INDONESIA INVESTMENT AUTHORITY

# Socio-Economic Impact Report of INA's Investment Portfolio

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Conducted independently by LPEM FEB Universitas Indonesia in collaboration with Indonesia Investment Authority (INA), under the coordination of the Directorate General of State Assets Management (DJKN), Ministry of Finance of the Republic of Indonesia



# Executive Overview

This report presents the key findings from a socio-economic impact analysis conducted independently by LPEM FEB Universitas Indonesia on two strategic investments of the Indonesia Investment Authority (INA):

1. The Bakauheni–Terbanggi Besar (BTB) Toll Road, and
2. The Belawan New Container Terminal (BNCT) International Port

The study provides an evidence-based assessment of how INA's long-term investments generate measurable economic, social, and environmental value for Indonesia. It reflects INA's commitment to transparency, accountability, and data-driven evaluation in advancing sustainable national development.

Aligned with INA's dual mandate to achieve long-term financial returns while contributing to Indonesia's sustainable economic growth, this study highlights INA's catalytic role in driving investments that deliver both commercial performance and tangible socio-economic benefits. By quantifying outcomes such as GDP contribution, job creation, and emissions reduction, the findings demonstrate how INA's responsible investment approach creates lasting value for the nation and its people.

## Bakauheni – Terbanggi Besar (BTB) Toll Road

## BTB's role in the Trans-Sumatra Corridor

**Trans-Sumatra Toll Road** *(Jalan Tol Trans Sumatera or JTTS)* spans ~2,974 km from **Lampung to Aceh**, designed to **improve inter-regional connectivity** in Sumatra.

**Bakauheni—Terbanggi Besar (BTB)** is the **first segment** and a critical part of JTTS, spanning **141 km.**

BTB connects **Bakauheni Port** (a gateway to Java) and **Central Lampung,** facilitating the flow of goods and passengers between **Indonesia's two largest economic regions.**





## Projected Impact of Bakauheni—Terbanggi Besar Toll Road

Cost-Benefit Analysis shows significant potential impact throughout its construction and concession period (2015—2067)

**2,59**

**Economic Benefit-Cost Ratio (EBCR)**

- every IDR1 invested in BTB generates IDR2.59 in economic value
- an investment is considered **economically viable if EBCR > 1**

### Economic

a. **Macro-economic Benefits:** ~ IDR400 T contribution to GDP (0,034% of Indonesia's GDP in 2024)
b. **Job Creation:** 20,000 jobs annually (direct and indirect)
c. **Logistics & Efficiency:** IDR170 T in total time, vehicle operations, safety cost savings, and others
   - IDR23.5 T time savings
   - IDR127 T vehicle operating cost reductions
   - IDR0.1 T accident cost savings
   - IDR2.5 T from the elimination of illegal levies
d. **Agriculture & Tourism:** 3.9x increase in tourism visits; farmers capture higher margins

### Social

a. **MSME Empowerment:** ~12% average revenue growth
b. **Market Expansion:** 46% of businesses expanded to new provinces
c. **Urban Migration:** 8% population growth in toll-connected areas vs. 3% in non-connected areas
d. **Improved Access to Public Facilities:** 21% reduction in travel time to essential services and amenities

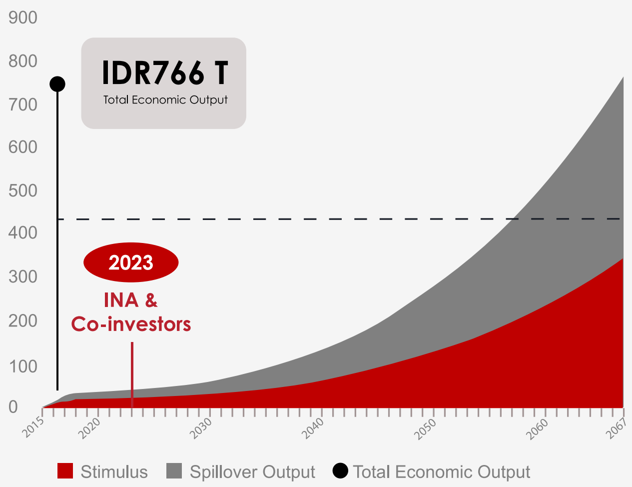
### Environmental & Governance

a. **Emissions Reduction:** IDR2,7 T in avoided $CO_2$ and PM10 costs from the reduction of
   - 1.6 million tons (~31,000 ton/year) $CO_2$ emissions
   - 4,600 tons (~96 ton/year) PM10 emissions
b. **Air Quality & Noise:** Levels within World Health Organization thresholds
c. **Road Safety & Governance:** 40% fewer speeding violations
d. **Technology Adoption:** Electronic Traffic Law Enforcement (ETLE), rumble strips, speed reducers

## Projected Economic Impact

### Macro-Economic Benefits

BTB is expected to contribute to ~IDR400 T in GDP over the concession period and support ~20.000 jobs annually




Spillover impact on economic output[2] : **~ IDR8 T / year** (IDR420 T total)

**Stimulus from INA's investment[1] : ~ IDR7 T / year** (IDR346 T total)

**IDR7.5 T / year**
**Contribution to GDP[3]**

**IDR1.7 T / year**
**Potential government revenue**
from direct and indirect taxes

**~20,000 jobs / year**
Direct and indirect

**IDR2.8 T / year**
**Additional household income**

**2.59**

**Economic Benefit-Cost Ratio (EBCR)**

- every IDR1 invested in BTB generates IDR2.59 in economic value
- an investment is considered economically viable if EBCR > 1

[1] Direct economic impact primarily comes from capital expenditure (capex) and the revenue generated
[2] Indirect economic impact beyond the initial investment, including multiplier effects on businesses, employment, and income
[3] GDP represents the portion of total stimulus and spillover impact that reflects value added



### Improving Logistics Efficiency

BTB delivers significant cost efficiencies from reduced travel time and operational costs


**5 hours**
before BTB

**2 hours**
after BTB

BTB has **reduced travel time** between Bandar Lampung and Bakauheni Port by **50%, transforming how people and goods move** across the island

**IDR24 T**
**time savings**
worker andbusiness productivity

**IDR0.1 T**
**accident cost savings**
safer roads and better enforcement

**IDR127 T**
**vehicle operating cost savings**
fuel and maintenance savings, worker and business productivity

**IDR2.5 T**
**savings from levy elimination**
improve trust in the logistics chain

Total cost savings amount to over IDR170 T, directly lowering Indonesia's high logistics costs.

## Projected Economic Impact

### Agriculture & Tourism Boost

BTB supports agricultural productivity and unlocks Lampung's tourism potential

**Farmer Uplift**

Faster transport reduces spoilage and post-harvest losses for perishable crops, helping farmers capture higher margins and increase competitiveness by reaching larger markets.

**Agribusiness Connectivity**

BTB connects Lampung's export producers (coffee, cassava, palm oil and rubber) directly to Java's consumer market, attracting agribusiness investment.

**Tourism Growth**

Improved road access to Way Kambas National Park, Krakatoa, and coastal attractions has driven a 3.9x increase in tourism visits, boosting revenues for small businesses in hospitality and services.

By enabling value creation beyond transport, BTB drives Lampung's economic diversification and creates new engines of growth.



## Social Impact

### BTB empowers businesses

BTB empowers businesses and contributes to urbanization


**Increased Urbanization**

**~8%**

Population growth in toll-connected areas (vs. 3% in non-toll connected areas).

**Higher MSME Revenue**

**~12%**

Average revenue growth (vs. before BTB) of MSMEs who reported that BTB has positively impacted their businesses.

**Market Expansion**

**~46%**

Of surveyed businesses expanded their markets to new provinces.

# BTB drives growth across industries, improves access to essential services

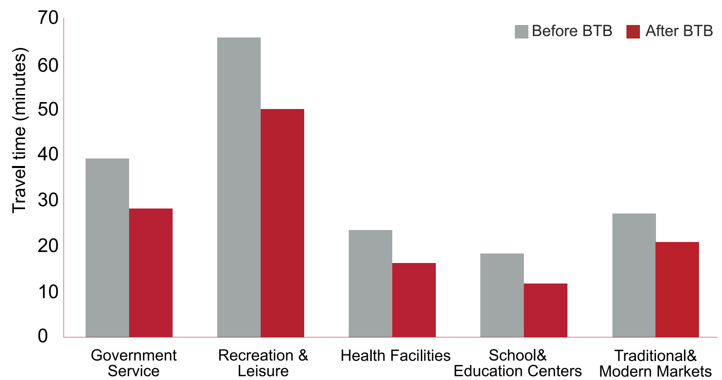
## Increased Business Activity Across Industries

A survey shows that BTB has contributed to **boosting business activity** across multiple sectors…

| Industry | Percentage of businesses that reported increased activity |
|---|---|
| **Trade** | 84% |
| **Culinary** | 66% |
| **Lodging** | 44% |
| **Services** | 37% |
| **Creative Economy** | 31% |

## Improved Access to Public Facilities

Residents **reach essential services faster…**




**21%** decrease in travel time to public facilities
vs. before BTB

## Emissions Reduction & Road Safety

BTB contributes to lower $CO_2$ emissions and enhances road governance through technology adoption

| | Measures | Outcomes |
|---|---|---|
| **$CO_2$ Emissions & Air Quality** | • 11.7% shorter travel distances vs. non-toll roads, resulting in **reduced fuel consumption and emissions.**<br>• **Continuous monitoring** of PM2.5, PM10, vibration, and noise levels. | • ↓ 1.6 million tons (~31,000 ton/year) $CO_2$ emissions[1.]<br>• ↓ 4,600 tons PM10 emissions (~96 ton/year).<br>• $CO_2$ and PM10 savings valued at ~ IDR2.7 T (~IDR0.6 T/year).<br>• Air quality and noise level indicators remain within WHO thresholds. |
| **Road Safety & Governance** | • Implementation of Electronic Traffic Law Enforcement (ETLE) technology.<br>• Daily patrols and reflective road signs.<br>• Rumble strips and speed reducers at 12 hotspots. | • ↓ 40% speeding violations.<br>• Accident rate within safe thresholds.<br>• Emergency response time avg. 12 minutes. |

## United Nations Sustainable Development Goals (SDGs)

BTB delivers measurable contributions to **six UN SDGs**, acting as a catalyst towards achieving **Indonesia Emas 2045**

| | |
|---|---|
| 1 NO POVERTY | Reduces the amount of people living in poverty in Lampung (2015-2024). |
| 8 GOOD JOBS AND ECONOMIC GROWTH | Contributes to Indonesia's GDP and support jobs annually. |
| 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE | Reduce logistics costs, strengthens regional industrial competitiveness, and supports the development of economic zones. |
| 11 SUSTAINABLE CITIES AND COMMUNITIES | Provide access to safe, accessible, and sustainable transport. |
| 13 CLIMATE ACTION | Reduces $CO_2$ emissions from shorter travel distances and lower fuel consumption as a direct result of the toll roads. |
| 17 PARTNERSHIPS FOR THE GOALS | Lampung's exports in palm oil, textiles, and pulp highlight BTB's role in enabling diversification and greater international market access for local commodities. |

## Belawan New Container Terminal (BNCT) International Port

## BNCT as Indonesia's main international gateway

The **Belawan New Container Terminal (BNCT)** is strategically located on the Malacca strait and plays a key role in connecting Asia to the Middle East, Europe, and Africa.

INA and DP World's investment aims to transform BNCT into Indonesia's primary international gateway, **reducing reliance on Singapore & Malaysia transshipment hubs** by implementing **direct-call services.**

The main operational objective is to **increase capacity from 600 thousand TEUs (Twenty-foot equivalent units) to 1.4 million TEUs,** supported by DP World's network, technological knowledge, and operational expertise.





## Projected Impact of the Belawan New Container Terminal Port

Cost-Benefit Analysis shows significant potential impact throughout its construction and concession period (2016—2072)

**1.90**

**Economic Benefit-Cost Ratio (EBCR)**

- every IDR1 invested in BNCT generates IDR1.90 in economic value
- an investment is considered economically viable if EBCR > 1

### Economic

a. **Macro-economic Benefits:** IDR82 T Gross Value Added (0.002% of Indonesia's GDP in 2024)
b. **Job Creation:** 4,400 jobs per year (direct and indirect) nationally
c. **Fiscal Impact:** IDR15 T (IDR0.3 T/year) from direct and indirect tax revenue
d. **Cost savings during projected concession period (2030-2072):**
   - IDR20 T time savings from the implementation of direct-calls
   - IDR40 T Terminal Handling Charges (THC) savings

### Social

a. **SME and Large Enterprise Empowerment:**
   - 50% report higher revenue
   - 25% report improved access to commodities
   - 30% report market expansion to other provinces
b. **Urban Sprawl:** Workers from other regions drive in-migration, population growth and housing demand

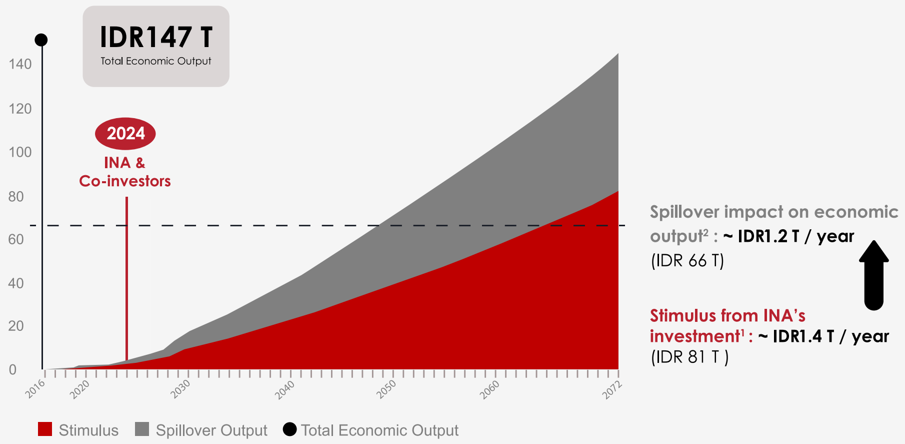
### Environmental & Governance

a. **$CO_2$ emissions reduction:** IDR1.9 T in avoided $CO_2$ costs (3.4 million tons $CO_2$)
b. **Digitalization & Compliance:** Implementation of a modern Terminal Operating System (TOS) and Weight Bridge Integration
c. **Cybersecurity:** Deployment of firewalls and data recovery systems
d. **Operational Safety:** Standardized safety measures including safe zones, pedestrian pathways, and lockout-tagout (LOTO) procedures

## Projected Economic Impact

### Macro-Economic Benefits

BNCT is expected to generate ~IDR82 T in GDP over the concession period and support ~4.400 jobs annually




**IDR1.5 T / year**
**Contribution to GDP**[3]

**IDR20 T**
**Time savings from direct-calls,** 2030 – 2072

**~4,400 jobs / year**
Direct and indirect

**IDR40 T**
**Terminal Handling Charges (THC) savings,** 2030 – 2072

**IDR0.3 T / year**
**Potential government revenue** from direct and indirect taxes

**1,90**

**Economic Benefit-Cost Ratio (EBCR)**
- every IDR1 invested in BNCT generates IDR1.90 in economic value
- an investment is considered **economically viable if EBCR > 1**

[1] Direct economic impact primarily comes from capital expenditure (capex) and the revenue generated
[2] Indirect economic impact beyond the initial investment, including multiplier effects on businesses, employment, and income
[3] GDP represents the portion of total stimulus and spillover impact that reflects value added



## Social Impact

### BNCT empowers businesses

**Improved Access to Commodities**
**~25%**
Surveyed businesses reported improved access to raw materials and commodities

**Higher MSME Revenue**
**~50%**
Surveyed businesses reported revenue growth

**Market Expansion**
**~30%**
Surveyed businesses expanded to other provinces

## Emission Reduction & Operational Efficiency

Through its partnership with DP World, and by leveraging their expertise in international terminal operations, INA seeks to improve port governance, safety, and efficiency


| | Measures | Outcomes |
|---|---|---|
| $CO_2$ Emissions | Implementation of **direct-calls** by 2030 would **shorten shipping distances** and **reduce fuel consumption**, contributing to overall reduction in $CO_2$ emissions. | **IDR1.9 T in avoided $CO_2$ costs**[1] from the reduction of 3,4 million tons $CO_2$. |
| Cybersecurity | Deployment of **firewalls, restricted remote access**, and **data recovery systems.** | • **Protect port operations** against cybersecurity threats<br>• Prevent data loss and operational shutdown. |
| Operational Safety | Standardized safety measures including **safe zones, pedestrian pathways**, and **lockout-tagout (LOTO) procedures.** | The integration of **occupational health and safety measures** as part of standard business operating procedure. |
| Digitalization of Terminal Systems | Modernization of the **Terminal Operating System (TOS)** and **Weight Bridge Integration** enabling real-time container tracking and accelerating berth productivity (siklus bongkar-muat). | In line with best practices of international port operations, which upholds **system automation** as a global standard. |

## United Nations Sustainable Development Goals (SDGs)

BNCT delivers measurable contributions to five UN SDGs, acting as a catalyst towards achieving Indonesia Emas 2045

1 NO POVERTY

Lifts people out of poverty each year (2016–2024).

8 GOOD JOBS AND ECONOMIC GROWTH

Adds to national GDP per year and creates jobs annually, supporting inclusive growth and employment.

9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

**Modernizes port infrastructure** and logistics, reducing costs, enabling direct calls, and advancing digitalization.

13 CLIMATE ACTION

**Reduces $CO_2$ emissions.**

17 PARTNERSHIPS FOR THE GOALS

**Strengthens global trade** through technology transfer, and multi-stakeholder cooperation for sustainable supply chains.



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