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**Comparative Case Study of Urban
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Lessons from Manila's MRT-3 and
Stockholm's Citybana**

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Comparative Case Study of Urban Rail Transit- Challenges and Lessons from Manila's MRT-3 and Stockholm's Citybana

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I. Introduction

The Metro Rail Transit Line 3, better known as MRT-3 or the Metro Express, is a public transportation system consisting of a 16.9-kilometer rail line that stretches along EDSA, from Taft Avenue in Pasay (Southbound) to North Avenue in Quezon City (Northbound). It is a common mode of transport for Lasallians and university students commuting across different parts of Metro Manila. MRT-3 is an affordable option when traveling between key points—say, from Ayala Station to Araneta-Cubao, or from Shaw Boulevard back to Taft Avenue. It's among the fastest ways to traverse EDSA, especially during rush hour. With careful timing, you can avoid the heaviest crowds—but ironically, you'll often find yourself competing with fellow commuters during the very same rush, especially in the late afternoon to early evening, just to get home early.

The system isn't perfect. It's often jam-packed, experiences delays, and requires passengers to stay alert against potential pickpockets who take advantage of the crowded train cars—described by many as sardine cans sealed in heat. Still, Filipinos in the NCR will often say: *"At least it gets the job done."* For many, it's a functional alternative—especially when compared to paying ₱400-₱600 for a Grab ride between Ortigas to Makati.

Peak hours are notoriously difficult, particularly on northbound trains heading toward Ortigas or Ayala Station. If you don't board before 7:30 AM, you'll likely be late. When the doors slide open, people instinctively push their way in, creating a surge of bodies moving forward while others struggle to get out. Despite the chaos, if MRT-3 didn't exist, many workers and students simply

wouldn't make it to their destinations on time. The only alternatives—buses or cars—would leave them stuck in gridlock.

These are the daily realities for most MRT-3 commuters, who largely come from the lower to middle classes—the majority of Metro Manila's workforce powering its central business districts. In a city where owning a functional car is a privilege—albeit one still trapped in traffic—riding a train is a necessity. For many, the MRT-3 represents a mix of relief, routine, and sacrifice.

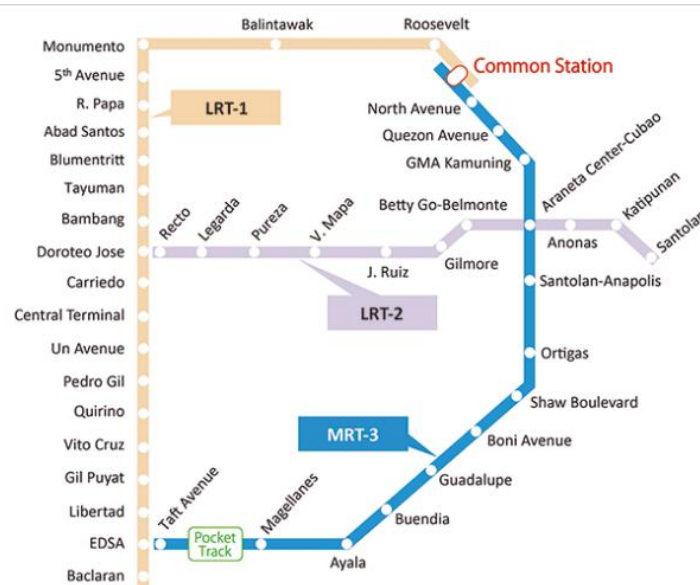
Its affordability and speed make it a preferred choice over jeeps, buses, or private vehicles. Yet, many Filipinos have become desensitized to the daily grind: overcrowding, long queues, and unexpected service interruptions are part of the sacrifice they silently endure.

While commuters continue to rely on MRT-3 as a necessity, it's important to look back on how this transit system was built—and whether it truly lived up to its promise. Originally envisioned in the 1990s as a flagship transportation solution for Metro Manila, the MRT-3 was backed by major local and foreign stakeholders. But as we revisit its history, construction model, project management practices, and procurement processes, a crucial question emerges: *Did the MRT-3 live up to the standards it set for itself—or was it a compromise from the beginning?*

II. History of Metro Rail Transit Line 3 and performance throughout the years

The implementation of MRT-3 was designed to alleviate chronic traffic congestion along EDSA and primarily aimed to improve accessibility across major business districts such as Pasay, Makati, Mandaluyong, Pasig, and Quezon City. With approximately 300,000 daily commuters in Metro Manila, MRT-3 was intended to provide a convenient, efficient, and cost-effective alternative to buses, jeepneys, taxis, or private vehicles traveling along EDSA. The railway transit system was originally designed to carry 23,000 passengers per hour in each direction (northbound and

southbound), with a theoretical capacity expandable to 48,000 passengers per hour (*Metro Rail Transit Corporation, n.d.*).



Source: Sumitomo Corporation (2023)

To begin with the contractual framework, the Department of Transportation and Communications (DOTC)—formerly under the Department of Information and Communications Technology (DICT)—awarded a Build-Operate-Transfer (BOT) contract to the Metro Rail Transit Corporation (MRTC) (Ganiron Jr., 2015).

The BOT Law was enacted to encourage private sector participation in the development of public infrastructure such as roads, railways, and airports. Under this model, a private company is tasked to build a project offered by a government agency, operate it for a specific number of years (as agreed upon in the contract), and recover their investment and generate profit by charging users—such as toll fees on highways or fare payments in transit systems. After the contract period, ownership is transferred back to the government, typically free of charge (Department of Trade and Industry, 2024).

The purpose of the BOT Law is to allow infrastructure development without relying entirely on government funding, thus expediting project timelines by sourcing capital from private entities. To implement this, the government must first identify public infrastructure suitable for a BOT arrangement and conduct a detailed feasibility study covering legal, financial, and technical aspects. Once complete, the government issues a public invitation for proposals to private companies interested in building the project (Nicolas, 2017).

As of 1991, the DOTC secretary Pete Prado requested the Aquino Administration for permission to negotiate with the private investors and was approved by that same year. As of now, they set up the Hongkong EDSA LRT corp. sending the contract for approval. In the following year, DOTC executive secretary Franklin M. Drilon said that the contract was disapproved as the bidding was not in accordance with the procedure of the BOT act which required public bidding and the projects listed under BOT have not been approved (Nicolas, 2017).

The new DOTC secretary Jesus in 1992 executed a revised and restated agreement to Build, Lease and Transfer a Light Rail Transit System for EDSA and a supplemental agreement on April 22, 1992 was approved in April 1993 by the Ramos Administration (*G.R. No. 114222*, n.d.). In 1994, President Ramos signed the RA No. 7718 or the BLT Act. To elaborate, the BLT contract occurs wherein a project proponent is authorized to construct and fund an infrastructure and turns over to the government or the LGU on a fixed period wherein the ownership is automatically transferred. On the other hand, the Build-Operate-Transfer (BOT) agreement with the Department of Transportation and Communications (DOTC), MRTC would be responsible for the construction, system maintenance, and operations management of the MRT-3 line, while the government retained regulatory oversight over fares and operational policies. In return, the DOTC agreed to pay MRTC monthly lease payments for a predetermined number of years to reimburse construction and operational costs. The private proponent, operates and owns the facility for the

duration of the contract while operating and managing facilities during the agreed term. Meanwhile, in a BLT contract, the government leases the facility from the private investors after construction and the government operates the infrastructure (for this case MRT-3) during the lease term. Hence, the government assumes control and utilizes the facilities while the private sector only leases it. When it comes to risk assumptions, the private sector would shoulder construction risks but the government would shoulder operational risks (*G.R. No. 114222, n.d.*).

The BLT contract guaranteed by the MRTC has a fixed lease payment based on a take-or-pay arrangement regardless of ridership which ensures a 15% guaranteed return after tax backed by the Philippine government. Furthermore, the new agreement defined the project coverage in two phases which spanned 16 km. Phase 1 encompasses Taft Avenue to North Avenue. The Second Phase covers Birth Avenue to Monumento. Supposedly, the EDSA LRT was obligated to build and construct MRT-3 while maintaining its operations but MRTC took the shoes to fulfill the role. In 1995, a consortium of local real estate companies led by Fil-Estate Management formed the Metro Rail Transit Corporation (MRTC) and assumed control over the MRT-3 project, effectively taking over from the original contractor, EDSA LRT Corporation. The MRTC obtained the rights and became the COO and President. Meanwhile, Laurence Weldon and Robert Ball oversaw the finalization of contracts along with negotiations with government officials involved and financial closing. Furthermore, the deed agreement between MRTC and EDSA LRT corporation was renamed as MRT Development Corporation (DEVCO) (*Metro Rail Transit Corporation, n.d.-a*).

Construction formally began in 1996 following the finalized agreement between the government and MRTC. In 1997, an amended agreement was signed, solidifying the participation of both local and international partners—including EEI Corporation, Mitsubishi Heavy Industries, and Sumitomo Corporation. MRTC also entered into a separate agreement with Českomoravská Kolben-Daněk (ČKD), one of the largest engineering firms in the Czech Republic, for the supply

of rolling stock (train sets). Initially, the project started out with a value contract of \$160 million but revisions. As of October 1997, JP Morgan was hired to be a financial consultant and MRTC obtained financial closing of loans worth \$465 million. The lenders involved were Bank of Tokyo-Mitsubishi, Japan-Import Bank, Postal Bank of Czech Republic, and Czech export credit agency, ING group, and other local banks which included Bank of the Philippine Islands (BPI), Metrobank, and East Bank and Trust Co. As of March 1998, the loans from MRTC are backed by the Philippine government through DOF. In 1999, during the Estrada administration, MRT-3's initial segment—from North Avenue, Quezon City to Buendia, Makati—was officially inaugurated. The remaining stations were completed and opened to the public by July 2000, slightly over a month past the original deadline (*On a Clear Day You Can See the MRT*, 2016).



Metro Rail Transit Line 3

Source: DOTr-MRT-3 (2025)

Other than that, the project included plans for lucrative property developments along EDSA road which were expected to generate substantial revenue and support the “no-subsidy” model by the MRTC during the early era. However, the development rights revenues were intended to cover losses on rail operations which contribute significantly to the financial viability of the project (Source). However, amendments reduced or scaled down the developments due to regulatory issues or public opposition. Therefore, scaling down the development led to diminished potential revenue streams and affected financial projects. Ironically, the last revision amendment led to significant cost escalation which raised the project costs to \$675.5 million by August 1997 (Nicolas, 2017)

In that same year, Kaiser Engineers and Constructors were contracted to provide oversight and program management, ensuring quality control and adherence to project timelines. MRTC took charge of the design, equipment installation, commissioning, and system testing, while the DOTC retained responsibility for technical supervision. To support this, the DOTC engaged Systra, a French consulting firm known for its expertise in rail operations, to assist in planning and implementation (*Metro Rail Transit Corporation*, n.d.-a).

Moreover, there were backdraws from the project implementation. For one, the proposed business model was fragmented and it compromised its sustainability and efficacy. Rail revenues from passenger fares flowed back to the operating company and these revenues were collected by the National Treasury of the Philippines which was under the Department of Finance (DOF). Furthermore, expenses incurred would need annual allowance from congress. This meant that MRTC did not receive sufficient income to cover daily operating expenses or invest in system maintenance – the direct entity responsible for running the operations had no direct access to finances or benefit in improving MRT-3’s services. Furthermore, maintenance responsibilities were outsourced to a separate entity with limited incentive alignment which are distinct from

MRTC as the operator – creating a disconnect between maintenance contractors who were under fixed agreements and short-term contracts with limited investments in long-term innovation. The government, as a client agency, reduced control over funding in maintenance repairs as it was dependent on congressional disbursements. Moreover, the project went through several contract revisions which included various problems such as high-risk financial arrangements, poor infrastructure planning such as at-grade crossings, and inaccessible stations. One particular instance was the presence of at-grade crossings on Quezon Avenue which was a safety hazard and operational inefficiencies. Efforts were made to modify the crossings to improve safety and reliability (Nicolas, 2017).

The revenues incurred in the system which should have covered operating expenses, specifically, maintenance and repairs, dependent on annual budget allocations from the congress. Therefore, the railway transit would be prone to delays and unpredictability depending on the priorities of the benefactors rather than technical needs. Additionally, long-term planning was made difficult due to the uncertainty of apt budget allocation which inhibits investments in preventive maintenance or capital improvements to enhance the quality of services (Nicolas, 2017).

With that being said, initial performance fell short of public expectations. Passengers criticized the stations' steep staircases, which were not commuter-friendly, especially for elderly or PWD passengers. The lack of transport linkages to other modes of public transport—such as jeepneys or buses—made last-mile travel more difficult for riders. Furthermore, the ticket prices received widespread criticism. With a maximum fare of PHP 34, the cost was significantly higher than fares on other systems like the Philippine National Railways (PNR) and Light Rail Transit (LRT), which offered cheaper alternatives despite covering less congested areas. As of 2001, the MRT-3 maintenance and spare parts contract was awarded to Sumitomo Corporation through a “pass-through” agreement which meant that the government had to pay maintenance costs to MRTC

which paid the Japanese corporation; the arrangement allowed Sumitomo to purchase needed parts and conduct maintenance systems. As daunting and bureaucratic as it seemed, the system operated reliably within this period with the corporation's computerized maintenance system and mechanics trained on Czech made railcars.

From 2002 to 2005, the MRT-3 continued operations with 22 trains in service which met contractual obligations for capacity and maintenance was managed by Sumitomo with detailed records on every system component which enabled them to do predictive maintenance and repairs. In terms of revenues, income from commercial properties wherein the stations are placed such as Trinoma or Araneta-Cubao – generated substation foot traffic. Therefore, they are expected to subsidize operations which reinforce the no-subsidy myth. Fortunately, there were no significant disruptions that occurred during this period as the system functioned under established arrangements. Therefore, this period avoided major contract disputes or maintenance contractors which indicate smooth operations and maintenance under Sumitomo's system. This continued before Sumitomo's contract expired by the end of the late 2000s. In the 2010s, the financial and operational dilemmas of MRT-3 only worsened which exacerbated its deeper systemic problems that had been building up since establishment of the project. The maintenance system deteriorated drastically as fixed-price maintenance countries in contracts awarded cost-cutting measures at the expense of quality repairs. Therefore, this led to utilization of subpar railcar components and a failing rail system. By this time, the DOTC lacked full control of funding which was subjected to inconsistent fund appropriations from the congress. Hence, the underfunded approach was systematically flawed as the separation of maintenance from operations prevented efficiency of bridging conflicting goals that are necessary for a well-functioning urban railway system (Masigan, 2017).

Furthermore, the expected revenues from development rights failed to materialize which eroded the “no-subsidy” myth and worsened funding problems. In 2013, there were several issues about fund management and transparency regarding rehabilitation problems in MRT-3 under DOTC during Secretary Joseph Abaya. Funds were released without documentation and that over PHP 5.6 billion were released to government owned corporations without cost-benefit analysis. The documents were essential to justify how public funds allocated for MRT-3 will be used. Furthermore, secretary Abaya insisted the funds were still under the Bureau of Treasury and have not been disbursed arguing that Programs of Work (POWs) are not legally required at the time of transfer – potentially seen as bypassing accountability in infrastructure spending (GMA News, 2013).

Other issues that occurred were legal and financial battles throughout the decade which included the arbitration in Singapore. (elaborate source). The financial instruments tied to MRT-3 went through controversial transactions which included local and vulture funds among government financial institutions (add article). In 2015, the Philippine Senate made a controversial decision to reject the PHP 53.9 billion buyout of MRT-3. The Aquino administration instructed DOTC and DOF to buy out the private owners of MRT-3 under the BLT agreement. However, Senator Chiz Escudero being the chair of the Senate Finance Committee argued that the buyout will not improve the train service or resolve arbitration cases filed by foreign investors. On the other hand, the MRT holdings claimed that the PHP 53 billion offer was insufficient and demanded at least \$200 million dollars more and insisted that the government was not offering sufficiently to cover the value of the private equity or MRT holdings (Arcangel, 2014).

These maneuvers, while they aimed to manage debt and recapitalize infrastructures, exceeded charters and needed intervention to legitimize and reflect the problematic system. Other issues that occurred were expansion and infrastructure constraints, it was reported from January

to October 2017 that MRT-3 has unloaded passengers 374 times due to technical problems. Often at times, these train stoppages happened during morning and evening rush at Araneta-Cubao station wherein there were 11 million passengers. On the other hand, the Shaw Boulevard station had 32 unloadings during that time period (GMA News, 2017). Throughout the late 2010s, maintenance contracts changes continued to decline in reliability. As of 2015, the maintenance contract was awarded to SBI C&T and later to Busan Universal Inc. (BURI) rail in 2016 due to the short-term nature of the contracts the maintenance firms did not engage in long-term engagements. As of 2017, DOTC became the Department of Transportation (DOTr), terminated BURI's contract and started to maintain the system themselves. The agency has managed to get 22 trains to run during peak hours but still has insufficient given that it cannot accommodate the passenger volume (Masigan, 2017).

Transitioning to 2020's, the MRT-3 continued to operate with subpar rolling stock originally designated as trams and are not capable of withstanding high-volume loads as a train service in Metro Manila. The system capacity limitations worsened due to infrastructure constraints. The delays causing injuries and long lines due to inadequate maintenance persists. However, there were improvements in terms of rehabilitation projects for MRT-3. In 2022, the DOTr made improvements for the railway transit under its Rehabilitation project. The upgrades for the MRT-3 line included an increase in operating speed and can travel to 60 km/hr from the maximum speed of 25 km/hr and the train interval was reduced from 9 minutes to 3-4 minutes. Moreover, ridership capacity expanded from 200,000 to 600,000 passengers (Mercurio, 2022). Furthermore, there were improvements in maintenance strategies as the government moved toward integrated maintenance management wherein their focus was on sustainable and long-term solutions (Nicolas, 2017). This grounded approach is essential to avoid maintenance neglect which was seen in the previous decade.

As of 2023, the Philippine government, represented by Secretary of Finance Benjamin Diokno, signed the Metro Rail Transit Line 3 rehabilitation project agreement with Japan International Cooperation Agency (JICA) and was originally approved by the National Economic and Development Authority (NEDA) in 2018 with the intent of improving the safety and service of MRT-3. The rehabilitations included provisions for capacity including rail stacks, signaling systems, power supply systems, overhead catenary system (OCS), and rolling stock. The supplemented loan of \$130 million was approved once again by NEDA to finance an increase in the total projected cost (Lo, 2023).

As of April 2025, the MRT-3 will maintain its extended weekday operations indefinitely after receiving positive feedback wherein it is able to serve 61,000 passengers with the intention of adding more train sets during peak hours (GMA News, 2025). Although rehabilitation for the railway transit marked progress, there are challenges that remain due to cumulative underinvestment and technical mismanagement. Hence, for this decade, the government and the DOTr are working together to improve the rail infrastructure and the system capacities. The proactive role in the 2020s was also a response from public pressure for a more reliable MRT-3 service; the harsh experiences of commuters during the 2010s highlighted the importance of sustained government intervention in mass railway infrastructures (Masigan, 2017).

The Metro Railway Transit Line 3 continues to struggle with capacity, reliability, and long-term maintenance underscore challenges faced by growing business districts that are concentrated in one region. These difficulties show how hard it is to maintain sufficient infrastructure while meeting growing passenger demand and ensuring apt rehabilitation projects. Given the well-documented challenges faced by MRT-3, it is important to look beyond the immediate problems rooted in issues such as fragmented management and outdated technology; in order to understand how successful urban rail systems have operated around the world who have managed to

overcome similar challenges but also navigate complex bureaucratic and financial landscapes that influence their development and sustainability. Sweden, for instance, can be a great example on how integrated maintenance systems, robust planning, and innovative rehabilitation systems can create a sustainable and reliable urban railway system.

III. Sweden's Railway History and Construction of Stockholm Cityline (CityBanan)

The quest for Sweden's transportation was managed by agencies and each were responsible for different modes of transport – roads, shipping, air traffic, railways, etc. This fragmented system led to difficulties in terms of coordination for the country's growing needs, specifically, with the rapid expansion of urban areas like Stockholm which demanded better transport solutions which include complex underground infrastructures. First of all, the earliest Swedish railways were built by the mid-19th century which were done to solve transportation problems for ironmines and iron works. The railway system after nationalization in the 1950s underwent deregulation from 1980s to 2000s which faced challenges in relation to modernization, operational efficiency, and urban integration. The nation had a monopoly as SJ AB (Statens järnvägar) held exclusive rights to operate commercial distance passengers nationwide (Justusson, N.A.). The monopoly was a model where railway services were provided by state-owned firms or public agencies with exclusive control, specifically, aiming for integrated transport without competition

The 1988 Transport Policy Act shifted investments in infrastructure to a new government authority. Banverket transformed the Swedish State Railways into a train operating company paying access charges. Furthermore, urban areas continued to expand which required new railway solutions to handle increasing passenger volumes that can connect them to city centers – often option infrastructure renewal and new construction. An example of this was the construction of

tunnels to ease traffic congestion (Lindgren & Hasselgren, N.A.). In the 1990s the regional and local authorities assumed greater responsibility for regional rail services which were done through procurement and tendering of operations. Hence, this decentralized approach enhanced competition and responsiveness to services. At this time period, there were increases in investment and recognition of the railways in sustainable transportation which reverses the decades of neglect before the 1980s. Regions began to take charge of regional rail services wherein they often used competitive award operation contracts that allowed them to use multiple operators to enter the market (Alexandersson, Hulten, Nilsson,&, Pyddoke, 2013).

In 1996, the freight market opened to more competition which allowed various weight operators to access the network which slowly elevated the road freight competition. The track fees were reduced in 1998 so that competitive pressure from road transport remains balanced, with operators having to pay 10% of maintenance costs which were the lowest rates in Europe – the remaining were covered by government funding. In the 2000s, the period was marked by growth, regionalization, and infrastructure bottlenecks. The period was marked with increased passenger demand and regional initiatives wherein the passenger rail transport renewed interest and strong growth. The passenger growth increased by more than 70% in kilometers travelled between 1990-2009 (Alexandersson, Hulten, Nilsson,&, Pyddoke, 2013).

Other regions launched the new regional train systems that reflected the enhanced role of regional authorities that are responsible for public transportation (Alexandersson, Hulten, Nilsson,&, Pyddoke, 2013). The growing competition in the rail market continued with more operations engaging in service tendering which broke the early state of monopoly which enhanced customer services and choices. Furthermore, the growth in passengers led to infrastructure challenges – placing a strain on Stockholm’s infrastructure. The aging rail network, especially in Stockholm Central Station, struggled with capacity limits which were mixed with traffic of commuter,

regional, and freight trains that led to delays and congestion – emphasizing the need for infrastructure upgrades (Lindgren & Hasselgren, N.A.). Despite the growing progress, the railway infrastructure operations were fragmented among several agencies and private companies which complicated integrated planning and investment (Alexandersson, Hulten, Nilsson,&, Pyddoke, 2013).

A solution to these brewing issues in the 2000s led to the creation of Trafikverket in 2010 which was marked as a period of consolidation, brewing infrastructure projects, and modernization. The Swedish government merged its railroad and road administrations to form the Swedish Transport Administration – consolidating for better planning, development, and maintenance across all modes of transport and simplify decision making for large-scale projects.

The government owned Swedish State railways was transformed into a state-owned limited company SJ AB, part of the liberalization process that was taken to operate in an increasingly competitive market. In this case, freight operations were separated into a distinct state-owned company to increase target efficiency;therefore, many stations underwent renovations or rehabilitation to reflect increased modernization demand and needs. Furthermore, Trafikverket took over responsibility for railway infrastructure lands that are close to the tracks while local and regional agents managed lands adjacent to Trafikverket's scope. Market liberalization reforms on passenger services persisted throughout 2009 and 2010 which led to the Swedish government to open its domestic railway market competition. Operators were allowed for free entry and exit under fit conditions and initial market opening started with weekend services in 2009. Meanwhile, SH AB lost its monopoly in the late 2000s to early 2010s. The passenger and charter night trains increasingly dominated the market in 2007 which was the groundwork for liberalization in the following years (Lindgren & Hasselgren, N.A.).

In 2011, there were multiple operators that competed in passenger railways though SJ AB held the market share by 80% in revenue. After the liberalization, other corporations such as Veolia, Tågakeriet, and A- train along with SJ AB won contracts for subsidized regional railway services (Alexandersson, Hulten, Nilsson,& Pyddoke, 2013). 13 companies operated rail services in Sweden under SJ AB and Trafikvet, as the infrastructure administration, became instrumental in coordinating allocation of train paths and sustaining fair access in new entrants (Alexandersson, Hulten, Nilsson,& Pyddoke, 2013).

The urgent resolution for the chronic bottleneck in Stockholm in railway infrastructure led to the launch of the Stockholm City line or better known as Citybanan project by 2010. The construction commenced in 2011 and the railway transit included a 6 kilometer underground tunnel that is dedicated to commuter trains for segregating long-distance and freight traffic. The final track laying was completed in 2016 wherein the service commenced by 2017. The project increased capacity and punctuality of commuter services within Stockholm (Railway Gazette International, 2016). The Stockholm city line dramatically improved the punctuality and frequency of commuter trains that surrounded Stockholm and increased the capacity by doubling the rail tracks throughout the city center. The project, which was coordinated by Trafikverket, reflected the mandate for major infrastructure projects. In addition, other major infrastructural developments in Sweden included the City Tunnel in Malmö and the ongoing Västlänken project in Gothenburg. The investments from Trafikverket supported the expansion and modernization of regional rail networks which complemented the liberalized market by enabling better services with more competition alongside other modes of transport (Lindgren & Hasselgren, N.A.).

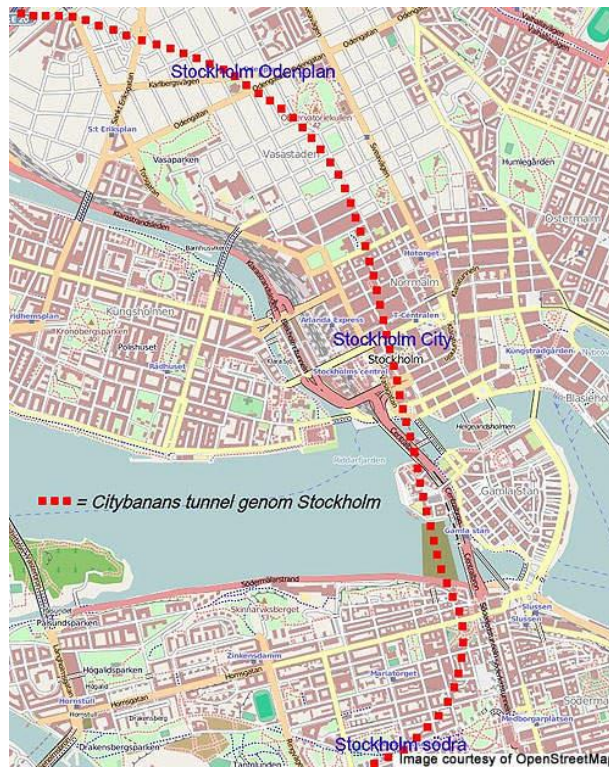


Figure 2. Stockholm City line or Citybanan

Source: Railway Technology (2011)

After the Stockholm City Line opened in 2017, the railway transit has been a model for urban rail infrastructure and has increased passenger traffic in the Stockholm metropolitan area. By diverting the commuter trains through the Citybanan tunnel, operation and traffic flow improved. Furthermore, the additional infrastructure such as Älvsjöbågen viaduct and the Årsta bridge highlights an integrated approach to enhance the rail connectivity of the City . Despite the improvements that it brought to Stockholm metropolitan, capacity allocation still remains an issue. While Citybanan increases physical capacity by merging train paths and balancing demands between various train types – which would require sophisticated strategies. (Vasundhara, 2017) The market

liberalization of the railway system intensifies competition on existing infrastructure which makes conflict resolution and optimization of railway schedules more complex. In relation to Trafikverket and the whole railway system of Sweden, the project's success is intertwined with Trafikverket's challenges in allocation, infrastructure coordination, and adapting into a liberalized market – which are factors that deliver efficiency and service quality (Kuchler, Craigh-Thompson, Alofe, & Tryggvason, 2024). To support this argument, Citybanan ensures to hire specialized maintenance providers wherein its handled by multiple firms such as Swemaint and Eurimaint, which focuses on train maintenance. The specialties of these firms ensure that high standards are tailor to specific requirements of commuter trains while fostering a competitive environment which in turn supports reliable services on Citybanan ((Kuchler, Craigh-Thompson, Alofe, & Tryggvason, 2024).

While the progress of the Stockholm City line project reflects effective policies and market competition, it is essential to understand how the Swedish government would enforce anti-corruption laws to maintain integrity and transparency, especially on large-scale public initiatives. The Swedish government has provided several specific mechanisms that directly impact public agencies such as Trafikverket and other agents that handle public infrastructure projects. For one, the Swedish National Anti-Corruption unit, established in 2003 focuses on investigating and prosecuting bribery and corruption cases, specifically, public officials in agencies which ensure that high-level accountability is maintained in public sectors. In addition, the Swedish Law allows corporate fines up to \$52 million which hold companies liable if convicted – implemented in January 2020 which was a significant increase from the previous maximum fine of \$1 million. Therefore agencies like Trafikverket which conduct business operations and manage public infrastructures can be fined if corruption or bribery occurs within the system. The legal provision creates a strong reputational and financial incentive for agencies to implement strict internal policies and uphold government standards. Furthermore, the Swedish national course has extended jurisdiction over bribery offenses linked to Swedish entities abroad that are involved in

public projects which support oversight regardless if domestic or international. This indicates that corruption risks that are associated with foreign suppliers or contractors linked to such projects can be addressed under the Swedish law (Tillen & Moushey, 2022). If a public official is convicted of bribery, they can be barred from public procurements although criminal debarment is not issued by the courts, the administrative courts handle decisions ensuring companies involved in public infrastructures such as Stockholm City line are regularly vetted for compliance – reducing the risk of corrupt actors to engage in public awards or operations.

Overall, Sweden's railway system demonstrates a flourishing transition through comprehensive market and bureaucratic reforms that emphasize separation of infrastructure management, liberalization, and regulatory oversight. The reforms produced competition, enhanced transparency, and anti-corruption measures that fostered efficiency in passenger rail transport despite the challenges it continues to face, it adapts and implements counter measures to ensure an efficient railway system.

IV. Comparative Analysis of PH MRT-3 and Sweden's Stockholm City Line

Why do some nations manage to build robust infrastructures that facilitate sustainability while other nations struggle and stagnate with inefficient systems? The institutional theory that is articulated in *Why Nations Fail* by Daron Acemoglu and James Robinson provides a lens to analyze the divergent paths for both the Philippines and Sweden. First, Inclusive institutions distribute power broadly and provide incentives for investment are key factors to foster sustainable infrastructures. On the other hand, extractive institutions prohibit growth by concentrating power and incentives in the hands of elites who prioritize short term extraction.

This case analysis compares the challenges faced by the Philippine's Metro Railway Transit Line 3 (MRT-3) and the flourishing railway transit system of Sweden and Stockholm City Line or Citybanan. At a glance, the core of sustainable infrastructure development would lie in the nature of political and economic institutions. For one, Sweden's railway system is a testament to this as it exhibits transparency, continuity, and accountability. A publicly owned national railway company, Trafikverket, is overseen by accountable institutions that enable long-term investment and avoid fragmentation and enhanced effort. Hence, the fruitful effort can be seen with the progress and effectiveness in Citybanan. By contrast, MRT-3 suffers from policies and administrative issues that hinder coordination and cloud accountability in terms of rehabilitating the railway infrastructures of MRT-3 and had delays in terms of progressive policies that would improve service quality among Filipino commuters.

It is binary to think that the way how the Philippine government and MRTC handled MRT-3 is purely extractive while the success of Sweden's Stockholm's Citybanan is a textbook example of Inclusive institutions. Using concepts of critical junctures should not be a deterministic factor on how a nation will perform in a specific sector, specifically, operating public infrastructures. For the case of MRT-3, it represents a case wherein government agencies exhibit traits that are extractive and have largely shaped the way governance, financing, and operational aspects of the railway system. The evidence points to fragmented management, opaque fund disbursements, and dubious financial arrangements – typical hallmarks of extractive institutions which undermine the quality and the potential of MRT-3 to serve millions of Filipinos commuters. The persistent operational challenges such as repeated technical breakdowns during rush hour, inconsistent funding, subpar maintenance in the 2010s – reflect the cycle of Acemoglu and Robinson where extractive political institutions perpetuate extractive economic institutions. The funding mismanagement and legal battles over contract transparency trace back to the absence of coherent and accountable institutions that should be capable of cultivating inclusive economic welfare such as maintenance

reports. The failure of agents involved to enforce cost-benefit analyses, prior to budget disbursements, are an example on how extractive institutions sidestep accountability which result in inefficiencies and dissatisfaction. Despite the problems that endured, MRT-3 was able to extend its operational hours, increase passenger capacity, and led government rehabilitation efforts demonstrate that institutions that exhibit extractive traits can still generate incremental improvements when political pressures mount the direct agents involved for infrastructure operations and funding.

Sweden's Citybanan benefits from strong political centralization, transparency, robust transparency, and competition in service provision for railway maintenance. The railway transit is governed by integrated planning and maintenance strategies that involve specialized firms that foster high standards. Apart from that, the government enforces strong anti-corruption laws and market liberalization increases competition. The rapid capacity expansion, integrated approach to rail connectivity and more competition which creates a cycle that is fostered by institutions that foster inclusive traits. However, challenges rise from increased complexity due to market liberalization and diverse service demands which require sophisticated coordination strategies. Yet, the Swedish government and Trafikverket capacity to address these issues within frameworks and laws that are inclusive – highlight the resilience of institutions that are similar to one another.

To answer the question from the first portion, MRT-3, can be understood as a compromise from the beginning and evolved as a vital infrastructure that delivers significant benefits despite hurdles throughout the decades. From its inception, the railway transit encountered compromises that hampered its promise to become a flagship railway transit. The problems mentioned above limited its ability to operate seamlessly and efficiently overtime which undermined their reliability. However, it represents a step forward in developing urban mass transits in Metro Manila which serve daily commuters who rely on it as an affordable and fast alternative to road-based

transportation that is congested by traffic. It became an indispensable part of EDSA road that connects stations to different central business districts in Manila, helping to alleviate chronic traffic problems in the rapidly congested city. Furthermore, MRT-3 and Citybanan provide valuable insights on the complexities of urban rail management within a developing and well-developed nation and this paves the way for more integrated and well planned projects in the future.

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