2.8701   | 0.68        |
| Regional DPWH budget share ( <sup>A</sup> excluding NCR)     | 0.0168**                  | 4.51        | 0.0975**                     | 1.69        | 0.1716**   | 3.34        |
| Regional inflation ( <sup>A</sup> excluding NCR)             | 0.1120**                  | 3.56        | 0.6400                       | 1.10        | 0.9794**   | 1.49        |
| Regional DOTC budget share ( <sup>A</sup> excluding NCR)     | -0.0016                   | -0.04       | -0.2918                      | -0.56       | -0.1356  | -0.24       |
| R-squared  | 0.71                      |             | 0.17                         |             | 0.19   |             |
| Adjusted R-squared   | 0.69                      |             | 0.10                         |             | 0.11   |             |
| F-statistic  | 27.8                      |             | 2.32                         |             | 2.44   |             |
| Durbin-Watson stat   | 2.32                      |             | 2.04                         |             | 1.93   |             |

Source: Citi Research using EVIEWS. \*\* statistically significant at the 5%-10% level. Method: Least Squares with residual adjustments

Note: We used regional annual data (2009-12) to quantify the impact of infra spending on regional GDP. We assume the shifting regional budget shares of DPWH and DoTC would be adequate indicators of infra spending. We also included regional inflation as its upside and downside changes could easily impact household purchasing power in the regions. Using time series cross section data, we employed the specification below in determining the key beta values:

Regional real GDP growth ( $i_t$ ) =  $\alpha + \beta_1 \text{DPWH regional budget share } (i_t) + \beta_2 \text{DoTC regional budget share } (i_t) - \beta_3 \text{regional inflation}(i_t) + \text{error}(i_t)$ , where  $i$  represents the region and  $t$  represents time.

## Which Regions Will Lead/Lag Growth?

The top three regions are NCR, CALABARZON and CAR, and we sort the other regions into clusters determined by real per-capita incomes.

Given different exposures to fiscal spending, we believe some regions are bound to accelerate faster than the rest. In the table below, we order the regions on the basis of per capita real GDP alongside their average regional budget shares (2010-12) and their SD (standard deviations) from the regional budget average for comparison purposes. The top three regions are NCR, CALABARZON and CAR, and we sort the other regions into clusters determined by real per capita incomes – at about Php51,400 for Cluster 1, Php37,000 for Cluster 2 and less than Php35,000 for the rest.

**Regions comprising Cluster 1 will probably accelerate faster than the rest of the archipelago.** Regional budget shares for these regions from both DPWH and DoTC exceeded the regional budget average in 2010-12, as mirrored by their positive SD. Central Visayas stands out as having regional budget shares from both DPWH and DoTC that registered positive SD from the overall regional budget share average. (Note: Our regional Z-score card in the accompanying chart affirms these findings.) If regional budget allocations from the key infra agencies were to remain favorable for the Cluster 1 areas, alongside their existing higher per capita incomes, they would almost certainly leap-frog the rest of the archipelago, barring natural disasters or internal political shocks.

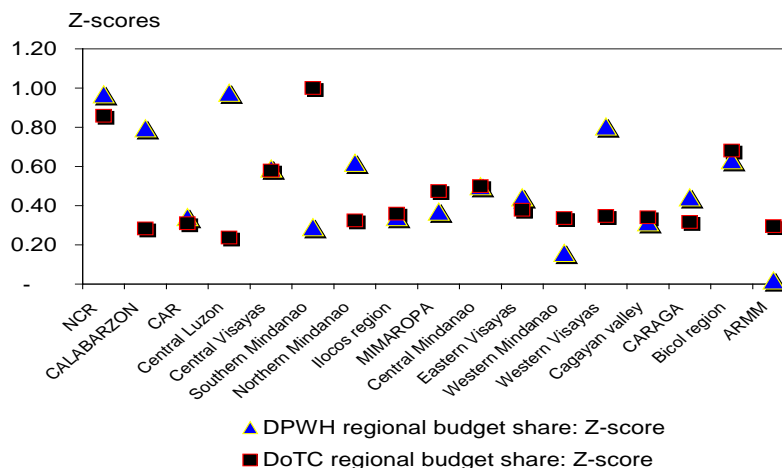
**Why did the government prioritize these regions?** The Cluster 1 regions, on our definition, account for 26% of PEZA-approved zones. The PEZA statistics provide a barometer of production activity across the regions linked to global markets. While those in Cluster 1 contain pockets of poverty, the government's infra spending priorities appear to be most focused on regional hubs of export-oriented enterprises, from manufacturing to tourism to IT parks/centers.

Figure 36. Regional data supporting the 'clusters'

|                | Regions           | Real per capita GDP income (Php at 2000P) |         |       |         |       | Operating<br>PEZA<br>zones | DPWH<br>regional<br>budget<br>share:<br>Average<br>2010-12 | SD from<br>regional<br>budget<br>average | DoTC<br>regional<br>budget<br>share:<br>Average<br>2010-12 | SD from<br>regional<br>budget<br>average |
|----------------|-------------------|---|---------|-------|---------|-------|----------------------------|--|--|--|--|
|                |                   | 2010                                      | 2011    | % gr  | 2012    | % gr  |                            | %  | x  | %  | x  |
| Top<br>regions | NCR               | 171,912                                   | 174,002 | 1.22  | 183,614 | 5.52  | 125                        | 10.9   | 1.85                                     | 15.9   | 1.07                                     |
|                | CALABARZON        | 80,048                                    | 78,945  | -1.38 | 81,944  | 3.80  | 39                         | 8.1  | 0.82                                     | 0.3  | -0.57                                    |
|                | CAR               | 74,302                                    | 74,028  | -0.37 | 73,532  | -0.67 | 3                          | 4.8  | -0.41                                    | 1.0  | -0.50                                    |
| Cluster 1      | Central Luzon     | 50,368                                    | 52,810  | 4.85  | 54,970  | 4.09  | 15                         | 11.2   | 1.97                                     | 2.7  | -0.32                                    |
|                | Central Visayas   | 50,102                                    | 52,583  | 4.95  | 52,402  | -0.34 | 40                         | 6.5  | 0.23                                     | 7.6  | 0.20                                     |
|                | Southern Mindanao | 48,632                                    | 49,479  | 1.74  | 52,133  | 5.36  | 9                          | 4.4  | -0.55                                    | 39.0   | 3.50                                     |
|                | Northern Mindanao | 49,092                                    | 50,882  | 3.65  | 53,545  | 5.23  | 8                          | 6.7  | 0.30                                     | 1.4  | -0.46                                    |
| Cluster 2      | Ilocos            | 37,893                                    | 38,331  | 1.16  | 39,816  | 3.88  | 3                          | 4.8  | -0.41                                    | 2.3  | -0.36                                    |
|                | MIMAROPA          | 37,103                                    | 37,579  | 1.28  | 38,479  | 2.40  | 4                          | 5.0  | -0.33                                    | 5.1  | -0.07                                    |
|                | Central Mindanao  | 36,821                                    | 37,835  | 2.75  | 39,929  | 5.53  | 6                          | 3.7  | -0.82                                    | 1.7  | -0.42                                    |
|                | Eastern Visayas   | 36,768                                    | 37,049  | 0.76  | 34,311  | -7.39 | 4                          | 5.5  | -0.15                                    | 2.8  | -0.31                                    |
| Cluster 3      | Western Mindanao  | 34,343                                    | 33,760  | -1.70 | 37,244  | 10.32 |                            | 3.2  | -1.00                                    | 1.7  | -0.42                                    |
|                | Western Visayas   | 31,995                                    | 33,537  | 4.82  | 35,560  | 6.03  | 15                         | 8.2  | 0.86                                     | 2.0  | -0.39                                    |
|                | Cagayan valley    | 30,918                                    | 32,203  | 4.16  | 34,362  | 6.70  | 1                          | 4.6  | -0.48                                    | 1.8  | -0.41                                    |
|                | CARAGA            | 26,566                                    | 28,394  | 6.88  | 30,944  | 8.98  |                            | 5.5  | -0.15                                    | 1.2  | -0.48                                    |
|                | Bicol             | 21,052                                    | 21,136  | 0.40  | 22,311  | 5.56  | 5                          | 6.8  | 0.34                                     | 10.2   | 0.47                                     |
|                | ARMM              | 14,622                                    | 14,364  | -1.76 | 14,318  | -0.33 |                            | 0.3  | -2.08                                    | 0.6  | -0.54                                    |

Source: NSCB, Citi Research SD - standard deviation

Figure 37. Z-score Card For Regional Budget Shares of DPWH & DoTC Over 2010-12



Source: NSCB, Citi Research

**Regions in Cluster 2 do not enjoy a DPWH/DoTC budget 'bias' and the setting up of PEZA zones likely reflects: 1) nearness to relatively cheap labor and raw materials, 2) availability of arable land, and 3) beaches/landscapes that attract tourism-related investment.** Agro-industrial zones (5 in Central Mindanao and 2 in Eastern Visayas) and tourism (3 in MIMAROPA) dominate the export-oriented enterprises hosted by regions in Cluster 2.

**Infra spending to expand and modernize regional water and airport capacities could help catalyze economic progress in Cluster 2.**

The scale of infrastructure requirements in Cluster 2 is likely to match that of Cluster 1 but the attendant cost may not be sufficiently justified by the resulting job and income creation. Of course, an argument can be made along the lines of 'build-and-they will come' ('they' being local investments/FDI) but this may be a more long-term prospect for regions with undersized local markets. Scale of business and production activities, regional exports, income and employment contribution, as well as taxes generated, etc. would have to be considered in a cost-benefit analysis of more infrastructure provision. Given the 'natural advantages' of the regions comprising Cluster 2, infra spending to expand and modernize regional water and airport capacities could help catalyze economic progress.

**In Cluster 3, Bicol and Western Visayas appear best placed to advance to Cluster 2.** Widespread poverty in Bicol (40% of households) and the setting up of 5 PEZA-approved zones (including 2 IT parks and 2 manufacturing zones) have led to elevated government infra spending, as indicated by the region's budget shares from DPWH and DoTC being in excess of the regional average (positive standard deviations for both). Also, the Bicol region is battered every year by typhoons, requiring the building of sturdier defenses. Western Visayas has 14 operating IT parks/centers that would also benefit from infra deployment.

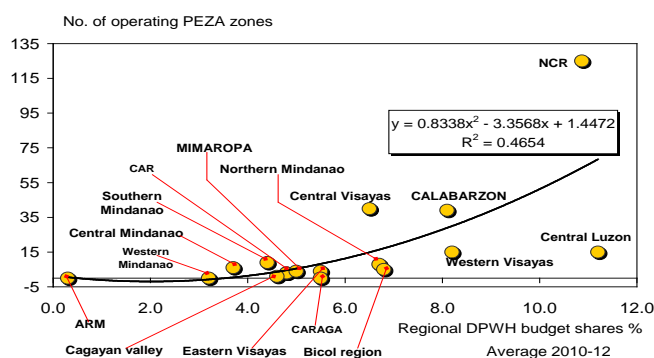
### Does Infra Spending Lead to Higher Regional Market Size/PEZA Zones – Or Is It the Other Way Around?

From our regional cluster appraisal, the impression is that regional market size – gauged by regional per capita real incomes alongside PEZA zones – attracts larger infra budgets. But is that really the 'direction of causality'? In other words, do market size/PEZA zones result in more infra spending, or is infra spending a vital enabler of market size/PEZA zones? Or is the causality a two-way process?

On our analysis, DPWH regional budget shares can ‘Granger-cause’ regional real GDP per capita<sup>3</sup>. In short, the empirical evidence is that regional infra allocations are a factor determining regional per capita incomes and/or market sizes (and not the other way around).

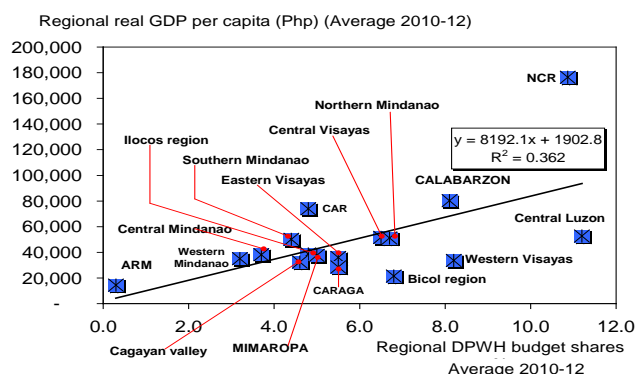
**Market size/PEZA intensity are likely to be leading catalysts in regions that have essential infrastructure and conducive business conditions: namely, peace and stability, pro-business local governments, and basic regulatory and other government services.** As such, we believe the government would be ill-advised to ignore infrastructure needs in regions that are already proving their economic competitiveness and attractiveness as investment hubs. We believe this argument has particular merit for the regions in Cluster 1: Central Luzon, Central Visayas, and Northern and Southern Mindanao.

Figure 38. Higher Infra Spending in the Regions Corresponds to Establishment of Investment Sites



Source: NSCB, Citi Research

Figure 39. Regional GDP Per Capita Positively Correlated With DPWH Budget Shares



Source: NSCB, Citi Research

**Additional disbursements to upgrade infrastructure in Clusters 2 and 3 could offer sustainable economic gains, but over an extended time-frame.** More government projects to link small towns and cities via improved roads, ‘electrify’ small barangays, upgrade small seaports and local airports, and to improve school, health and water facilities would enhance the capacity of poorer regions to attract local businesses and investment, and thus spawn a virtuous loop of more jobs and higher incomes, resulting in increased consumption demand and in turn more investment.

## Broad Social and Business Service Indicators Support the Case for Regional Selection

**Other socio-economic data support case for regional selection.** Beyond NCR and CALABARZON, our regional clusters strongly suggest that adequate socio-economic features would also be essential for regional development. We compare regional socio-economic indicators – functional literacy rates, no. of bank branches, HH electricity access, HH access to community water, prevalence of concrete roads, and availability of hotel rooms – with regional per capita GDP trends and derive the following views:

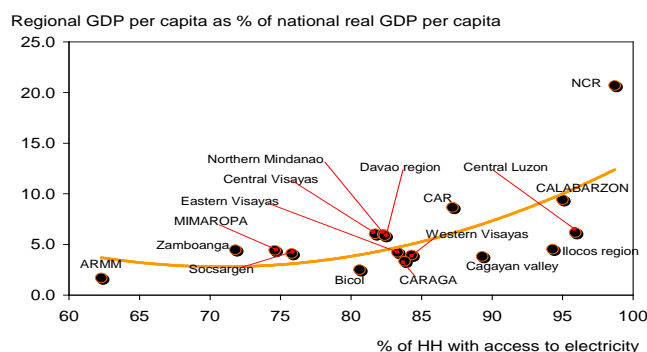
<sup>3</sup> The Granger causality test is a statistical hypothesis test for determining whether one time series is useful in forecasting another.

■ **HH access to electricity at >80% is correlated with higher GDP per capita.**

This reflects not only HH's income capability to pay but also the government's wider HH penetration of its electricity program. Northern Mindanao, Davao, and Eastern & Central Visayas are among regions with over 80% of HH having access to electricity that contribute more than 5% to national per capita income. Central Luzon, on the other hand, had a larger proportion of HH with access to electricity but with the same regional per capita GDP contribution to the national total. This suggests that having broad based electricity access is not necessarily a guarantee of higher per capita GDP although it would certainly help in improving the investment appeal of a region.

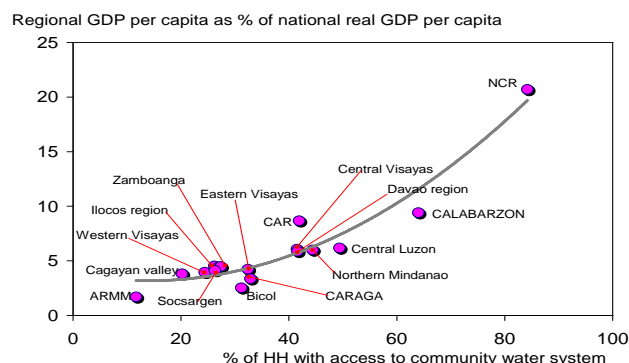
■ **40-50% of HH with access to community water systems can also signal a breakout to higher per capita GDP.** A larger percentage of HH with pipe-in water supports the view of a modernizing infra support system with government and private sector support (eg private cooperatives), which bodes well for business prospects.

Figure 40. >80% HH Access To Electricity Correlates to Higher Regional Per-capita Income



Source: National Statistics Office, 2011 Annual Poverty Indicators Survey, Citi Research

Figure 41. >40%-50% of HH Access to Community Water Systems Correlates to Higher Regional Per-capita Income



Source: National Statistics Office, 2011 Annual Poverty Indicators Survey, Citi Research

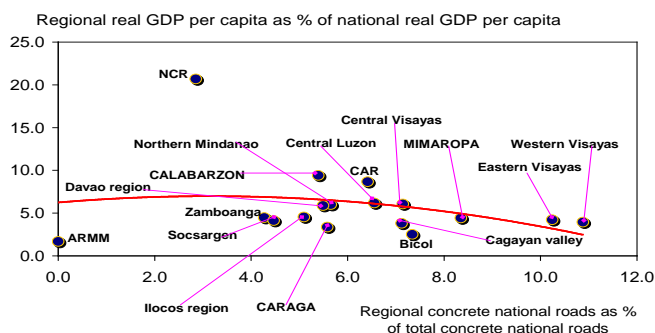
■ **Concrete roads do not guarantee favorable regional per capita GDP.** Some regions have large land masses and communities dispersed across uplands and lowlands that need to be interconnected with local markets and business centers. Others areas are more densely populated and compact, requiring less geographically extensive transportation and communication networks: eg NCR's concrete roads are less than 3% of the national total of 15,867km. BICOL and MIMAROPA account for a larger share of concrete roads although they make a much smaller contribution to real output, even on a per capita basis. In these poorer regions, perhaps, more public investment may be required in road transport systems to lift local HH incomes and create jobs. For the likes of Central Luzon, Northern & Southern Mindanao and Central Visayas, though, the existing road systems are sufficient to support their levels of economic activity, though other forms of infrastructure may be needed if they are to vault to the top regional tier.

■ **As a general indicator of respective levels of healthcare, we use hospital beds per 1,000 population to compare among the regions. Ratios in excess of 1:1,000 correlate to higher regional contributions to total GDP per capita.** While this may appear somewhat self-evident, given that regions with higher per capita incomes should be able to afford superior medical treatment/services, we note our healthcare indicator is more positive for Northern Mindanao and Davao



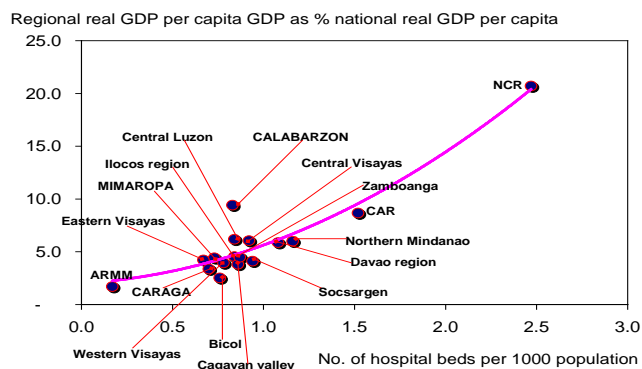
than for Central Luzon, Central Visayas and even CALABARZON. This suggests greater availability of public hospitals and thus government health services in the Mindanao regions, although the quality of such services may be more variable than in other regions with higher per capita incomes.

Figure 42. % of Concrete Roads Relative to Total Concrete Roads Is Not Coincident With Higher Regional Per-capita Income



Source: Department of Public Works & Highways (Oct 31, 2012), Citi Research

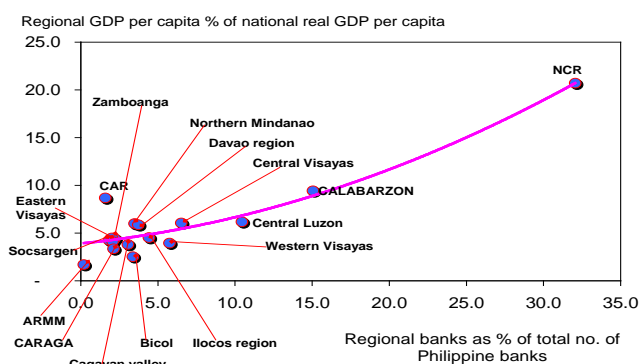
Figure 43. Higher Ratio Of Hospital Beds For Every 1,000 People Seems to Track Rising Regional Per-capita Income



Source: Department of Health (National Objectives for Health 2011-16, published July 2012), Citi Research

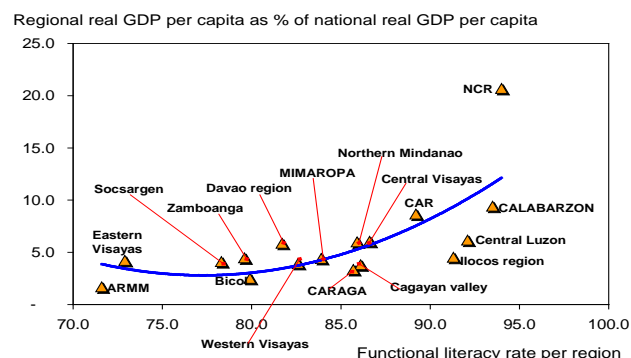
- **Regions with unibank/commercial bank branches, rural banks, etc. that are more than 5% of the national total of bank branches are more likely to have higher regional GDP per capita.** Predictably. Low incomes suggest limited need for banking services. As such, banking services may not necessarily lead or trigger per capita GDP gains. In our regional clusters, only Central Luzon and Central Visayas have bank shares exceeding 5% of the national total.
- Higher rates of functional literacy (defined as % of those aged 10-64 with reading, writing and numerical skills) appear consistent with higher regional per capita income. **On its own, though, a high functional literacy rate (even exceeding 80%) does not assure an elevated level of per-capita GDP.** Take the Ilocos region as an example: the region has a 91.3% literacy rate but its GDP per capita contributes less than 5% of the national total. This implies a non-linear relationship between the two, which some might argue raises questions about the government giving budget priority to education. However, we would make the case that giving resources priority to education (building more schools, hiring better qualified teachers, etc.) is entirely compatible with a commitment to upgrading business-related infrastructure. Better infrastructure will attract more private businesses and investments, with a rise up the value chain jobs requiring employees who are educated beyond rudimentary standards.

Figure 44. Large Portion Of the Country Is 'Unbanked' With Bank Branches/Services Concentrated in Higher Per-capita Income Regions



Source: Bangko Sentral ng Pilipinas (2H12 status report), Citi Research

Figure 45. Relatively High Literacy Rates Do Not Assure Elevated Per-capita Incomes



Source: 2008 Functional literacy, education and mass media survey of the National Statistics Office, Citi Research

A regression analysis suggests statistically significant impacts on real GDP per capita (average of 2010-12) from 1) percentage of HH with water access, 2) ratio of banks in the region relative to national total, and 3) percentage of concrete roads relative to national total. HH electricity access, literacy rates and our healthcare indicator did not register strong statistical significance. Perhaps a larger data set would offer a better perspective of regional impacts but the initial set of results suggests that availability of banking services and percentage of concrete roads in the regions have a material impact on regional per capita GDP. A 1% increase in either banking services or % of concrete roads in the region on average could contribute a potential 0.2% gain in the share of regional GDP per capita.

Figure 46. Regression Analysis: Among Regional Socio-Economic Indicators, Which Have a Strong Regional GDP per-capita Income Effect?

| Variable   | Coefficient | t-statistic | Remarks   |
|--|-------------|-------------|---|
| Constant   | 6.1769      | 2.21        |   |
| % of HH with access to electricity   | -0.1368     | -4.07       | Should have a positive coefficient sign                                 |
| % of HH with access to community water system                                | 0.1011      | 12.98       | Statistically significant at 1% level with the correct coefficient sign |
| % of banks in the region relative to the total number of banks in the system | 0.2344      | 6.48        | Statistically significant at 1% level with the correct coefficient sign |
| % of concrete roads in the region relative to the national total             | 0.2124      | 2.93        | Statistically significant at 5% level with the correct coefficient sign |
| Functional literacy rate %   | 0.0356      | 0.63        | Not statistically significant   |
| No. of hospital beds per 1,000   | 0.9427      | 0.75        | Not statistically significant   |
| R-squared  | 0.91        |             |   |
| Adjusted R-squared   | 0.83        |             |   |
| F-statistic  | 11.18       |             |   |
| Durbin-Watson  | 2.25        |             |   |

Source: Citi Research using EVIEWS. Dependent variable: Regional GDP per capita as % of national GDP per capita (Average 2010-12). Method: Least Squares with residual adjustments. Sample (adjusted): 16 observations

## What Would It Take to Raise the Share of Regional GDP per Capita By 1%?

Hiking the share of regional GDP per capita by 1% would require the following estimated rises in combined DPWH/DoTC budgets: **Cluster 1: Php5.9bn (1.7% of avg regional GDP); Cluster 2: Php5bn (3.4%); and Cluster 3: Php7.9bn (6.7%).**

Hiking the share of regional GDP per capita (to total GDP per capita) by just 1% through fiscal intervention would require the combined DPWH/DoTC budgets to rise by roughly Php5.9bn in Cluster 1, Php5bn in Cluster 2 and Php7.9bn in Cluster 3, on our estimate (see Fig 47). The additional 1% share of real GDP per capita could result in average per capita income gains of P8,000 or more in real terms for each regional cluster. In spreadsheet estimates, there's a lot more upside to the lowest regional cluster with lagging real per capita incomes from strong fiscal intervention.

Admittedly, the assumptions/results in this sensitivity exercise would suggest imposing excessive stress on DoTC/DPWH's ability to implement 'gazillion' projects as may be implied by the required huge regional budget allocations. Eventually these government agencies would be facing absorptive capacity risk and inefficient implementation.

Nonetheless, absorptive capacity risk doesn't dilute our key point in this sensitivity exercise, which is that fiscal intervention – whether huge or modest – can exert a material influence on regional income prospects.

Figure 47. To Elevate Regional Per-capita GDP, Significant Regional Budget Increases Would Be Required for DPWH and DoTC

|  | Cluster 1 | Cluster 2 | Cluster 3 |
|--|-----------|-----------|-----------|
| Average GDP/capita 2010-12   | P51,416   | P37,151   | P26,152   |
| Share of RPCY  | 6.0%      | 4.4%      | 3.1%      |
| Est. additional RPCY for 1% rise in regional GDP share   | P8290     | P8909     | P8819     |
| GDP/capita growth with estimated rise in regional GDP share                                    | 16.1%     | 24.0%     | 33.7%     |
| Average 2010-12 DPWH budget share  | 7.2%      | 4.4%      | 5.1%      |
| Est. DPWH regional budget share needed for 1% rise in share of regional GDP                    | 14.5%     | 11.2%     | 15.9%     |
| Est. increment of DPWH regional budget needed for 1% rise in share of regional PCY             | P5.1bn    | P4.6bn    | P7.5bn    |
| Average 2010-12 DoTC budget share  | 12.7%     | 2.7%      | 3.2%      |
| Est DoTC regional budget share needed for 1% rise in share of regional GDP                     | 25.6%     | 6.8%      | 9.9%      |
| Est. increment of DoTC regional budget needed for 1% rise in share of regional PCY             | P0.792bn  | P0.253bn  | P0.413bn  |
| Est. total regional budget costs for DPWH and DoTC to support 1% rise in share of regional PCY | P5.9bn    | P4.9bn    | P7.9bn    |
| % of average national GDP  | 0.98%     | 0.82%     | 1.32%     |
| % of average regional GDP cluster  | 1.7%      | 3.4%      | 6.7%      |

Source: Citi Research

## Key Macro Implications of Regions on the Rise

### Concentration of growth would restrict income opportunities in other regions

**Higher incomes in any cluster will ease concentration risk in Philippine growth.** Philippine's GDP growth prospects are far too concentrated in NCR, CALABARZON and CAR, as a result of which their per-capita GDP is much higher than in the other regions. They contribute 55.2% to the national real GDP (2010-12 average) and close to 40% of the country's per-capita GDP. Concentration of growth would restrict income opportunities in other regions and further deepen poverty there.

### Faster rollout and implementation of PPP projects would boost regional growth

**Alleviating regional poverty requires fiscal intervention.** Larger budgets and operational efficiency of key infra agencies, led by DPWH and DoTC, would help in tackling poverty. While such corruption issues as the recent pork-barrel scam diminish the appeal of large-scale government spending, larger budgets for infra agencies would still help in bringing scarce public goods to these regions. PPP would need to either complement or augment the government's annual infra budgets. Further regional growth upside would come from a faster rollout and implementation of PPP projects.

**Our regional clustering is not new, but we offer deeper insights into potential.** Beyond the NCR and CALABARZON, there is consensus on strong prospects for Central Luzon (key provinces Tarlac, Pampanga & Pangasinan), Central Visayas (Cebu and Bohol), Southern Mindanao (Davao region) and Northern Mindanao (key area is Cagayan de Oro), or the poverty-stricken areas of Bicol, MIMAROPA and the autonomous region of Muslim Mindanao. Our regional assessment of infrastructure budgets, PEZA zones and other socio-economic and business indicators offers a stronger basis for these views and why clustering (using regional per-capita GDP) offers a good guide to potential sources of upside.

**Budget shares of DPWH and DoTC could serve as fiscal spending catalysts**

**Surveys show that discretionary spending is on the rise in the regions**

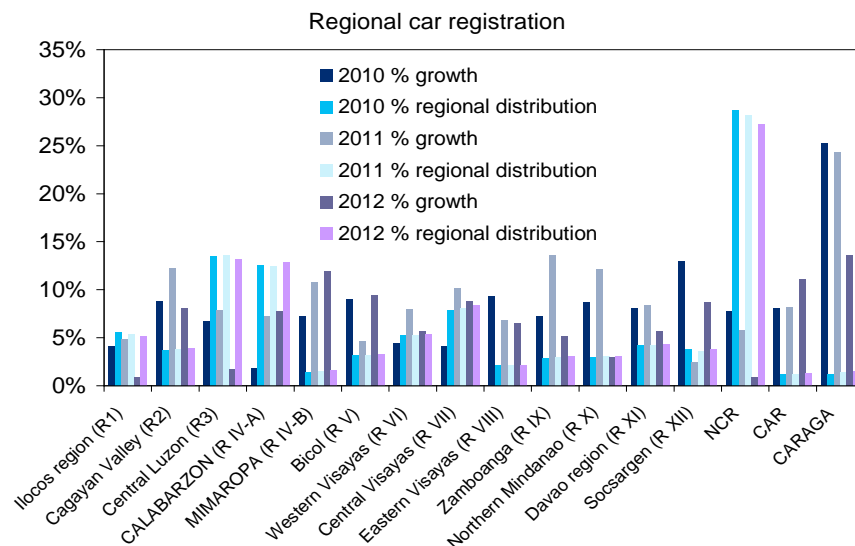
### Regional consumption, private investments to benefit from infra spending.

Investment approvals could increase with more infra spending. Empirical analysis shows that regional budget shares of DPWH and DoTC could serve as fiscal spending catalysts, as their budget operations would be directly deployed for public investment. Improving infrastructure will enable these provinces/cities to attract and host more PEZA-approved investments. The government can ill afford to neglect infra requirements of the regions with a higher share of PEZA zones.

### Higher regional income to change lifestyle toward discretionary spending.

A recent consumer survey (Kantar Worldpanel reported by Philippine Daily Inquirer, 6 Sep 2013) noted that consumption of beauty, hygiene and health products is rising in the Philippines, with South Luzon and Mindanao contributing more to overall growth. Spending on hygiene products, e.g. 19% growth in hand sanitizers, 54% growth in razors, etc., was driven by Visayas and Mindanao consumers from socioeconomic classes D and E. At the national level, discretionary consumption spending has been on the rise as per-capita incomes improve and, at the regional level, consumer survey data seem to confirm this. The chart below on car registration (new and renewals heavily skewed to private-car owners) points to sharply rising growth from Cagayan valley and Central Luzon in the Luzon grid to Zamboanga and Caraga in the South. It suggests rising durable-goods demand, helped by access to consumer financing. Potential for broad-based consumer spending, including durable goods, depends on rising regional per-capita GDP.

Figure 48. Sharply Rising Car Registrations in CARAGA, CAR, Zamboanga, Cagayan Valley, Central Luzon, MIMAROPA, and Others



Source: NSO, Citi Research

## Industries Likely to Thrive in the Regions

**Manufacturing, agri-business, IT parks and ecotourism should benefit**

The breakdown of PEZA-approved zones suggests that manufacturing, agri-business, IT parks and ecotourism would thrive in our regional Clusters 1 to 3. Specifically, labor-intensive manufacturing industries such as food processing, garments, furniture & fixtures, and construction materials should do well. These industries are not very sensitive to 'clean & stable' power, while cheap labor and supply of indigenous agro-based inputs would enable them to produce for the national/regional markets.

Zamboanga is the country's 'canned sardine capital', and Cebu is home to furniture makers for the local and export markets. Fruit exports (including processed fruits), e.g. bananas & pineapples, dominate agro-based production in Davao. General Santos has manufacturing facilities for processing tuna, although tuna supply constraints have limited the region's ability to step up exports.

**Tourism has immense potential but lacks adequate infrastructure**

Aside from manufacturing, tourism in Palawan (MIMAROPA) and the different regions comprising Visayas has immense potential. The white-sand beaches of Boracay island (Western Visayas) attract not just hordes of local and foreign tourists, but also investment in accommodation and services. That said, such attractions lack adequate tourist infrastructure, particularly airports/waterports that can accommodate large vessels capable of ferrying more passengers and cargo. Authorities have only now begun planning for adequate water/sanitation facilities in these areas.

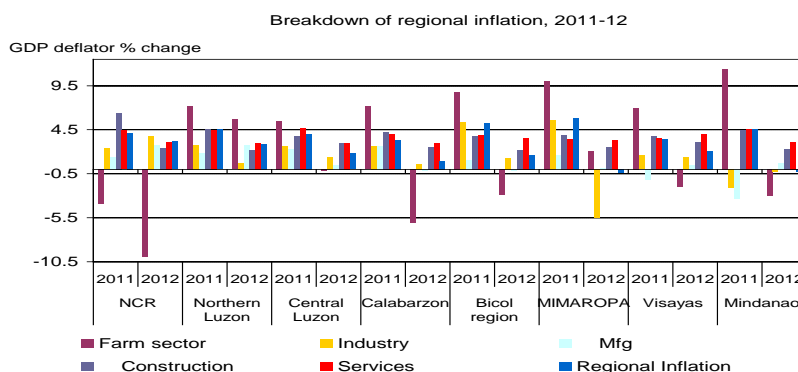
The desire to have new industries and investments, including PEZA zones, in these regions could enhance public investment in protecting economically designated areas from weather shocks and other natural disasters. Public investment policies so far have been 'reactive'. Closer coordination with private investors in these poorer regions to build adequate defence against natural disasters needs to be prioritized.

## Regional Inflation Appears Hostage to Weather Shocks

**Regional inflation will ease with improved development**

Regional inflation data, particularly in the poorer regions with a large share of farm output, appear hostage to weather shocks (see chart below). In 2011 farm prices soared in Mindanao, Mimaropa and Bicol primarily due to weather shocks, raising regional inflation. As farm conditions improved, farm inflation eased in 2012 and average inflation slowed. The farm price shocks in 2011 did not have a 'contagion' effect on non-farm prices. Improving infrastructure, production capacity and regional development would ease regional inflation, which would bode well for regional real per-capita GDP and spending.

Figure 49. Regional Inflation Eased From 2011 to 2012



Source: NSCB, Citi Research

## Risks to Regional Growth Story

**Risks: poor law & order; delays in PPP projects; natural disasters**

Fiscal constraints, poor law & order, delays in PPP projects, natural disasters, and power shortages in Mindanao would delay public and private investment activities in the underdeveloped regional clusters.

For instance, Zamboanga peninsula was recently hit by a conflict between an 'invading' Muslim armed group (not the Muslim secessionist group that agreed to a peace treaty with the govt) and the military. More than 100,000 people were affected and hundreds were killed, largely from the Muslim faction. The government has promised nearly Php4bn in relief and rehabilitation for the city, but the incident undermined the strong potential of what is considered the manufacturing gateway of Mindanao. Nearly 80% of canned sardine supply can be sourced from Zamboanga, a city with busy regional airports and ports.

**Typhoons are a growing risk**

Regions, including the NCR, are now more vulnerable to typhoons than in the past, which authorities attribute to global climate changes since 2009. Regional production and economic activities could therefore suffer in the absence of proper equipment such as modern typhoon/monsoon rain monitoring/radar tracking devices. Late Nov 2013, typhoon Yolanda wrought devastation on Eastern Visayas in one of the worst disasters in recent years. Over 6,000 people died, 28,626 were injured and 1,785 are still missing (as of Jan 29, 2014). About 3.4mn families were affected in over 12,000 villages in 44 provinces comprising 9 regions. Government estimated the damage costs at Php39.8bn (0.3% of 2013 GDP), broken into infrastructure damage of Php19.6bn (damage to roads & bridges at Php15.7bn) and agricultural output losses of Php20.3bn (Php9.5bn of crop losses and Php6bn in lost fisheries output). Typhoons in late Sep-Oct 2009 cost the country close to 5% of GDP. In 2012, seven regions were affected by typhoon Pablo, which damaged agriculture, infrastructure and other private property equating to 3.5% of 2012 GDP.

Figure 50. Recent Typhoons With High Regional Damages/Costs

| Typhoon local code names*        | % of Affected Population |      |     | Casualties (No. of persons) |     |       | Houses (Units) |        |        | Schools (Units) |     |     | Cost of Damages (Php mn) |         |       |
|----------------------------------|--------------------------|------|-----|-----------------------------|-----|-------|----------------|--------|--------|-----------------|-----|-----|--------------------------|---------|-------|
|                                  | O                        | P    | S** | O                           | P   | S     | O***           | P***   | S**    | O               | P   | S** | O                        | P       | S     |
| National Capital Region          | 8.3                      | 0.2  |     | 241                         |     |       | 65,521         |        |        | 348             |     |     | 1,305                    |         |       |
| Cordillera Administrative Region |                          | 28.2 |     | 4                           | 346 |       | 8,186          |        |        | 80              | 230 |     | 140                      | 3,800   |       |
| Ilocos Region (I)                |                          | 46.5 |     |                             | 95  |       | 25,437         |        |        | 2               | 708 |     | 169                      | 11,0916 |       |
| Cagayan Valley (II)              |                          | 16.4 |     |                             |     |       | 18,502         |        |        | 72              | 139 |     | 465                      | 4,218   |       |
| Central Luzon (III)              | 9.1                      | 11.7 |     | 56                          | 19  |       | 2,519          |        |        | 357             | 87  |     | 6,243                    | 6,103   |       |
| CALABARZON (IVA)                 | 25.7                     | 0.1  |     | 160                         | 1   |       | 90,482         |        |        | 5,023           |     |     | 2,290                    | 198     |       |
| MIMAROPA (IVB)                   | 1.4                      |      |     |                             |     |       |                |        |        | 21              |     |     | 208                      | 64      | 5.3   |
| Bicol (V)                        | 0.5                      | 5.1  |     |                             | 4   | 2     | 1,949          |        |        |                 | 289 |     | 289                      | 895     | 0.4   |
| Western Visayas (VI)             |                          |      |     |                             |     | 39    | 155            |        |        |                 |     |     |                          |         |       |
| Central Visayas (VII)            |                          |      |     |                             |     |       |                |        |        |                 |     |     |                          |         |       |
| Eastern Visayas (VIII)           |                          |      |     |                             |     |       |                |        |        |                 |     |     |                          |         |       |
| Zamboanga Peninsula (IX)         |                          |      |     |                             |     | 11    | 55             |        |        |                 |     |     | 374                      |         | 9.5   |
| Northern Mindanao (X)            |                          |      |     |                             |     | 1,206 |                |        | 19,952 |                 |     |     |                          |         | 2,059 |
| Davao Region (XI)                |                          |      |     |                             |     | 5     |                |        |        |                 |     |     |                          |         |       |
| SOCSARGEN (XII)                  | 0.1                      |      |     |                             |     |       | 1,123          |        |        |                 |     |     |                          |         |       |
| CARAGA (XIII)                    |                          |      |     |                             |     | 1     |                |        |        |                 |     |     |                          |         | 17    |
| Muslim Mindanao (ARMM)           |                          |      |     | 3                           |     | 4     |                |        |        |                 |     |     |                          |         |       |
| Philippines                      | 5.6                      | 5.1  |     | 464                         | 465 | 1,268 | 213,929        | 51,144 | 5,903  | 1,453           |     |     | 11,121                   | 27,195  | 2,091 |
| % NGDP                           |                          |      |     |                             |     |       |                |        |        |                 |     |     | 1.34                     | 3.29    | 0.22  |

\* O – Ondoy (date of occurrence: 09/24/09-09/27/09), P – Pepeng (9/29/09-10/20/09), S – Sendong (12/15/11-12/18/11). \*\* no breakdown for other regions, \*\*\* same stats for Ondoy and Pepeng

Source: NSCB, National Disaster Risk Reduction Management Council



Figure 51. Typhoon Pablo Crippled Banana Plantation Capacity In Davao and Generated Opportunity Losses For Local Farm Output and Overall GDP

| Typhoon PABLO               |                                |            |
|-----------------------------|--------------------------------|------------|
| Date of occurrence          | December 15 - 18, 2012         |            |
| Regions Affected            | VI, VII, IX,X,XI, CARAGA, ARMM |            |
| No. of Families affected    | 711,682                        |            |
| Casualties (no. of persons) | 1,067                          |            |
| Damaged houses (units)      | 216,817                        |            |
| Cost of Damage              | In Php mn                      | % 2012 GDP |
| TOTAL                       | 36,949.2                       | 3.5        |
| Infrastructure              | 7,565.0                        | 0.7        |
| Agriculture                 | 26,526.7                       | 2.5        |
| Private Property            | 2,857.5                        | 0.3        |

Source: NSCB, National Disaster Risk Reduction Management Council

Economic losses from earthquake-prone regions are another downside risk. The Central Visayan region was recently rocked by a strong quake (7.2 on the Richter scale), the brunt of which was borne by the tourist/agro-based island of Bohol. It left in its wake more than Php2bn in infrastructure damage and Php1bn in damage to the 'heritage-churches'. More than 200 people were killed and a large number of families in small towns and remote villages of Bohol were evacuated due to persistent and strong aftershocks (over 800 in total). Damages to roads and bridges did not add up to a large amount, but some communities were isolated days after the quake. Unless we see government agencies accelerating rehabilitation and reconstruction work in Bohol, potential losses in terms of foregone tourism and agri-business incomes in the area could rise.

#### Delays in awarding PPP projects would slow investment-driven growth

Further delays in awarding PPP projects would not just slow investment-driven growth but also hurt job and income opportunities. The three PPP projects awarded over the past 2-3 years (see table below) would benefit mainly NCR, Ilocos, Cagayan valley and CALABARZON regions. Delays in key PPP projects: relocation/construction of the Mactan Cebu international airport (Cebu in Central Visayas) and extension of LRT 1 (NCR) could further delay smaller PPP projects in other regions, e.g. New Bohol (Panglao) airport (Central Visayas), Languindingan airport (Region X), which may be as essential to these regions as the bigger projects. Awarding of PPP projects over the last three years of Pres. Aquino's term and their implementation could be an upside surprise to national as well as regional GDP, particularly for regions in which these projects are located.

Figure 52. PPP Update

| Awarded Projects  | Cost (Pm) | Cost (US\$m) | Region         | Project Description  | Status   |
|---|-----------|--------------|----------------|--|--|
| Daang Hari-SLEX Link Road   | 1,957     | 47           | NCR, IV-A      | Construction of a 4-km, 4-lane toll road   | Ayala Corp was issued a notice of award on 22 Dec 2011; 30.205% complete; ahead of schedule 2.242%   |
| DepEd PPP for School Infrastructure Program (Phase 1)                     | 16,420    | 389          | I, III, IV-A   | Design, financing and construction of around 9,300 one-storey and two-storey classrooms, including furniture and fixtures in various sites.  | 40 sub-projects (114 classrooms) have been completed<br>860 sub-projects (2,766 classrooms) have started construction<br>Notices to Proceed (NTPs) to 1,112 sub-projects (4,073 classrooms) issued   |
| NAIA Expressway O&M and extension   | 15,520    | 378          | NCR            | Project is to alleviate existing and future traffic problems going to and from the MIA/NAIA Complex. It is expected to provide a seamless link between the South Luzon Expressway (SLEX)/Skyway, and the Manila-Cavite Toll Expressway (CAVITEX)/Roxas Boulevard /Macapagal Boulevard, and the upcoming PAGCOR City. | Done: San Miguel Corp's subsidiary Optimal Infrastructure Fund won bid. Ongoing preparation of Detailed Engineering Design (DED); Target construction period January 2014 to September 2015.   |
| <b>Offered for Bidding / Due Diligence Ongoing</b>                        |           |              |                |  |  |
| Philippine Orthopedic Center Modernization Project                        | 5,700     | 136          | NCR            | Construction of a 700-bed capacity super-specialty tertiary orthopedic hospital and upgrade of buildings and facilities, purchase and supply of modern hospital equipment, furniture and fixtures and installation of IT system  | For ICC-Cabinet Committee approval of bid  |
| PPP for School Infrastructure Project (PSIP) - Phase II                   | 8,800     | 210          | Nationwide     | Construction of around 10,679 classrooms, including furniture, fixtures and toilets, in 5,033 public schools in 14 regions nationwide.   | Prequalification on-going  |
| Common Automatic Fare Collection system for Metro Manila's light railways | 1,722     | 43           | NCR            | Contactless-based smart card technology on LRT lines 1 and 2 and MRT 3, with the introduction of a centralized back office that will perform apportionment of revenues.  | Bidders due diligence ongoing; Invitation to bid issued on 17 Dec 2012; Bidding slated in 3Q13   |
| Operation and Maintenance of Mactan Cebu International Airport            | 17,520    | 417          | VII            | 20-yr concession involving construction of w new world-class passenger terminal building in Mactan, Cebu with a capacity of 8m passengers/year (vs. 5m current capacity). Expected completion is between 2014-16.  | Bidders due diligence ongoing; Concession agreement to be finalized end-August   |
| CALA Expressway - Cavite and Laguna Side                                  | 35,577    | 847          | NCR, IV-A      | Construction of 2 expressways: 1) Cavite side (27.5km, 4-lane highway and 2) Laguna side (14.3km, 4-lane at-grade expressway)  | Invitation to Prequalify to Bid (ITPB) published on July 22, 2013  |
| Rehabilitation of Angat Hydro-Electric Power Plant                        | 1,155     | 28           | III            | Rehabilitation, operation and maintenance of Angat HEPP's auxiliary turbines 4 and 5. Renovate and modernize the existing 1 x 10MW (Unit 4) and 1 x 18MW (Unit 5) auxiliary turbines and construction of separate control room.  | Korea Water Resources Corp (K-Water) won the bidding   |
| O&M and extension of LRT 1 southwards                                     | 59,200    | 1,250        | NCR            | Addition of 11.7km, of which 10.5km will be elevated and 1.2km will be at-grade (total length of integrated Line 1 will be 32.4km)   | First bid failed. Rebid scheduled on 4Q13.   |
| <b>NEDA Board Approved Projects</b>                                       |           |              |                |  |  |
| NLEX-SLEX Road project (Connector Road)                                   | 19,980    | 476          | NCR, III, IV-A | Construction of a 13.4km, 4-lane elevated expressway over the Philippine National Railway right of way, which starts at Caloocan city and ends in Buendia, Makati city; connect North Luzon Expressway and South Luzon Expressway  | Approved by NEDA-Board on 18 Jan 13. Department of Finance has objections related to the provisions on the draft concession for Skyway Stage 3 (partnership between Citra Metro Manila Tollways Corp, a unit of San Miguel Corp). Identified as a key project in Pres. Aquino's 2013 State of the Nation Address; Congress asked to review existing legislations relating to existing franchise holder (Philippine National Construction Corp) which could affect the validity of the contract for the concession. |
|   |           |              |                |  |  |
|   |           |              |                |  |  |

Figure 52. PPP Update (con't)

| In the Process of Securing Government Approvals      |                |              |                 |   |   |
|--|----------------|--------------|-----------------|---|---|
|  | Cost (Pm)      | Cost (US\$m) | Region          | Project Description   | Status  |
| Integrated Transport System (ITS) Project            | 5,006          | 119          | Luzon           | Establishment of three mass transportation intermodal terminals at the outskirts of Metro Manila  | On-going evaluation of NEDA Board   |
| Grains Central Project                               | 285            | 7            | Luzon, Mindanao | Establish grains bulk handling systems with corn grains processing centers and transshipment stations   | On-going evaluation by the appropriate government body                          |
| Vaccine Self-Sufficiency Project (Phase II)          | 453            | 11           | Nationwide      | Accelerate progress in vaccine production and ensure vaccine sufficiency in the country; reduce overall vaccine procurement costs   | In the process of securing approvals  |
| Other projects in various stages of preparation      |                |              |                 |   |   |
| O&M of the New Bohol (Panglao) Airport               | 8,001          | 191          | VII             | Construction of an international-standard airport to replace existing Tagbilaran airport  | Finalization of project structure on-going                                      |
| Laguindingan Airport Operations and Maintenance      | 1,802          | 43           | X               | Operation and maintenance of newly constructed international standard airport in Laguindingan, Misamis Oriental   | PDMF application approved; Finalization of project structure on-going           |
| Establishment of cold chain systems                  | 684            | 17           | NCR, CAR        | Construction and operation of Cold Chain Centers in major production and consolidation areas of agri-fishery products; centers will be equipped with required facilities and machineries for minimal processing of livestock, fisheries, high value crops | For finalization of project structure   |
| New Centennial Water Supply Source Project           | TBD            | TBD          | NCR             | Construction of a dam, a water treatment plant and an associated main pipeline to deliver water from the project location to Metro Manila   | On-going finalization of project structure                                      |
| Bulacan Bulk Water Supply Project                    | TBD            | TBD          | III             | Construction of treated water transmission mains, water reservoirs and pumping stations in the Province of Bulacan  | On-going finalization of project structure                                      |
| Puerto Princesa Airport Development                  | TBD            | TBD          | IV-B            | Privatization of the operation and maintenance of the airport; upgrade and improvement of existing airport to meet international standards  | On-going preparation of Feasibility study                                       |
| LRT Line 2 Operation and Maintenance                 | TBD            | TBD          |                 | Operate and maintain the existing 13.8km LRT Line 2   | On-going preparation of Feasibility study                                       |
| Subnational Projects                                 |                |              |                 |   |   |
| Talisay City Plaza Complex                           | 198            | 5            | IV-A            | Redevelopment of the central public market into a mixed-use facility and restoration of old city hall.  | Approved by the Regional Development Council<br>Bidder due diligence is ongoing |
| El Nido Water Supply and Sanitation Facility Project | TBD            | TBD          | IV-B            | The project involves the establishment of a water supply system and sanitation project covering four (4) baranggays of the Poblacion area.  | Ongoing preparation of Feasibility Study  |
| <b>TOTAL</b>   | <b>199,980</b> | <b>4,614</b> |                 |   |   |

Source: PPP Center, Citi Research



## Appendix A-1

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