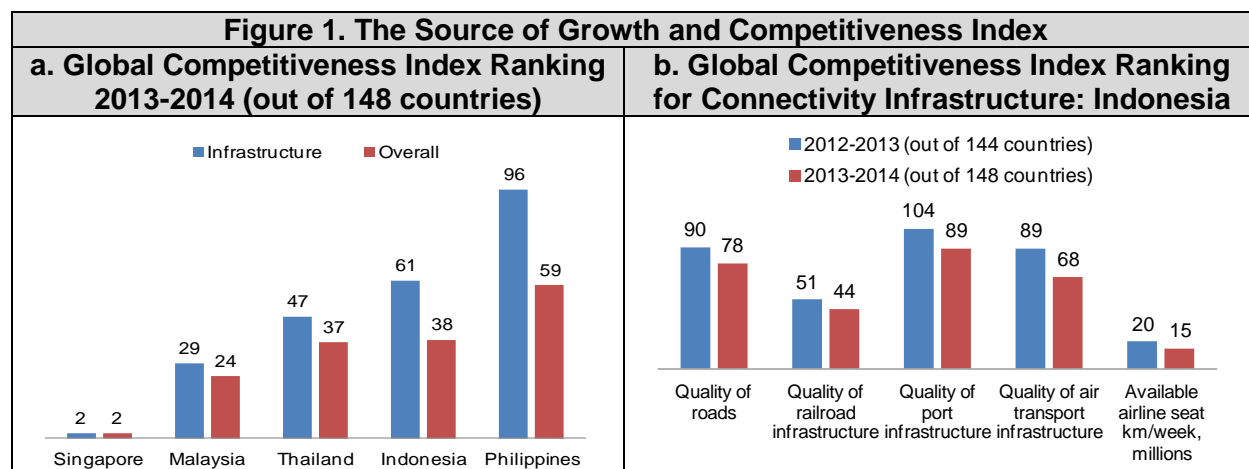## SUMMARY PROGRAM IMPACT ASSESSMENT

I.   Introduction

1.   The proposed Inclusive Growth through Improved Connectivity (IGIC) will support a key strategic pillar of the government's medium- and long-term development plans to achieve higher and more inclusive economic growth through improved national connectivity. An analysis using a computable inter-regional model of the Indonesian economy (Indo-TERM) suggests that sustained reforms that lead to significant efficiency improvement in the transport and logistics sectors over the medium-term could improve economic growth by about 1 percentage point annually. It will also reduce the country's poverty incidence by 2.2% (4.7 million people) over a five-year period.

II.   The Problem

2.   **Potential growth rate and under investment in infrastructure.** The ADB Study (ADB, 2010 and Hill et al, 2012) identifies inadequacies in infrastructure as one of the critical constraints to economic growth. With a large increase in the infrastructure spending in the past few years, together with reforms implemented to support infrastructure development, Indonesia's global competitiveness index ranking rose by 12 places to 38 in the 2013 Global Competitiveness Index.[1] However, significant challenges remain. Although Indonesia's ranking on infrastructure pillar has moved up by 17 places to 61, it is still much lower than the country's overall ranking of 38 out of 148 countries (Figure 1a). Lagging development of infrastructure—transport and telecommunications networks, electricity, and water supply—is a prime constraint on the stagnated *tradables* sectors growth (Figure 1b). The quality of infrastructure is ranked below that of, for example, Malaysia and Thailand (Figure 1a). The impact of lagging infrastructure appears in a number of forms. Deteriorating road systems in the provinces and districts increases domestic transport and logistics costs. Congested port and underdeveloped inter-island transport systems have led to expensive domestic shipping costs. Congested and underdeveloped international ports limit the efficient integration of Indonesia's manufacturing sector into international production networks.
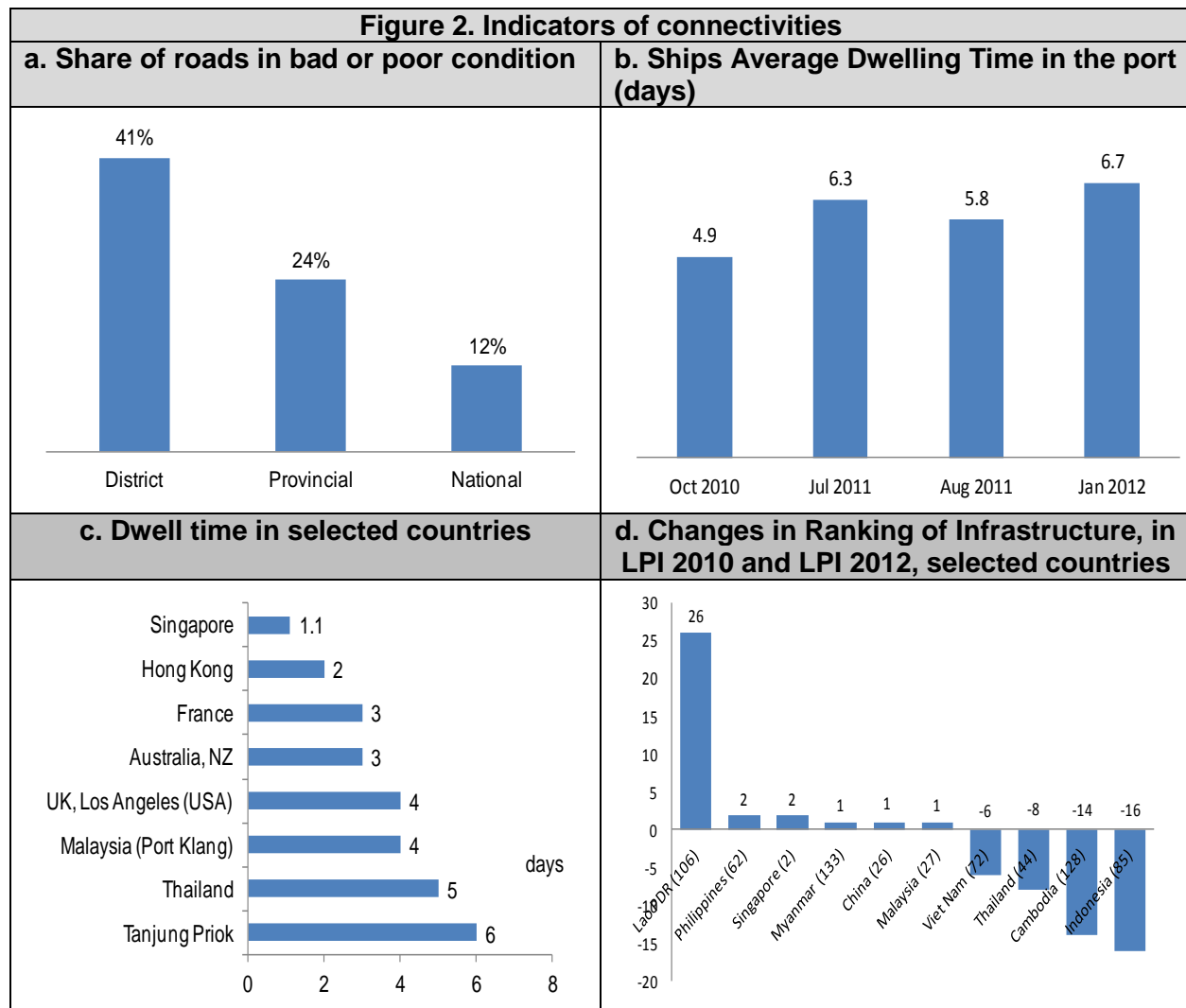
Figure 1. The Source of Growth and Competitiveness Index	
a. Global Competitiveness Index Ranking 2013-2014 (out of 148 countries)	**b. Global Competitiveness Index Ranking for Connectivity Infrastructure: Indonesia**

Sources: The Global Competitiveness Report 2013 (World Economic Forum, 2013).

3.   **Intra-island connectivity**. Linking rural areas with growth poles within islands is constrained by inadequate road infrastructure and poor maintenance, and underdeveloped

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[1] World Economic Forum. *Global Competitiveness Report, 2013–2014.* Geneva.

railway networks. Due to sustained low government spending in infrastructure spending, the quality of the existing road network has deteriorated significantly. The recent Public Expenditure Review of the Road Sector conducted by the World Bank finds that, respectively, 24% and 41% of provincial and district roads are in bad or poor condition (Figure 2a). The performance is better at the national level where only 12% of the roads are in bad or poor condition. Inability to acquire land for public use has been one of the reasons for the delayed disbursement of government's capital spending. It has also delayed the development of public-private partnerships (PPPs), particularly for toll roads. The private sector considers the land acquisition problem as a major source of uncertainties for project development, costs and implementation. The existing rail network mainly provides passenger service only in Java and limited freight services in Sumatra.

Figure 2. Indicators of connectivities	
a. Share of roads in bad or poor condition	b. Ships Average Dwelling Time in the port (days)

c. Dwell time in selected countries	d. Changes in Ranking of Infrastructure, in LPI 2010 and LPI 2012, selected countries

Sources: The Public Expenditure Review of the Road Sector, the World Bank. A First Analysis of the Logistics Performance Index (World Bank, 2012). Journal of the Indonesia Infrastructure Initiative PRAKARSA, issue 10, April 2012 page 11. World Bank, LPI 2012.

4.   **Inter-Island connectivity**. As a large archipelagic country, reducing the cost of inter-island shipping will contribute significantly to economic growth and poverty reduction across islands of the country. At present, domestic shipping costs constitute a large portion of producers' total costs, with these costs being passed on to consumers throughout the country.

Reflecting poor logistics and inadequate transport infrastructure, about 70% of the rice price differences across provinces is explained by the degree of remoteness.[2] The high cost of shipping is due to a combination of inadequate hard and soft infrastructure in the ports. According to one estimate, the average turnaround time for domestic shipping at the 25 strategic ports is 2.7 days. With average sailing time being 1.5 days, ships are spending about 75% of the total time between destinations at port.

5.   **International Connectivity**. Congested ports and rising logistic costs are major constraints on the expansion of manufacturing. The bulk of the country's international trade is facilitated by five main ports. The largest is Tanjung Priok, the country's main international gateway in Jakarta, currently serving approximately 70% of internationally traded goods. Tanjung Priok also serves 29% of container traffic between Java and other islands. The average time cargo containers spend at Tanjung Priok, the country's main port, stretched to 6.7 days in January 2012 from 4.9 days in 2010 (Figure 1b). This compares with 1–2 days at Asia's most efficient ports (Figure 1c). It costs $750 to transport a container 56 kilometers from the Cikarang industrial zone to Tanjung Priok port, almost 70% more than moving a container a similar distance in Malaysia. The difference is primarily caused by road congestion in Indonesia. The 2012 Logistic Performance Index, which measured the efficiency of logistic services for international trade, confirms that Indonesia's performance is much lower than the neighboring countries due to lagging infrastructure support (Figure 2d).

III.   Economic Analysis and Poverty Assessment

6.   **Policy reforms to improve national connectivity in the medium term**. The Government has embarked on a connectivity reform agenda that includes: (i) strengthened coordination, regulatory and institutional frameworks; (ii) improved intra-island connectivity aimed at connecting rural areas with regional growth poles, and accelerated development and better maintenance of inland transport networks; (iii) improved inter-island connectivity to enhance efficiencies and service performance of transport services; and (iv) improved international connectivity by making the country's key ports, logistics and intermodal systems more efficient in handling increasing traffic and trade volume. The Government has more than doubled its budget allocation to support infrastructure development and connectivity investments since 2010. In 2013, Rp205.8 trillion is allocated by the central government for capital/infrastructure spending, including to support connectivity-related projects in eastern Indonesia.

7.   **Policies to strengthen policy coordination.** There are two areas of reforms. The first is to strengthen coordination of policy reforms surrounding national connectivity. The second is to improve mechanisms to channel public sector resources to projects that promote national connectivity. In the first area, the government set up a coordinating mechanism equipped with the political mandate to coordinate policy reforms on connectivity beyond the core economic agencies and has appointed the Coordinating Minister of Economic Affairs (CMEA) as the Executive Chairman for implementing the MP3EI. At the policy implementation level, CMEA has done the following: (i) established a monitoring system to assess progress in implementation of the national logistics system; (ii) issued a debottlenecking mechanism in the Executive Committee of MP3EI (KP3EI) secretariat, to enhance the implementation of prioritized national connectivity infrastructures; and (iii) revitalizes the Policy Committee for Acceleration of Infrastructure Delivery (KKPPI), by reviewing its structure, strengthening its Secretariat and employing professionals. The Minister of Finance (MoF) is in the process of establishing a PPP

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[2] World Bank. 2010. *Logistics Performance Index 2010: Indonesia.* Washington, DC.

Unit within MoF to mainstream the use of PPP for infrastructure projects. CMEA has formalized the selection of 56 priority infrastructure projects and established project preparation facilities (e.g. pre feasibility study fund, technical assisstance fund) to support PPP infrastructure projects. The government also set up and operationalized a Viability Gap Fund (VGF) to provide public sector financial support to well-prepared PPP projects to enhance their bankability and financial viability.
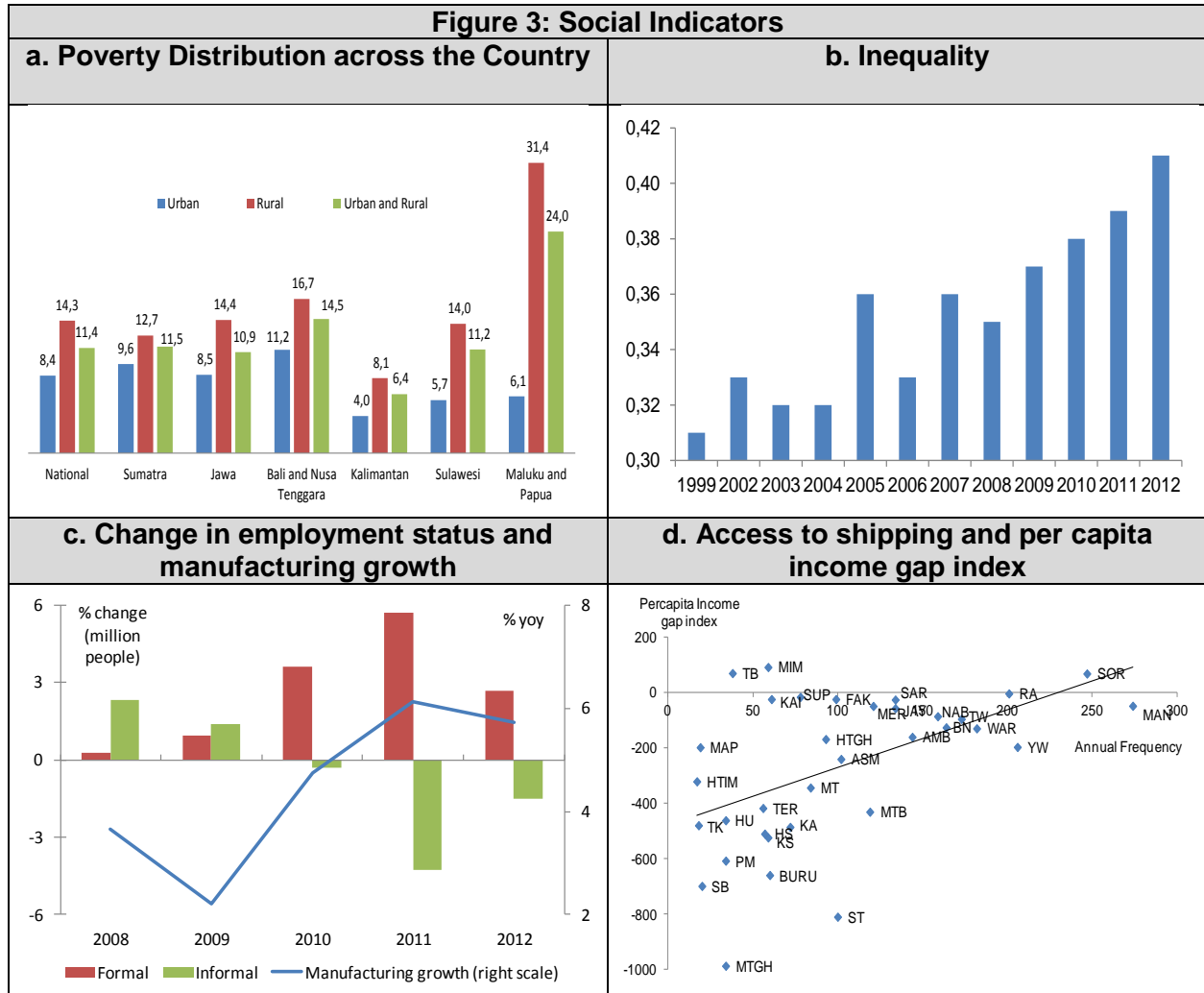
8.   **Policies to improve intra-island connectivity.** To Increase investors' confidence and stakeholders participation in the national connectivity agenda, the government has issued a land acquisition Law (No.2/2012) and a Presidential Regulation (No.71/2012) on land acquisition for public purpose development, which is a critical step towards attracting and mobilizing infrastructure investment. More recently, related ministries, including MoF, the National Land Agency and the Ministry of Home Affairs, have issued the implementing regulations as mandated by the Presidential Regulation. The National Land Agency and CMEA have also finalized action plan to accelerate the implementation of the new regulations. On the road sector, Ministry of Public Works DG Highway has expanded the use of performance based contracting (PBC) for road maintenance. The government introduced a pilot for reimbursable road maintenance in eastern Indonesia on a pilot basis. Under this mechanism, road infrastructure grant funds will be disbursed by the national government to local governments only if they meet pre-agreed road maintenance quality and performance standards.

9.   **Policies to improve inter-island connectivity**. The key objectives of interisland connectivity reforms are to strengthen the policy framework to facilitate improvement in port productivity and to improve transport access in the eastern part of Indonesia. In a large, archipelagic country with a dispersed population, reducing the cost of interisland shipping is expected to make a significant contribution to facilitating economic growth and poverty reduction by connecting islands through lower cost and higher volume trade and movement of people. The Shipping Law No. 17 issued in 2008 marks the starts of reforms with long-term objectives of developing competitive shipping sector to support domestic and international trade. The Law includes a provision to issue a national port masterplan (NPM) to guide implementation of reform and port investment across the country, including the eastern Indonesia. The Ministry of Transport issued ministerial decree No. 414 on NPM to integrate economic corridors development envisioned under the MP3EI and national transport and port systems. The NPM also includes port investment plans, both from public and private, and also cover policies to support improvements in port operation and efficiency.

10.   **Policies to enhance international connectivity**. While efforts to expand the capacity of the main Jakarta port of Tanjung Priok port are underway, the government is also addressing soft infrastructure and trade facilitation impediments. Progress continued in the implementation of the Indonesia National Single Window System (INSW). The single-submission and sign-on are the final goals of the INSW. With those features, the INSW system will significantly improve the efficiency of cargo clearance process which will reduce costs for exporters/importers and in turn strengthen the competitiveness in trade logistics. The government has incorporated the national Agency of Drug and Food Control (BPOM), one of the major issuers of import/export permits, into the INSW Single Sign-On. This year, two additional agencies, the Ministry of Trade and the Ministry of Agriculture, have been added to the INSW Single Sign-On.

11.   **Current performance in poverty and income inequality reduction**. Economic growth averaging about 6% over the past 6 years has helped to lift 6.4 million people out of poverty. Yet 29 million Indonesians continue to live below the government's poverty line, and another 60 million would join them in the event of even a small reduction in their incomes. Of those

employed, 60% work in the informal sector, where incomes are low. Further, income inequality as measured by the Gini coefficient has worsened from 0.35 in 2008 to 0.41 in 2012 (Figure 3b). The national rural poverty rate of 14.3% is still much higher than the national urban poverty rate of 8.4% (Figure 3a). Poverty rates in some provinces in eastern Indonesia are much higher than elsewhere in the country—for example, 24.0% in Maluku and Papua (Figure 3a). Alleviating the country's multidimensional poverty and income inequality will require not only accelerated economic growth but also a more inclusive growth process that provides rural areas and disadvantaged regions with greater economic opportunity.
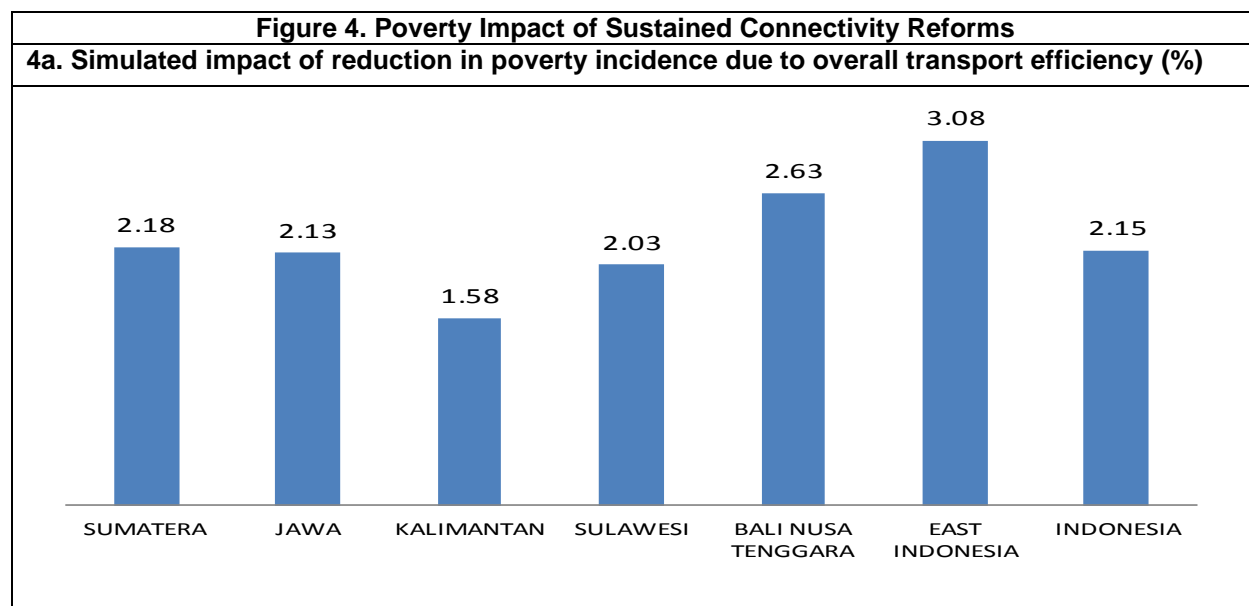

Figure 3: Social Indicators

a. Poverty Distribution across the Country

b. Inequality

c. Change in employment status and manufacturing growth

d. Access to shipping and per capita income gap index

Source: Badan Pusat Statistik (BPS). An Assessment on Maritime Pioneer Shipping in Eastern Indonesia (Edimon and Aji, 2011).

12. **Infrastructure development for better social outcomes.** Improved public infrastructure would make a significant contribution to reducing poverty and closing gaps in income inequality. Toward reducing poverty, better infrastructure, particularly for transportation and generating electricity, would support growth in manufacturing, which generates jobs in the formal sector (Figure 3c). The performance of manufacturing has been lackluster since the late 1990s and started to improve only in the past 2 years. Toward closing income gaps, investment in infrastructure is also needed to address high poverty rates in rural areas, as development prospects are poor for rural areas that lack good connections with towns and markets. Finally,
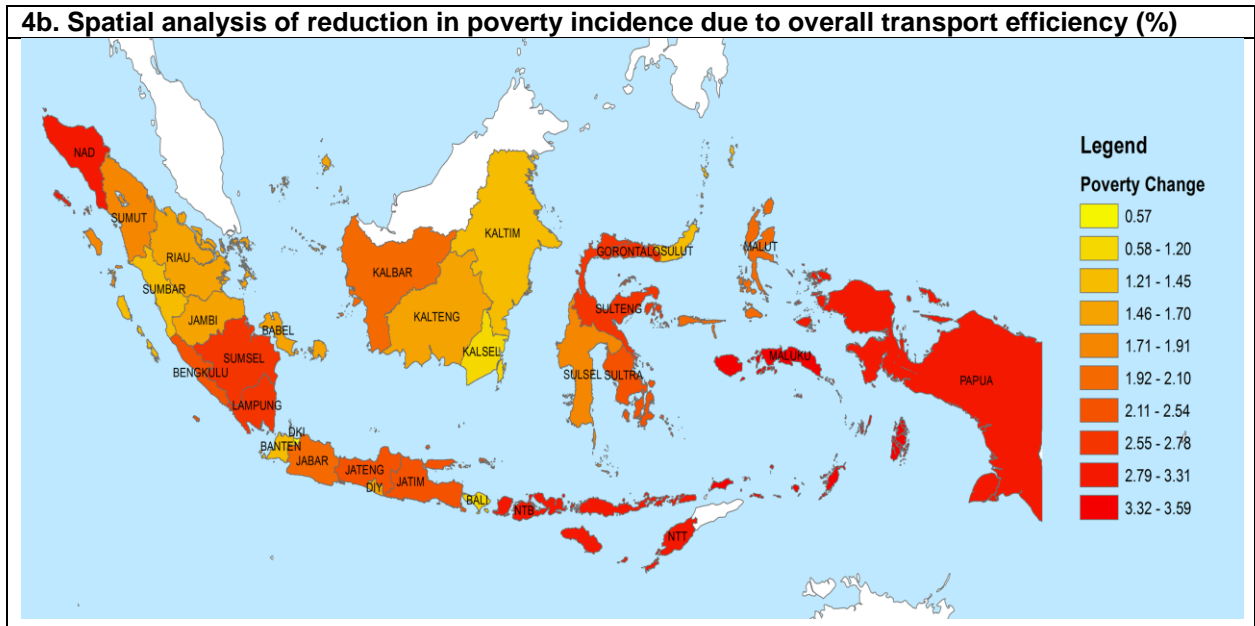
poverty in some eastern provinces is even higher—at 24.1% in Maluku and Papua. The quality of access to shipping services partly explains the income gap within in the eastern part of Indonesia. The districts that have better access to the shipping services tend to have higher per capita income (Figure 3d). As consequence, the progress in reducing poverty is mixed in the rural and in the eastern part of Indonesia (Figure 3a). Weak infrastructure there hinders economic activity, the growth of employment, and access to services such as education and health care. Alleviating the country's multidimensional poverty and income inequality will require not only accelerated economic growth but also a more inclusive growth process that provides rural areas and disadvantaged regions with greater economic opportunity.

13.   **Impact of sustained connectivity reforms on economic growth and poverty reduction**. An analysis using a computable inter-regional model of the Indonesian economy (Indo-TERM)[3] suggests that sustained reforms that lead to a significant efficiency improvement in the transport and logistics sectors over the medium term could improve economic growth by about 1 percentage point annually. Additional economic growth in the first round is generated by efficiency improvement in the transport and logistics sectors, which leads to more competitive domestic products and increased production of certain products such as agricultural commodities that were not tradable into the market due to expensive inter-island transport and logistics costs. In the second round, the reforms will attract new investment due to improved investment climate, both to the transport and logistics sectors and other growing industry spurred by the connectivity reforms. The improved growth prospects from sustained connectivity reforms would also reduce the country's poverty incidence [4] by 2.2% (4.7 million people) over a five-year period (Figure 4a). Interestingly, poverty reduction is higher in the eastern part of Indonesia (Figure 4b) as those provinces are suffering more from connectivity impediments. In addition, it also due to a higher base poverty base in those provinces.

Figure 4. Poverty Impact of Sustained Connectivity Reforms
4a. Simulated impact of reduction in poverty incidence due to overall transport efficiency (%)

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[3] Indo-TERM is a bottom-up computable inter-regional model of the Indonesian economy covering 30 aggregated provinces. It is calibrated using 2005 input-output with inter-provincial trade data.

[4] Computed from the result of Indo-TERM using cumulative density function of change in expenditure per capita from the simulation. Lognormal distribution is assumed as in Bourguignon (2003), 'The growth elasticity of poverty reduction: explaining heterogeneity across countries and time periods', in T. Eicher and S. Turnovsky (eds), 'Growth and Inequality', MIT Press.

4b. Spatial analysis of reduction in poverty incidence due to overall transport efficiency (%)

Note: East Indonesia refers to Maluku and Papua.
Source: ADB Staff Estimates