

Road and Rail Transport Infrastructure in the Philippines: Current State, Issues, and Challenges

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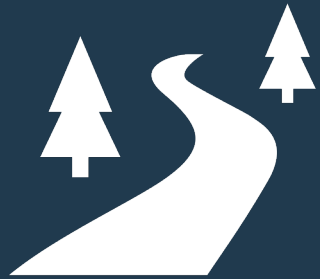
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Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas



Outline of Presentation


-  Current state and issues
 - Roads
 - Railways
-  Challenges in the planning, programming and implementation stages
-  Policy insights



Current state and issues (stock and quality)



Road transport infrastructure

 **Total Road Network:
205,045.97 km (2021)**

- National Roads: 34,250.97 km
 - National Bridges:
8,546 bridges; 388,057 linear meters
- Local roads: 170,795 km
 - Provincial roads: 31,501 km
 - City roads: 17,222 km
 - Municipal and Barangay roads:
122,072 km
 - Local bridges: n/a

Increase in national road length over the years.

Gradual increase of nationwide road density* recording 10.68 km of roads per 100 km² of land in 2021. However, **regional road densities in the regions remain low**, indicative of weak connectivity.

*exclusive of BARMM; No available data from DPWH



Road transport infrastructure

Increasing length of paved roads: concrete and asphalt. Total of 32,767 km or 98.66% of national roads in 2021.

Increasing number and length of permanent bridges: concrete and steel. Total of 386,927 linear meters or 99.71% of total national bridges in 2021.

However, unpaved national roads (gravel and earth) and temporary national bridges (bailey and timber) in 2021 mean that crucial quality improvements are still needed as these may **weaken connectivity**.

Majority of local roads are unpaved roads at 56%. Further, 47.42% of municipal roads are unpaved.*

*Note: Based on LGSF-funded roads that submitted data.

National Road and Bridge Condition

In 2021, only 41.22% of paved national roads considered to be under GOOD condition.

Only 51.03% bridges are in GOOD condition.

'GOOD' condition means the road/bridge needs routine maintenance only.



Rail transport infrastructure



**Total Operating Railway Length:
395 km (2021)**

- PNR Network
 - PNR Metro Commuter Line (Manila to Calamba; 75.734 km)
 - PNR Inter-Provincial Commuter Line (Calamba to Lucena; 44 km)
 - PNR Bicol Commuter Line (Sipocot to Naga; 37.07 km)
- Metro Manila Mass Rail Transit Systems
 - LRT-1 (20 stations; 19.65 km; north-south)
 - LRT-2 (13 stations; 17.6 km; east-west)
 - MRT-3 (13 stations; 16.9 km; north-south)

Development of rail transport sector stagnated.



Rail transport infrastructure



Average Number of Passengers Per Trip in PNR Lines

	PNR Metro South	PNR Metro North	PNR Bicol
2020	368	142	158
2021	263	93	125



Passenger traffic in Metro Manila Mass Rail Transit Lines (in millions)

	LRT-1	LRT-2	MRT-3
2017	157.00	65.96	140.15
2018	165.30	64.70	104.28
2019	161.35	56.98	97.15
2020	51.00	12.50	31.80
2021	44.40	11.84	n.d.

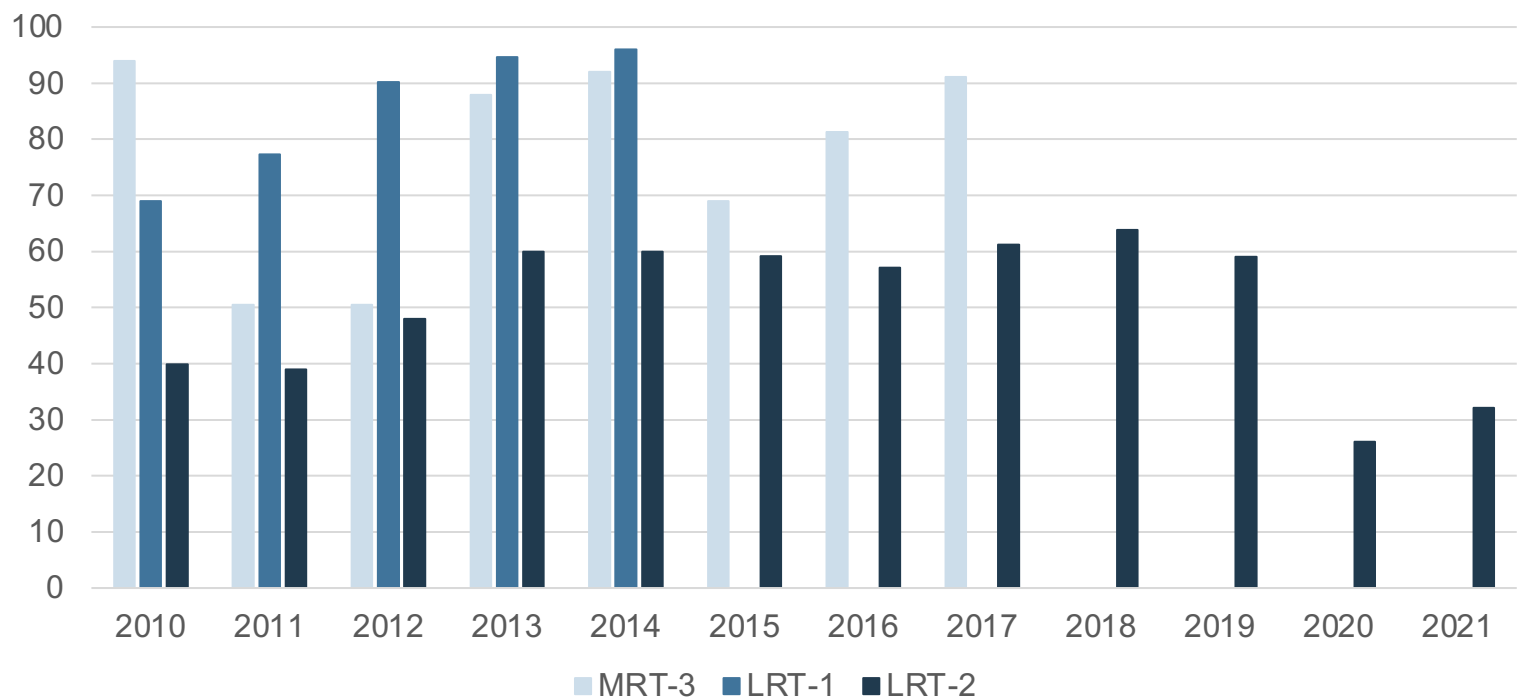
Decline in average number of passengers per trip either due to decrease in number of trips or drop in absolute number of passengers.

Decline in passenger traffic pre-pandemic.



Rail transport infrastructure

 **Load factor in Metro Manila mass rail transit lines, 2010 to 2021 (in percent)**



Load factor data reveals severe rail congestion in LRT-1 and MRT-3 as they exhibited above 60% load factors in most years.

LRT-2 also recorded a load factor above 60% before the height of pandemic (2020-2021).



Rail transport infrastructure

PNR commuters suffer poor service due to congestion, poor quality and unsafe railway platforms, and train delays and trip cancellations. Reasons include signaling problems, presence of garbage on rail tracks, and derailment.



A PNR Bicol train got derailed in Gumaca, Quezon in 2020

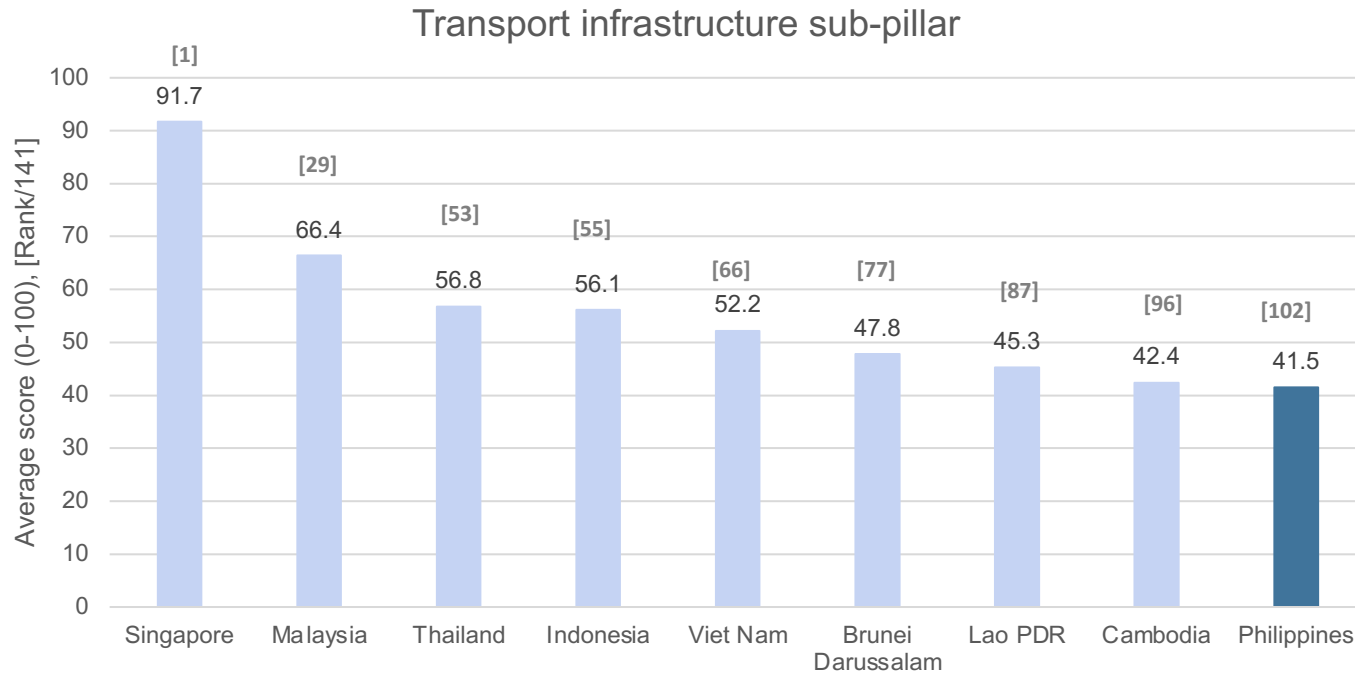
Source: <https://newsinfo.inquirer.net/1349097/pnr-train-derailed-snarls-traffic-in-gumaca-quezon#ixzz7rsBMT0x7>



Poor transport infrastructure hurting our competitiveness



ASEAN Rankings in the Transport Infrastructure Sub-pillar of the Global Competitiveness Index



The Philippines has the **poorest showing among ASEAN countries** in terms of transport infrastructure competitiveness in 2019.

Note: The numbers in parentheses are the ranks of the countries in the global ranking of 141 economies and the numbers below the ranks are the averages of the scores for the transport and utility infrastructure sub-pillars.

Myanmar is not included in the 2019 Global Competitiveness Report



Challenges in the planning, programming and implementation stages



Unmet planned targets



PDP 2017-2022 Targets in the Road & Rail Transport Sectors

	Base year	Baseline value	End of plan target (2022)
Road Transport			
International Road Roughness Index in national primary roads achieved	2015	4.62	3.0
Rail Transport			
Optimal capacity in train systems achieved, in passengers per sq.m.			
<i>Philippine National Railways</i>	2015	6	6
(optimal capacity = 6 passengers per sq.m.)			
<i>Light Rail Transit Line 2</i>	2015	5	4 to 5
(optimal capacity = 4 to 5 passengers per sq.m.)			

Targets either **not achieved** or **not useful**.

National International Roughness Index (IRI) in 2019 deteriorated to 4.68 compared to the baseline value of 4.62 in 2015.

Also, several regions have average IRI of >5 which means that they are in **'POOR'** condition: Cordillera Administrative Region, Western Visayas, Zamboanga Peninsula, Davao, and SOCCSKSARGEN.

On the other hand, targets for train system optimal capacity are not being reported by concerned agencies.



Unmet planned targets



Updated PDP 2017-2022 Targets in the Road & Rail Transport Sectors

	Base year	Baseline value	2020	2021	2022	End of Plan
Road Transport						
Travel time (decreased) via land per key corridor (in hours)	2016	Varies per corridor. (See Discussion Paper (DP))	Varies. (See DP.)	Varies. (See DP.)	Varies. (See DP.)	Varies. (See DP.)
Road traffic accident rate reduced (in number of accidents per 100,000 population) - incidents of accidents	2016	10.7	10	10	10	10
Rail Transport						
Passenger trips via rail in Metro Manila increased (in % share to total passenger trips via rail, cumulative)	2014	11	16	17	19	19

Target reduction in travel times **not achieved.**

Target reduction in road traffic accident rate **not achieved.**

Target increase in passenger trips via rail in Metro Manila **most likely not achieved** given the decline in passenger traffic in recent years. (No report on achievement.)

Policy targets **not achieved:**

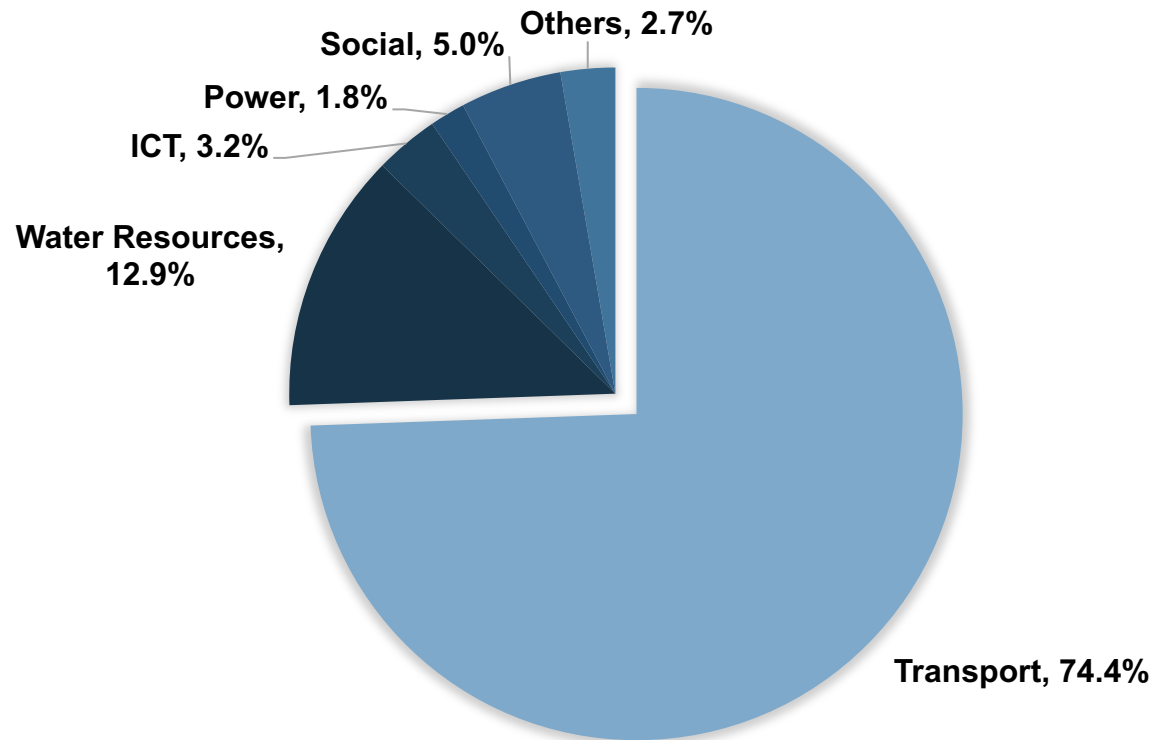
- a) Enactment of National Transport Policy
- b) Creation of an independent regulatory body for railways



Programmed investments



Philippine public investment program for infrastructure 2017-2022, by sectoral shares



Consisted of 5,586 infrastructure programs/activities/projects (PAPs) with total investment requirement of PhP3,123.47 billion; supposed to be implemented or rolled-out by the government within the medium-term.

Transport sector had the highest share at 74.4%

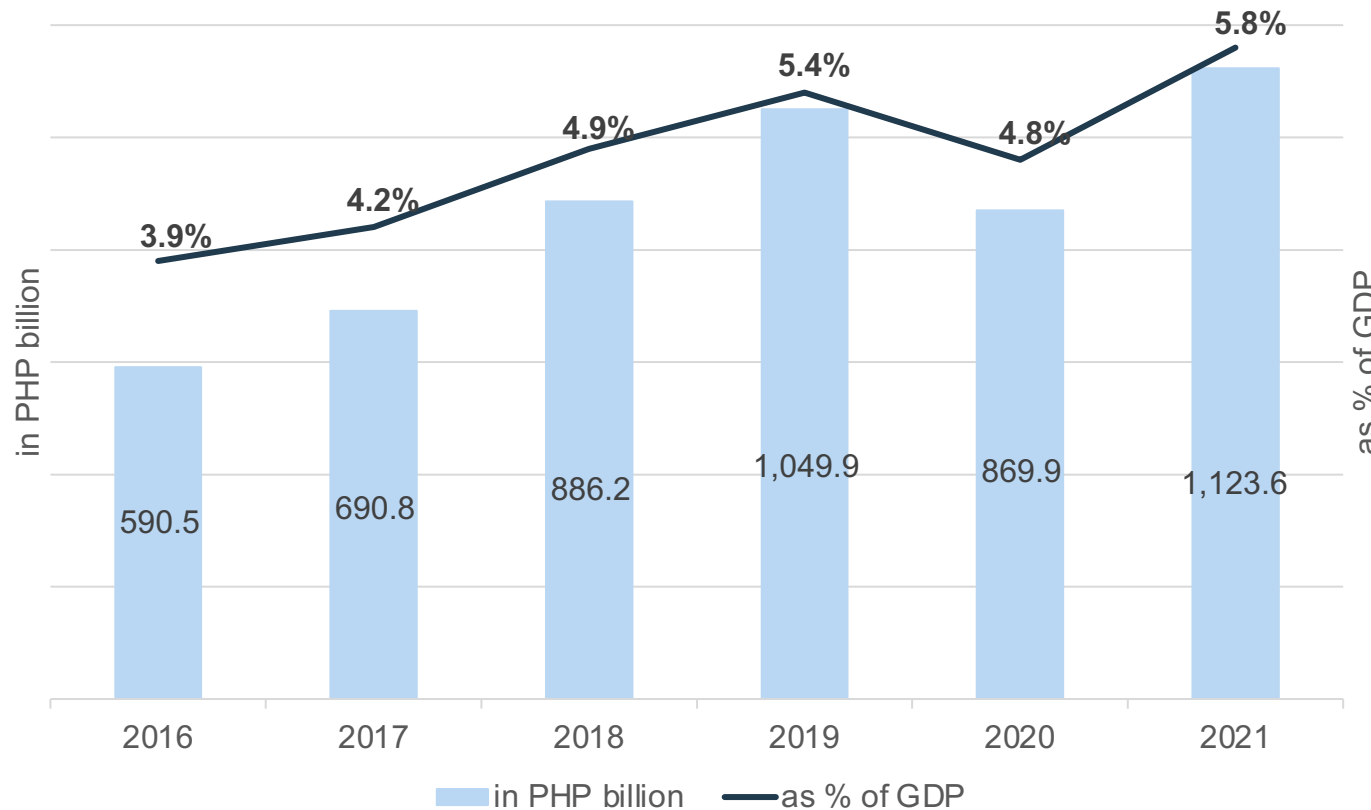
Notes: ICT - information and communication technology
Others - include urban/heritage renewal projects, government buildings, and multi-purpose facilities.



Disbursement vs spending program



Infrastructure spending as percentage of GDP (based on actual disbursements)



The target for public infrastructure spending is 7.4% of GDP by 2022.

, it appears from the trajectory of actual disbursements that this **may not be achieved.**



The agencies' capacity to absorb and spend public funds remains a problem



DPWH and DOTr Obligation Rates and Disbursement Rates, 2016-2021

Year	Obligation Rate (Obligation / Allotment)		Disbursement Rate 1 (Disbursement / Obligation)		Disbursement Rate 2 (Disbursement / Appropriations)	
	DPWH	DOTr	DPWH	DOTr	DPWH	DOTr
2016	77.5%	67.1%	73.2%	79.2%	54.7%	52.9%
2017	92.1%	84.1%	36.3%	39.2%	32.8%	32.5%
2018	92.6%	90.0%	42.9%	40.7%	39.3%	36.6%
2019	87.8%	85.2%	56.4%	42.5%	48.1%	34.3%
2020	92.5%	96.8%	31.2%	36.9%	28.6%	35.3%
2021	93.2%	93.9%	61.0%	47.0%	53.8%	41.5%

Both DPWH and the DOTr continue to have low absorptive capacity for funds.

Their absorptive capacity in terms of ability to actually spend deteriorated from 2016 to 2017, then remained low afterwards.



Project implementation challenges

Implementation Challenges For Roads/Bridge Projects

- Pandemic-related restrictions delayed the right-of-way (ROW) acquisition
- Delays in DBM fund release for items under the “For Later Release” category
- Delays in improving road quality (i.e. paving) due to failure of some contractors to comply with DPWH quality control program
- Many farm-to-market roads (FMR) still unpaved and disconnected due to erroneous past practices
- Standard costing of FMR at PHP 12 million per km not realistic
- Political intervention in the finalization of the list of projects in the GAA
- Monitoring and evaluation (M&E) still not institutionalized
- Mandanas-Garcia ruling to affect timely completion and quality of infrastructure projects
- Large gap in upgrading the quality of local roads due to numerous issues, e.g., natural calamities, delayed or incomplete removal of obstructions in project sites, difficulties in materials handling, and manpower and supply chain problems



Project implementation challenges

Implementation Challenges For Rail Projects

- ROW issues stalling the completion of projects no matter how early or efficient the other stages in project implementation were
- Lack of consistency in decision-making (e.g., due to changes in leadership) and attendant legal disputes when original agreements are not honored
- Delays in financing (e.g., China financing, which has a significantly different procedure relative to other ODA sources)



Policy Insights



Policy Insights

- Plan for the long term, e.g., 20-plus years, and link the financing buildup to the long-term plan. Institutionalize this at the LGU-level to encourage continuity.
- Implement the NEDA Board-issued National Transport Policy (NTP)
- Build the capacities of LGUs given the Mandanas-Garcia ruling
- Fast-track the integration of databases given that accurate information is crucial in investment programming
- Introduce transit-oriented development in cities outside Metro Manila through sustainable infrastructure master planning



Policy Insights

- Regarding the complex issue of Congressional introductions and the executive's hold on "For Later Release" funds:
 - At the national level, seek reform champions for minimizing Congressional introductions and fast-tracking executive approvals.
 - At the regional level, strengthen the practice of project identification and prioritization through the Regional Development Council (RDC) processes.



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