

ROAD MAP FOR NATIONAL RAILWAY INSTITUTIONAL DEVELOPMENT^{*)}

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Abstract: *New features of institutional set up were introduced under the new Law number 23 / 2007 on Railway. They are the involvements of local government and the private sector participation (PPP) in developing railway industry in the country.*

Although Indonesian railway policy reform had been initiated since 1991, where several stages of improvement took place, nevertheless train services decline, length of track in operation decline too. The sector simply did not function as expected by the old Law number 13 / 1992 on Railway. There has been a slowdown in the policy implementations especially since the Asian financial crisis in 1997 hit the country. Government's policy reform as well as the state-owned enterprise PT Kereta Api (Persero)'s restructuring agenda were failed and some key elements halted.

This paper reports the recent developments of Indonesian railway institutional development and its underlying problems. As the practice of multi-operators is envisaged in the future, the necessary changes in the institutional set up for Indonesian railway will be discussed and potential PPP model projects and modalities in rail sector are outlined.

It is argued that leaving the institutional and governance matter unresolved, while carrying out a business as usual rail infrastructure investment and maintenance program, it will jeopardize the value for money of every single investment made through the state budget. In other words institutional resolution is a pre-cursor to any rehabilitation or revitalization agenda, if government wishes to pursue.

Key Words: *public private partnerships, railway restructuring, institutional development*

1. SETTING THE SCENE

Although Indonesian railway reforms formally begun in 1996, they were in fact a part of a long history. The effort had been started since the early history of the colonial era where private entities initiated to build railway lines to support trade and commerce

development at that time. Later on, tight competition with road transportation and automotive industry led the railway infrastructure and services decline significantly. Public policies to maintain and improve the railway network and its service provisions had become a government agenda.

The railway restructuring has gone through various stages, started with *Djawatan Kereta Api* (DKA), short after the Independence Day in 1945. Later years, changed to several names of public corporations, such as *Perusahaan Negara Kereta Api* (PNKA) and *Perusahaan Jawatan* (PJKA), which practiced as public services. In 1991, the organization changed to a state-owned enterprise, *Perusahaan Umum Kereta Api* (PERUMKA) which aimed for commercial purposes, while maintained the obligation to provide public services.

The transformation from PJKA into PERUMKA which was conducted on January 2nd, 1991 was known as the first major step in Indonesian railway restructuring. The implementation of Law Number 13/1992 on Railway influenced the efforts of the restructuring of the State Owned Companies (BUMN) which had functions as the provider and operator of rail infrastructure as well as train services. As stated in Chapter 6 of the law, the implementation of railway transport by the government was delegated to a corporation, which was established for the purpose according to the regulation.

With the implementation of Law Number 13/1992, part of the regulatory function was then indirectly conducted by PERUMKA even though formally was the duty and responsibility of the government in this case Ministry of Transportation - Directorate General of Land Transportation.

The second stage of the railway restructuring was the transformation of PERUMKA into PT. Kereta Api (Persero), a state owned enterprise, through Government Regulation No. 19/1998. By this latest conversion therefore full extent of limited company principle was then exercised by PT. Kereta Api (Persero), as regulated in Law No. 1 / 1995 on Limited Company and Government Regulation No. 12 / 1998 on Persero Company. The objective of PT. Kereta Api (Persero) was to provide high quality services that were competitive and profitable to increase company's value (Article 4 item (1) sub B. Government Regulation No. 12 / 1998). This was supported by Article 1 Item (2) Government Regulation No. 12 / 1998 which stated that all or at least 51% of the company's shares was owned by the State through direct capital investment.

Now the policy reform's key components implementation is underway, but at a very slow

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pace. This leave some fundamental problems to be resolved urgently, to mention a few, a desired organizational changes of PT. Kereta Api (Persero) in accord with restructuring agenda halted and many staffs resisted, under a limited state budget an agreed financing mechanism i.e. PSO, IMO and TAC¹ has never been fully implemented according to the regulation. These financial instruments had specifically been designed to contrast the owner and/or regulatory role of government with the management and operations role of service providers. Problems often occur in the infrastructure investment and or maintenance as government's programs clashed with the maintenance tasks entrusted to PT. Kereta Api (Persero).

Under the old railway law government can function both as infrastructure operator as well as regulator. Under the new law, the government was supposed to play regulatory functions including overseeing, supervising and facilitating service providers through a strategy and policy making in order to guarantee fair businesses are exercised by all stakeholders. Government, however, may be appointed a duty to be a service provider when no private providers in existence². But to do so only through a temporary business entity purposely created until the service economically can be commercialized³.

2. PRESENT CONDITION OF INDONESIAN RAILWAY

Table 1 depicts the current operational data of PT. Kereta Api (Persero). There are currently four regional operations i.e. Java, South Sumatera, West Sumatera and North Sumatera consisting 6,700 kms track. 4,000 kms is in operation, while the rest 2,700 kms were closed due to the tight competition with road transport. This has attracted the attention of local governments to revitalize them in accordance with the new Law Number 23 / 2007 on Railway. Table 1 also shows the traffic loads as well as revenue gained from each region.

The recent enactment of Law Number 23 / 2007 on Railway supersedes the Law Number. 13 / 1992 on Railway. Two significant changes were made, those are the monopoly of PT Kereta Api (Persero) as the sole service provider has been abandoned and the local governments may get involved in railway development within their jurisdictions. As the monopoly privilege of PT Kereta Api (Persero) has

been discarded, other business entities including private sectors are then welcomed to be involved in the railway sector in the country. However, this may not abruptly succeeded as the foundation for inviting private sector in railway is not ready yet e.g. the institutional framework is still being developed, especially how private sectors can participate in the existing main railway lines.

Under the new law, Government should champion the restructuring of the sole railway company (PT Kereta Api). Given unfinished or halted restructuring agenda of PT. Kereta Api (Persero), this may lead to a dilemma in resolving its future institutional set up. Moreover, as stated in the Transitional Chapter XVIII, Article 214 of Law 13/ 2007 at the latest three years after the law enacted the future or a new entity of PT Kereta Api should comply with the law, but before then Government should take the lead in rehabilitating or improving the condition of the existing PT Kereta Api i.e. by conducting total audit, asset inventory, finding resolution to PSO, IMO & TAC and Past Service Liabilities of ex-civil servant during the PJKA/DoT era, finally setting an initial balance sheet of a new entity of PT. Kereta Api⁴. The dilemma will occur especially in Java's 3000 km rail operation, because the previous PT. Kereta Api's restructuring agenda was decided to follow a soft unbundling through business units creation or divisions. Some have been created such as rolling stock, training and property divisions; others are to follow including passenger and freight transport divisions as well as IMO division for track maintenance. But on the other hand it was publicly impressed that government intends to adopt a hard unbundling by institutionally separated the infrastructure and rolling stocks management and operations at least in Java island, as its network coverage was possible to do so.

The remaining rail networks located in Sumatra are geographically separated in the north, west and south Sumatra. They are limited in coverage and mainly for freight transport. Under the restructuring agenda the three were already managed by regional divisions. Recently an effort to establish a special purpose vehicle to coal transport in South Sumatra is envisaged particularly directed by State Ministry of State-owned Enterprises. This aims at establishing a new subsidiary company belong to state-owned enterprises directly concerned to coal resource utilization i.e. PT Bukit Asam as coal miner, PT Kereta Api the freight transporter and PT. Perusahaan Listrik Negara state-owned electricity company as coal consumer. Given its

¹ PSO (public service obligation) is a compensation provided by the government to service providers, the amount of which is defined by the difference between the production cost and non commercial tariffs set by the government. IMO (infrastructure maintenance and operation cost) is a compensation for the cost of maintaining and operating the main infrastructure on behalf of the government. TAC (track access charge) is a cost charged to the company for the use of track owned by the government.

² Article 23 and 31, Law number 23/ 2007 on Railway.

³ Explanation of Article 23 and 31, Law number 23/ 2007 on Railway.

⁴ Explanation of Article 214 of Law 23 / 2007 on Railway

Table 1 Track Length, traffic and

	Java	South Sumatera	West Sumatera	North Sumatera
Route-km	2944	649	202 (16 km in operation)	463
Track-km	3362	649	202	463
Traffic 2005 (milions) (Pass-kms + tonne-kms)	14540	3650	0.036	0.498
% Freight	6	90	100	29
Traffic density / route kms (thousand)	4938.9	5624.0	2.250	1.076
%Revenue	74	22	1	3

Figure 1 shows the previous Indonesian railway institutional arrangement according to Law Number 13 / 1992 on Railway. The role of government was to provide strategy and policy. Two ministers were appointed to supervise the railway activities in the country, Ministry of State-owned Enterprises as the financial and business auditor and Ministry of Transport mainly responsible for the technical matter and rules of conduct. The state appointed a state-owned company, *PT. Kereta Api (Persero)* to become services provider and conduct rail infrastructure operation and maintenance. Private companies could be part of this structure through a direct cooperation with *PT Kereta Api (Persero)*, although no core railway businesses had ever been cooperated so far.

The role of *PT. Kereta Api (Persero)* as the provider of public services, which at the same time has to be able to accumulate profit was very difficult in reality. Basically, it was quite contrary if one to make profit as well as provide public services tasks at the same time. However, *PT. Kereta Api (Persero)* should play these two tasks. Therefore the basis for funding mechanism had eventually been prepared, the IMO, PSO and TAC, see

footnote 1) for their definitions. Although the financing concept is perfect with the intention to establish clear roles and responsibilities between public (government) and corporation, however, having implemented this financial scheme for six years, practically it does not work as expected, as will be explained later.

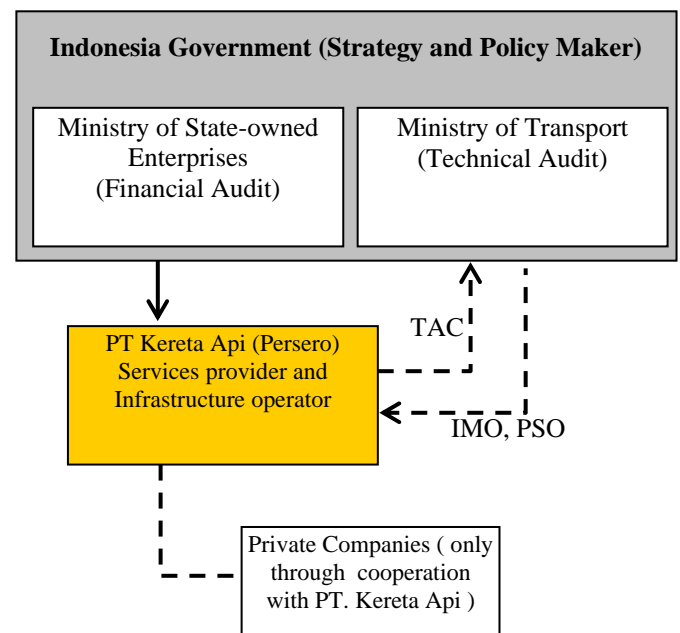


Figure 1 Railway institutional framework under Law Number 13 / 1992 on Railway

3. NATIONAL RAILWAY INSTITUTIONAL DEVELOPMENT

3.1 What had been done? What are the problems?

Figure 2 illustrates the mental map of causal effect of rail policy making between two actors i.e. government and the corporation, *PT. Kereta Api (Persero)*. Previous goals and policy reform at government level as well as organizational changes program at the corporate level were not succeeded to boost the railway industry in the country. Cash lacking at the corporate level led production declined, in consequence this made infrastructure and rolling stock obsolete too, revenue drops, staffs frustrated, and so on. Government's funding commitment was not directly resolved these problems, sometimes even added a burden to *PT. Kereta Api (Persero)*. Board of Director's commitment to lead changes was resisted by overburdened staffs. This vicious circle dragged the industry close to a state of collapsing.

i.e balance on the amount of more or less Rp 700 billions or equivalent to US \$ 70 millions. The policy left problematic and accumulated infrastructure maintenance backlog, approximately amounting to Rp 6.5 billions or equivalent to US \$ 650 thousands and US \$ 500 thousands for rolling stock backlog.

However, under the new Law no 23/2007 government cannot directly operate the rail infrastructure and/or services any longer, unless in the absence of private operators. The government can temporarily do so through a special purpose vehicle or separate corporation. In this matter, the phrase of Law no 23 / 2007 is dilemmatic. *PT. Kereta Api (Persero)* is acknowledged as the incumbent rail infrastructure operator and/or service provider, but for new institutional development in the transitional period the government can form a new or special purpose company.

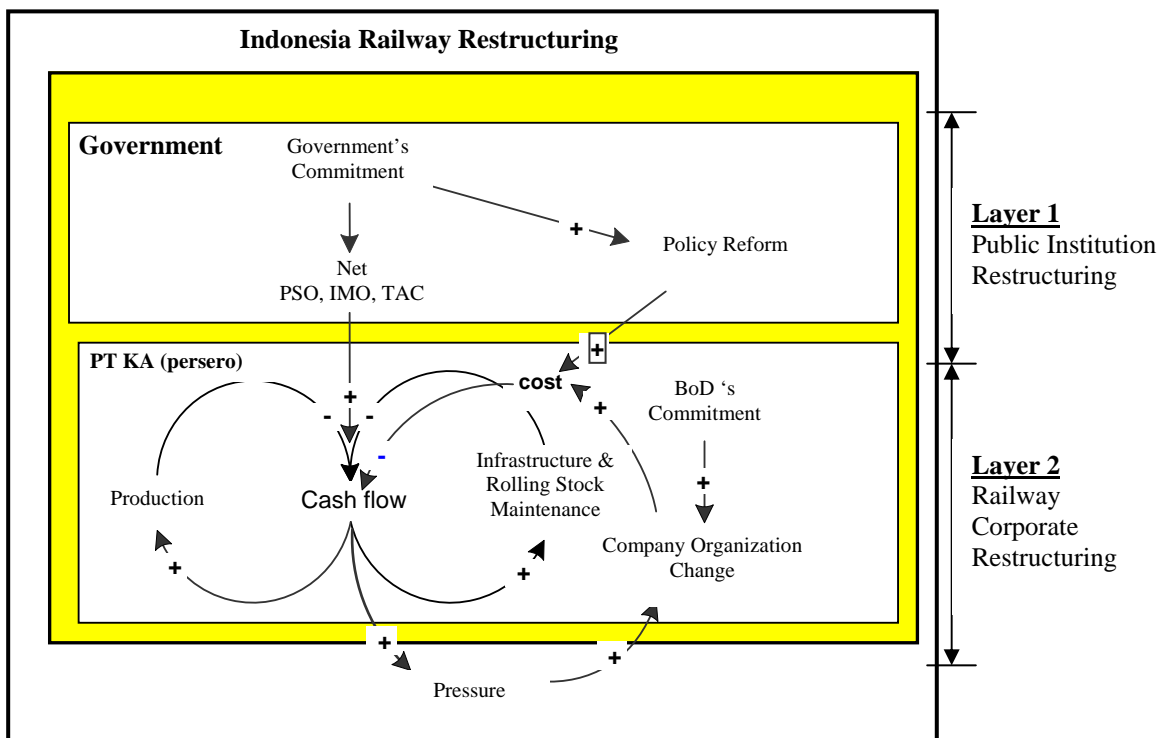


Figure 2 The mental map of Indonesian railway problem

The government's roles previously were the owner, regulator and operator. This causes problems in the determination and policy implementation. Often at times, the problems cannot be resolved thoroughly due to conflict of interest. The financial scheme formulated in the form of PSO, IMO and TAC is not yet effective. This is because the formulation only paper-based theories. In practice, the fund provided by the government is not enough. The lack of fund is the subject of many factors such as the government's limited resource, organization conflict of interest and so on. In 2007 the policy on IMO was offset by TAC

This led to controversy as publicly impressed that the government wish to vertically or institutionally separated (hard unbundling) the existing rail infrastructure and services particularly in Java, while under the previous restructuring agenda of the incumbent operator i.e. PT Kereta Api (Persero) was decided to follow an organizationally separated (soft unbundling) through a creation of business units (SBU).

Until recently, as stated in the Blue Print of National Railway, a Public Service Board (BLU)

which is integrated with the government or ministerial unit was thought and envisaged as an alternative temporary body for the existing rail infrastructure management and operations. But this is in conflict with the Law no. 23/2007 as the body is supposed to be a separate and dedicated corporation or company specially created for the purposes. As institutional and governance matter is very crucial in managing the rail businesses, this issue remains a political choice for the government to decide in the near future. Leaving this unclear, while carrying out a business as usual rail infrastructure investment and maintenance can surely jeopardize the value for money of investment made through the state budget. In other words institutional resolution should first be found as a pre-cursor to any rehabilitation or revitalization agenda that government wishes to carry out, otherwise the program will never be accountable.

At the moment *PT. Kereta Api (Persero)* as the sole railway operator has a full control in its arm length to manage the entire rail transport matter, though not an authority, as it is incumbent, surely still is in the transition period. Such authority is shown in Figure 2, as *PT. Kereta Api* is the sole PSO and IMO receiver and TAC payer. Until recently problems repeatedly occur as the funds transfer is made in one accounting, this leads to complication in its allocation. Although the contracts were separated, funds that are supposed to be utilized for infrastructure maintenance (IMO) or subsidies to the economy class train (PSO), were actually used by *PT Kereta Api* to pay wages, or for locomotive and other rolling stocks procurement.

Surely, the government's or public side institutional development is an important step to enhance government's role as the railway administrator. Two years ago the government had formed a Directorate General of Railway (DGR), upgraded from previously Directorate of Railway. DGR consists of three directorates i.e. rolling stock and safety, infrastructure and operations. In its infancy, DGR still needs a competent staffs to carry out its administrator and regulatory functions. To be more effective in managing the railway reform in the country, more efficient resource management and capacity building activities are bound to be necessary to support DGR's roles and responsibilities in the near future.

As illustrated in Figure 2, the restructuring is aimed at two layers i.e. the government in policy reform layer and *PT. Kereta Api (Persero)* in operational layer. The development in **layer 1** is meant for the public institutional development, this includes the Railway Directorate General organization development, and later the Local Government's rail development units are subject to be developed and enhanced in the future.

The other goals of the restructuring are to open up participation from private sectors and local governments in nation-wide rail transport

development. The development in **layer 2** is meant to develop the railway business institution. Now, the public only recognizes *PT. Kereta Api (Persero)* as the sole operator or service provider. This is traditionally acceptable because the characteristic of railway transportation typically implicates on the emergence of a natural monopoly. But introducing some degree of competition to service providers are also crucial in order to deliver more alternatives and better services to customers, at least in rail market known as competition for market, not in the market.

Having mentioned those two layers one can readily extend or pose question on how and when public institution should function and structured, given the light of competition and investment climate in the rail sector yet. Surely in the future, if new comer for service providers grow in number, new roles and institutional setting are need to be specified in order to guarantee a good governance conduct in rail business. This can be pursued by delegating roles traditionally accumulated to governmental institution or office to more professional agencies, such as the creation of governmental task or technical supporting unit (UPT) for a specific government's task and regulatory function, the regulatory body and/or contracting agency, while keeping the strategy and policy maker role at the Directorate General.

3.2 Road Map for National Railway Institutional Development

Figure 3 depicts the current government policy suggestion under the Coordinating Ministry of Economics and Industry. Other sectors such oil and gas, toll road, telecommunication, electricity in a way have adapted such institutional development accordingly. The state-owned companies involved in transport activities are still remote to adapt such institutional scheme. Four entities are suggested to include strategy and policy maker i.e. the government, independent regulatory body, contracting authority that provide concessions to operators, and the service provider or companies right at the bottom box. Companies expect fair and impartial treatment from the regulators in conducting the business. Within the railway sector the adaptation can be explained as follows.

Contracting Agency is required when the railway operation is open for the private sectors or Local Governments initiatives. The involvement of the private sector requires a contract admission procedures or concession awards from the government. In order to avoid a complication between the government's role with the other role as regulator and policy maker, therefore the role of

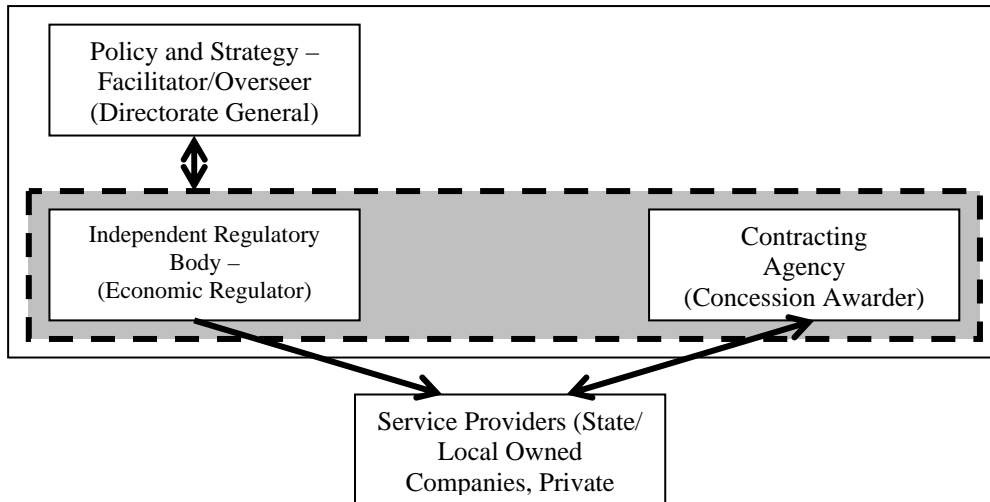


Figure 3 Rail Sector’s four institutional Functions

concession/contract provider must be performed by a separate institution which is in this case a contracting agency. This agency is dependent as well as independent from the Directorate General. Post concession issues mainly the economic regulations matters during the operation period such as tariffs, competing environment, etc. are managed and supervised by the *independent regulatory body*, explained later.

Contracting Agency will also regulate the joint operation in the passenger/freight transport business operation. To attract private sector as well as Local Governments involved in rail transport development, a feasibility study needs to be conducted as well as the likely business scheme arrangement towards risks and returns of the investment to each party. The railway institutional development should be formulated to enable the public sector to draw funds from a third party to complement the limitation of government funding.

The tasks of the *regulators* are detailed in Table 2. Directorate General of Railway as the prime regulator focuses on strategy and policy setting, and develops and enforces the safety, health and environment regulations. The remaining roles and responsibilities appointed to the Directorate General of Railway are listed in Table 2. The regulatory body functions as *post-concession* economic regulator after contracting agency awarded the concession to service providers. The regulatory body is dependent as well as independent from the Directorate General. None of these issues is accommodated in the new law.

Different types of regulatory institution have varying advantages and disadvantages. The main problem of central government department is that there will be a perceived lack of independence, dynamism and expertise. Particularly, it is likely that party politics will become involved when regulatory decisions are taken.

Table 2. Roles and function of the Regulators

Directorate General of Railway	Independent Regulatory Body
<ol style="list-style-type: none"> 1. Develop strategy and policy and stands as quality, safety and environment regulator. 2. Develop railway system operation and procedures, guidance and criteria, norms and standards. 3. Issue licenses for service providers (accreditations) and register assessors and certificate of competencies for individuals. <i>(Note: Standards of competencies for accreditations and certifications were delegated to professional associations comprising board of certification and accreditations)</i> 	<ol style="list-style-type: none"> 1. As the economic regulator IRB supervises business practices of service providers according to the concession agreement made with contracting agency. 2. Regulate services according to procedures and technical standards. 3. Monitor and resolve conflict or dispute amongst service providers and apply rewards and punishments mechanism accordingly. 4. Develop tariff setting procedure and mechanism 5. Supervise competitive behavior of service providers according to the law.

It is for this reasons that the creation of independent regulatory agencies is generally regarded as essential (UNESCAP, 2001)

In attracting private sectors to be involved in the rail industry development, government or state function should be clearly defined. Two options are available for government in order to be more focus on managing the PPP development i.e. by appointing an ad-hoc task force or by assigning a special directorate to carry out the tasks. Idea to establish a PPP Node within the Ministry of Transport (MoT) is part of an ad-hoc basis that can be exercised temporarily.

Table 3 listed options of PPP institutional setting and allocation of responsibilities amongst parties. Three prime tasks or responsibilities will govern activities for each party i.e ownership, investment and management/operation of services. Options A and D are the most extreme cases. Option A, government takes all responsibilities is no longer relevant at the moment and the future, except government intends to so on strategic grounds.

Option D, the other extreme, private entities take all the responsibilities, again this is a very rare cases only possible if the rail market so promising and customers or demand is abundant.

For options B and C where governments to retain the ownership role are common, and it is up to the governments to position or delegate other responsibilities to private entities. In rail transport, if the market is to be differentiated in two categories i.e. economic (PSO) and commercial basis, for the PSO option B is more appropriate option where governments also take role in the investment and financing, while delegating management and operation of the services to private entities⁵. PPP modalities are also highlighted in Table 3, such as BOT is the most common on Option C, where market is potential. In Option C, at least government can involve in the provision of the right of way of the infrastructure. More options on modalities and rail business activities potential to be a PPP subject will be elaborated in Section 4.

3.2.1 Directorate General of Railway

The government's role and function as railway administrator is appointed to the Ministry of Transportation, in this case the Directorate General of Railway (DGR). The institution has the role to formulate and implement the policy and technical standards in rail sector and stands as quality, safety and environment regulator.

Recent evaluation on tasks, functions and organizational structure of DGR led to a point of

necessity to be more focus on resolving the safety issue and establish a dedicated directorate of Railway Safety, while keeping Directorate of Rolling Stocks in the structure (MoT, 2006). Plans and efforts to improve rail safety and the level of services were not new issue; it had been exercised even before the establishment of DGR. Normally after every train accident, there always been a post audit and came up with measures and procedure to improve rail safety. Nevertheless, typical accidents such as derailments are repeatedly occurred again. It is expected the establishment of Railway Safety Directorate, DGR can focus on more strategic oriented policy to resolve rail safety issues while developing foundation and procedure for permits and license requirements.

Some of the government's responsibilities as the railway administrator cannot be directly managed on desk, though still in the authority of DGR, such as to guarantee a safety regulation safety inspectors are bound to be required. The inspectors can be placed regionally in terminals or stations and/or at workshops or laboratories that will release the certificates of inspections.

3.2.2 Independent Regulatory Body and Contracting Authority

The administrative roles performed by government are stated in Law number 23 /2007, these include regulation role, control and supervision. In reality the implementation of the government's role as the railway administrator has not yet been optimized; it is because the law does not describe specifically the institutions responsibility for each of the administration role. It leads to complications regarding the indistinctness of role of the institutions' responsibility for the execution of each railway administration role. In the new Law Number 23 / 2007 such regulatory and contracting authorities still rest in the DGR, and no independent regulatory function and separate contracting agency or authorities were introduced in the new law. If it is kept unclear, these will lead to some problems in the future, include:

- a. Government can have multiple roles of owner, regulator as well as operator.
- b. Higher level conflict of interest
- c. Bureaucracy hindrances in the railway development or investment.

Therefore there is a necessity for policies to separate the roles of the government as owner, regulator and operator. This responsibility division can be made by re-allocating authorities performed by government organizations. This is particularly true for some immediate roles perceived to be urgently required to speed up the sector reform. The role of such organization can be an embryo or

⁵ State-owned enterprises were here considered as private entities.

Table 3. Allocation of responsibilities of Public – Private Partnership in rail sector

	Policy Options			
	Option A:	Option B:	Option C:	Option D:
Allocation of Responsibilities	State manages all activities, retains ownership /investment responsibilities, management and operations of rail infrastructure and/or services	State retains ownership/investment responsibilities but transfer management and operations of rail infrastructure and/or services to private sector	State retains ownership rail infrastructure but transfer investment responsibilities as well as operations/ management to private sector	Ownership, Management/Operation, and Investment responsibilities are transferred to private sector
Ownership	State/Government	State/Government	State/Government	Private Sector
Investment/ Financing	State/Government	State/Government	Private Sector	Private Sector
Management / Operations	State/Government	Private Sector	Private Sector	Private Sector
Public-Private Partnership Options (widely used practice)	Not available	Service Concession Contracting out Management Contracts Multiple Concession	BOT Long term leases Master Concessions	BOO Strategic Buyouts Capital Markets
Recent experiences or cases	Old DKA/PJKA	Freight Railway Development in Borneo Jakarta MRT Development	Freight railway development in Borneo SHIARL (Soekarno Hatta International Airport Rail Link) as perceived by government Jakarta Monorail Jabodetabek Railway Revitalization	SHIARL as perceived by developer (PT. Raillink)

the basis in establishing more permanent public institutions for rail sector in the future.

Figure 4 depicts the road map that can be followed by government in establishing the separation of railway administration role onto specific or dedicated organizations or institutions.

The separation process will through several stages; Stage 1 is the integration among the roles of policy maker, regulator, assigned contractor/ agency and operator, which is performed by one institution and PT. Kereta Api (Persero) as operator has the role as the policy maker by setting objectives and direction to the railway system development policy.

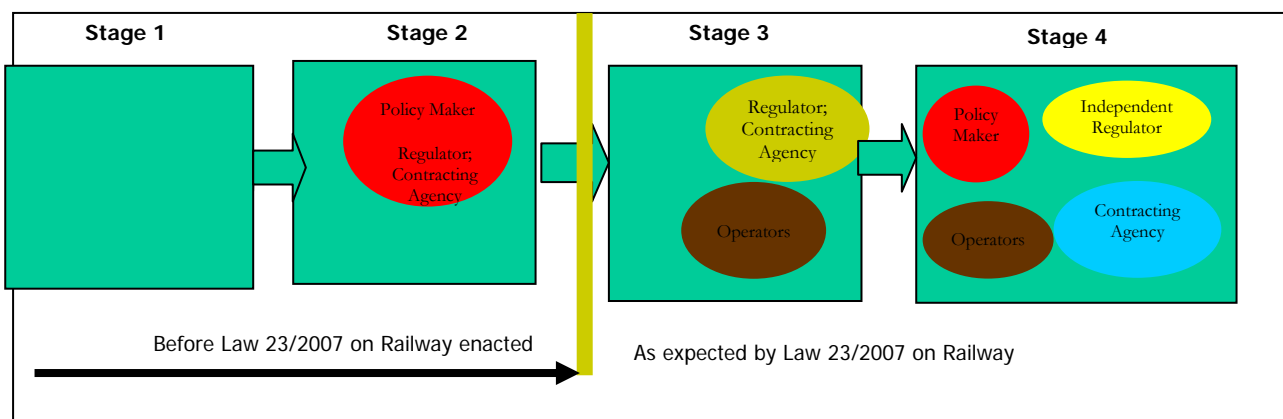


Figure 4 Road Map for Railway

Contract qualification process to become railway operator has never been performed by PT. Kereta Api (Persero) which is the only railway operator in the country and established by the government. This business mechanism had been abandoned.

Stage 2 is a more advanced stage. With the establishment of Railway Directorate General, the policy maker is clearly performed by the government. The Directorate General has the role to set goals and direction in railway development policy, produces norms, procedure and standards. However, PT. Kereta Api (Persero) as the operator still has the role in setting the direction of railway industry development and officials' competence assignment is still conducted by the operator. There still an overlapping tasks or areas exist amongst operators and regulator. This is undesirable in the railway sector reform.

Stage 3, as expected by Law 23/2007 on Railway, is an effort to separate the role of operator from administrator, which should have been carried out by the government. The operator or service provider has to manage and operate directly the services. Operator can also perform the role as the infrastructure maintenance contractor, where at present is still under the monopoly of one operator i.e. PT. Kereta Api (Persero). The task performed by Directorate General

of Railway (DGR) is to carry out the entire administration role stated in the law. In the future role of DGR as the regulator and policy maker must be improved and focus on quality, safety and environment regulator or assurance. PT. Kereta Api (Persero) as the operator only performs the management and operations appointed by MoT, through DGR.

Stage 4 is the condition when multi-operator exists. Time will tell when this may happen. It is necessary at this stage business processes are conducted by separate institutions, as above explained and discussed. For example, a contracting agency is responsible in signing a contract and concession to service providers.

If multi-operator exists then competition between operators should be mediated and controlled, it is a necessity to establish an independent regulator institution, standing as a economics or business regulator. Meanwhile the Directorate General of Railway stands as the institution that sets the norm, standards and procedures that enforce and supervise the compliance of norms, standards and procedures by the operators.

3.3 Options for Indonesia Railway Restructuring

Under Law no 23/2007 on Railway, there are two options available for managing the existing rail network operation. First is to disclose opportunities for private entities including and local government-owned company to operate railway transport (multi operators) is described in Figure 5. But PT. Kereta Api (Persero) remains conducting management and operations of rail infrastructure, the so called *dominant integral operator*, while other service providers can cooperate with PT Kereta Api (Persero) to conduct potential business activities in rail sector. This option seems not preferred by the government any longer, and in fact this was the setting under the previous law.

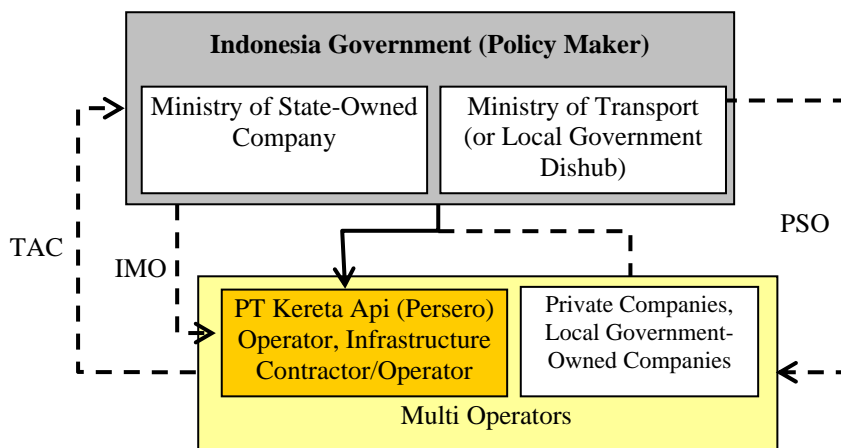


Figure 5 Option 1 Multi operators

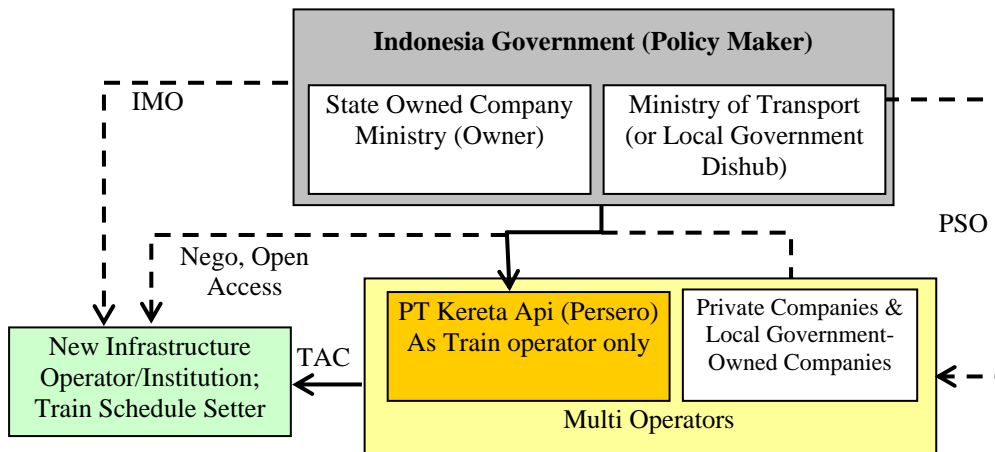


Figure 6. Option 2 Multi operator and open access

The second option is the separation of infrastructure management and operations with the train operator, the so called hard unbundling. The new infrastructure institution may be in the form of Perum or Persero, while the incumbent PT Kereta Api becomes the train operator only. This is depicted in Figure 6. In this option the principal of negotiation or open access is introduced to train operators or infrastructure users through a TAC. PT. Kereta Api (Persero) only acts as the transport or train operator just like intercity coaches or buses. The new infrastructure institution will receive and manage TAC collection from the transport or train operators. There is an expectation from the incumbent PT Kereta Api, if this option is opted by the government, then the existing staff, workers and labour in the infrastructure organization that left in PT Kereta Api should be in priority be recruited by the government and employed in the new infrastructure institution.

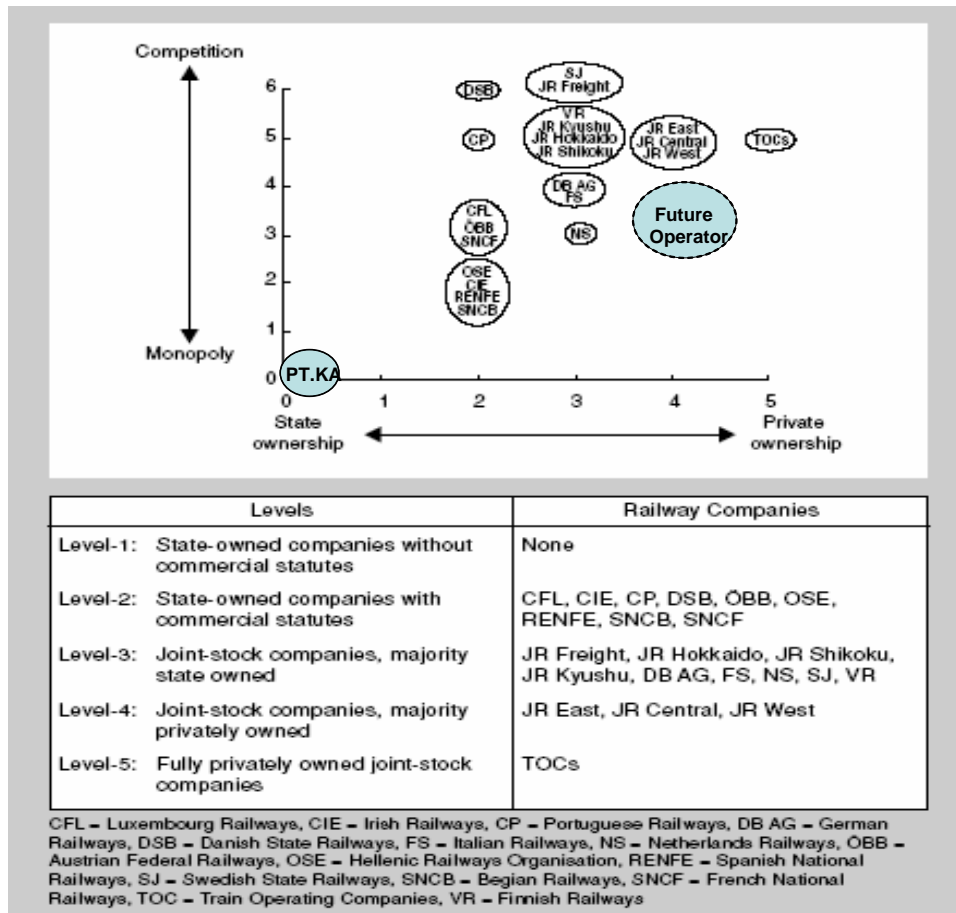
Each option has its own advantages and drawbacks. Until recently, PT. Kereta Api (Persero) is still carrying out the corporate restructuring. Several important business lines have been formed into divisions; there are Jabodetabek Division, Rolling Stock Division, Property Division and Training Division. It was planned in 2008 that PT. Kereta Api (Persero) is preparing the establishment of Passenger Transport Division, Freight Division and IMO Division (infrastructure). However, with the enactment of Law 23 /2007 on Railway *PT. Kereta Api (Persero)* is now subject to be audited in totality by the government, at the latest in three years after the law enacted. Such a complication and uncertainty of reform agenda must be settled and harmonized in the immediate future.

3.4 Degree of competition and private ownership

Figure 7 illustrates the railway institutional set up showing the spectrum of private ownership in the railway businesses and the degree of competition

ever implemented around the world with a success and failures, as adapted from Obermauer (2001). As various degrees of competition and of state or private ownership were introduced in different countries, this suggests that no generic model can be adopted instantly to resolve any railway restructuring goals. Railway restructuring experiences as it happen in Japan and or European countries, all of which are still under going, each of which has its own historical perspectives. Is Japan a good model or European such as German, French and or Britain ones better? Japan has experienced 20 years of JNR privatization, noting that not all of the six regional operators perform; only

European rail reform experienced a very long process and each country has a distinct model. It can be noted that there has not been privatization except in Britain, where the hard unbundling of British Rail into Train Operation Companies (TOCs) and Railtrack⁷ as a private infrastructure company were regarded as a failure. On-rail competition amongst TOCs is a distinct feature of European model, but the progress on expecting more new entrants has been too slow and insignificant.



Adapted from (Obermauer, A (2001).

Figure 7 Expected Indonesian railway institutional set up three out six passenger companies can list their shares on the stock exchange ie JR East, JR Central and JR West all of which operate in the main islands where the market level are sufficient as having an extremely dense corridor. The other three JR Hokkaido, JR Shikoku and JR Kyushu are facing difficulties and losses as they are located in smaller and less populated islands. The freight company also has difficulties due to competition with road and sea transport, and only pays marginal track usage cost to the passenger companies that own the infrastructures.

At present as the existing rail tracks are solely operated by PT. Kereta Api (Persero), any change management is very vulnerable and resisted by the majority of workers in the company, as often revealed in railway studies elsewhere, and in fact in PT Kereta Api ‘s case. Problems were emerged due to the monopoly power of the incumbent railway operator that lead to group solidarity that perceived ‘togetherness’ hence *status quo* is preferable than change or reform. It can be seen from Figure 7 that

⁷ In order to dress up financial statement company deferred maintenance works that led to a train accident, after that government took over the majority shares and formed Network Rail.

the national railway reform agenda intends to push the existing PT. Kereta Api (PT KA) to be more competitive and preferably become a private owned entity in the future and compete with other operators (multi-operators). While this is perceived a desirable agenda to pursue, government however can only champion this through a solid and well prepared national railway reform agenda.

The goal of Law 23/2007 on Railway is aimed at abandoning the underlying problems of the railway operation, amongst others, the monopoly power of PT Kereta Api (Persero) by inviting third parties participant be it private sectors and/or Local Governments initiative, even though the nature of the railway is still characterized by monopoly of one operator i.e. PT. Kereta Api (Persero).

As illustrated in Figure 7, the existing stage of PT Kereta Api has a monopoly power in railway operation; it will then gradually shift on to another stage where some degrees of competition will later be introduced. At the present condition, the railway business is still under monopoly of PT. Kereta Api (Persero) and according to the new law, it was stated that there is an opportunity for private sectors and/or Local Governments to be directly involved in the operational management of the railway rolling stock and rail infrastructure. But how this can be done is still a challenging task. Because it is very rare train operator can independently run the business and make profit while covering an expensive infrastructure costs. If exists such a company should be one that has a captive and abundant market be it freight or passenger⁸. Almost no companies in the world can run the rail business without some support of public fund. Pursuing radical rail reform by aiming at privatization, while government hopes that it can abandon responsibility to railways is disastrous.

3.5 Recommendation for Indonesia Railway Restructuring

The steps taken in the railway operation restructuring are carried out by referring to the railway restructuring applied in other countries with adjustments to suit the railway condition in Indonesia. The main dimension of the railway restructuring is the separation or integrating the infrastructure management and passenger/freight transport. This leads to two commonly known restructuring i.e. vertical integration or vertical separation of the infrastructure and rolling stocks management and operations⁹.

⁸ In Indonesia, this maybe the case for coal train in South Sumatera and the prospective coal transport in Borneo, for passenger is the urban and commuter rail in Jabodetabek.

⁹ Although each option may have its own premises, many literatures on railway restructuring, such as (UNESCAP, 2003) advocate and discuss the two options on the ground of their benefits, rather than

Another form of restructuring is based on regional or geographical division i.e. horizontal separation where both infrastructure and train services are kept in integration, each region managed by a different regional company, institutionally separated -- *regionalization*. The favorable option will depend on the geographical condition in the region, market size and also the function of rail business expected by the government in the regional economic development of the country. Each country should develop the most appropriate and suitable model for a particular purpose, as no generic model can be adopted to solve seemingly different magnitude and nature of the problems.

Principally the previous railway restructuring at the PT Kereta Api level had been suggested to follow both horizontal and vertical restructuring, according to the characteristics of the region and island. This is performed by separating the organizations of infrastructure and transport service providers into strategic business units or divisions, while keeping the institution in one Board of Directors. By separating the two organizations, the contracts for infrastructure and transport will be done separately. The most crucial choice is how the existing railway line should be restructured and managed, as it is the only operated railway infrastructure in the country. As far as the new lines or green fields projects are concerned, this could be arranged in more liberal and flexible basis with the involvement of investors and private entities. Table 4 recommends the business scheme and modalities, grouped by island or potential market area. These can be seen as an intermediate stage for Indonesian railway restructuring.

Horizontal restructuring is basically selected based on the reason that Indonesia's geographic characteristic of having many islands. The existing railway is now only operated at the Islands of Java and Sumatra; other islands such as Sulawesi and Kalimantan will soon follow. Rail transportation, compared to other means of transportation, is considered more feasible to be developed for intra-islands transport in Indonesia. As the private sectors and Local Governments are willing to develop railway infrastructures across the islands of Indonesia; therefore the central government must provide good investment climate and business mechanism for the future of Indonesian railway development. PPP rules and procedures in rail sectors should be enhanced and clearly formulated.

In general, geographical market segmentation is chosen when sufficient trips demand concentrated in a specific sub network so that this area segmentation

disadvantages. This suggests that its follow up action and policy consistencies are essential, once government has chosen one.

is suitable to offer a service to cope with the local intra trip demands. Sometimes this segmentation involving the separation of passenger and freight transport into several sub-networks or the freight transport provider or company may pay an infrastructure charges while using tracks that belong to different companies. Such a regionalization may be chosen for area having a massive and connected rail infrastructure such as in Java.

With regards to PPP in rail sub-sector, it is widely known that the role of government is vital at the planning stage such as preparing the initial feasibility study; by then type of government's supports can be specified more precisely to be fruitful in the project implementation. All the above mentioned options for Indonesian railway restructuring, when comes to a final choice the decisions should be based on comprehensive analyses, regarding the cost and benefits of each option.

4. Future Agenda for Public – Private Partnership in Rail Sector

Involvement of private sector in railway operation in developing countries was initially started in Argentina since private operator took over freight transport on Argentina's Rosario to Bahia Blanca railway line in 1991, private participation has grown significantly. By the end of 1997, the government of fourteen developing countries had transferred varying degrees of responsibility for railway operation to the private sector. Concessions have been the most common form of private participation in rail sector. License for private sector access to the existing track with management and operation responsibilities expected to improve the efficiency of railway network and management so the railways would be more profitable¹⁰.

Recently, in Indonesia there have been discussions in private involvement in railway industry. There will be a wide possibility for interested private sector to get in to the market after the arrival of new legislation in railway that abandoned government's monopoly in the industry. By completing set procedures, a private company can use the existing railway tracks. However, this issue was not totally new, private participation had been provided possibility to enter the market even before the new legislation passed. Yet, up until now, there have not been any form of direct investment by private sector nor partnership between public and private sectors. The fact that railway business is designed to be more on public services then profit-making business has kept private sector to stay out the market.

One of the causes for PT Kereta Api had experienced difficult times was the social roles which they have been playing all these years. High installment, maintenance and operation costs, added by pressures from road and air transportations make railway industry to be not so promising business for profit seeker such as private sectors. The finishing of Cipularang toll road connecting Bandung to Jakarta and the lower air transportation fares (which gives exceptional advantage on travel time) for long distance travels are examples of tight competition faced by railway business, not to mention once the Jakarta – Surabaya toll road is ready. Such burdens would be one of the reasons for private sector to keep avoiding the market even though the door is already open for them to enter the market. Moreover, private sectors need a predictability as well as stability of the rail markets. Any effective partnerships between Public and Private sectors to exploit resources available in providing public services while optimizing any possible profitable areas (upper class services) have to be studied and explored.

The foregoing discussions lead us to select potential projects to be targeted as model projects for public and private partnership. Participation of private sector in railway restructuring can be in a form of partnership with the related government body. Table 5 shows various potential types of Public-Private Partnership that can be formed in relation to the railway sub-sector. Project types below are detailed with their each characteristic and structure options available. These various project types come from the ones with highly investment requirement such as Urban Mass Transit and Track Right of Way to those which required lower investment cost such as Light – Rail System and Bus ways and Urban Rail.

Inter-City Rail Links, Specific Links to airport or ports and High Speed Inter-City Trains would provide potential benefits, especially in freight transport. However, government subsidy on train services may be required and in the development stages, government can take role in land acquisition and station redevelopment, for examples.

¹⁰ Private Participation in the Rail Sector – Recent Trends : The World Bank Group

Table 4 Options for Indonesian Railway Restructuring

	Market / area	Type of Restructuring	Institutions	Funding and modalities	Note
	Commuter & urban Railway; Spin-off (subsidiary companies)	Integration of Infrastructure and Rolling Stock management and operations (IR)	PT / Perum	Entitle to receive subsidy; ROT ; BOT	Local Governments involves in managing commuter-urban trains and establish new service provider and/or BUMD.
	Sumatra Railway; Separated	IR	PT/Perum	ROT ; BOT	Spin-off Existing lines, and Local Governments may develop new rail track and establish new service provider and/or BUMD through concessions.
	Java Railway	I – R (direct competition/ Multi operators)	PT for commercial passenger transport	Pay TAC to Perum Infrastructure	Open market and more direct competition
Perum for economy passenger transport			Receive PSO and pay TAC		
PT for freight			Pay TAC to Perum Infrastructure		
Perum for Infrastructure management and operation unit			<ul style="list-style-type: none"> • Receive TAC from train service providers • Receive Government obligation 	<ul style="list-style-type: none"> • Responsible for the railway infrastructure maintenance and operation • Government obligation = (1-f) *(depreciation + IMO) 	
	1 or 2 up to 3 IRs (regionalization / indirect competition)	PT / Perum for East, Central and West Java Exploitation, OR Java North and South Region	Receive Government obligation	Central and Local Government establishes railway companies and cooperated with private sector develops non-core activities.	
	Track not in operation (new companies)	IR	PT / Perum	BOT	Local Government may re-opens the abandoned rail track, and form a new company under BUMDs and cooperated with private sector develops non-core activities
	Greenfield projects (new companies) In Kalimantan, Sulawesi and Papua	IR	PT for freight and commercial passenger transport	BOT	With the central government supports, Local Governments may involve in managing the projects and establish new service provider and/or BUMD.
Perum for economy passenger transport			Receive PSO and Pay TAC		

Note: **PT** : Perusahaan Terbatas (Limited Corporation) ; **Perum** : Perusahaan Umum (Public Services Company)
IR: Integration of Infrastructure and Rolling Stock management/operations under one institution.
I-R: Institutional Separation of Infrastructure and rolling stock management/operations.

Table 5 Potential Forms of PPP in Relation to the Railway Sub-Sector

Project Type	Characteristics	PSP Structure Options	
1. Inter-City Rail Links/Specific Links	<ul style="list-style-type: none"> - In concept, could be developed as PSP ventures, but often magnitude of costs, particularly for track and stations undermines commercial and financial viability. - Needs significant passenger and (fast) freight track to generate sufficient revenues to be viable. - Few successful precedents internationally. - Elements of rail-link can be undertaken as PSP. - Airport Rail link 	<ul style="list-style-type: none"> (i) Concession (ii) BOT (iii) Government 	Specific projects will have good potential especially freight.. Inter city possibly with subsidy and/or station redevelopment
2. High Speed Inter-City Trains	<ul style="list-style-type: none"> - Provided demand from passengers and freight (fast) sufficient could be developed as PSP. - Access and availability of high-speed track and train control required. - Some regulation of service required. - Some successful international precedents. 	<ul style="list-style-type: none"> (i) BOT (ii) Concession 	As above
3. Urban Mass Transit	<ul style="list-style-type: none"> - High capital investment, particularly in track, stations, and tunnels. - High passenger demand required to achieve economic viability. - Invariably financially non-viable: public subsidy needed. - Project approval based on economic / social benefits. - Construction usually complex. - Revenue forecasts speculative at best. - Some characteristics of commercial viability can sometimes be achieved if project has to meet equipment cost recovery, but not infrastructure. 	<ul style="list-style-type: none"> (i) Government (ii) BOT of parts 	If part subsidized or there are commercial opportunities
4. Light-Rail System and Busways and Urban Rail	<ul style="list-style-type: none"> - Lower investment costs than mass transit: funding commitment less onerous. - Lower passenger throughput possible than mass transit. - Property potential lower than for mass transit. - Many international precedents recently, although BOT viability often in doubt. - Could be better implemented as concessions. - Urban rail needs “system” approach and often too diffuse for PSP except as a system. 	<ul style="list-style-type: none"> (i) Government (ii) Concession (iii) BOT 	Potential
5. Freight Terminals, Inland Terminals, and Multimodal Terminals	<ul style="list-style-type: none"> - PSP potentially feasible, it traffic / revenues can be assured. - Supporting infrastructure links essential, <u>e.g. road/ rail</u>. - Primarily property development in concept. - Potential for developing associated industries and industrial generation; - Free-zone potential. - Operators often net financially strong enough to provide equity for essential infrastructure. - Needs to be large enough investment to justify BOT / concession. 	<ul style="list-style-type: none"> (i) Government (ii) Concession (iii) BOT 	Potential

Table 5 (Continued)

6. Freight Operations	<ul style="list-style-type: none"> - Often Government operated initially, but with effective commercialization and responsive rail system to match a degree, if not total, privatization can ensue once the business base has been established. 	<ul style="list-style-type: none"> (i) Government (ii) Concession 	Only in conjunction with infrastructure.
7. Passenger: - Terminals - Stations	<ul style="list-style-type: none"> - Primarily real estate projects supporting infrastructure developments. - Free access normal: any potential revenue stream diffuse. - PSP could only apply if a significant number of passengers were dedicated to particular route, e.g. a High-Speed Rail Link. - Some retail and restaurant services can be franchised. 	Private/PPP/Government	Those with volume of traffic and commercial opportunities will have potential
8. Rolling stock: - Passenger - Freight and Engines	<ul style="list-style-type: none"> - If a significant dedicated passenger or freight demand can be established, PSP can be applied to either passenger or freight rolling stock and engines, e.g. High-Speed Rail Link or iron ore / coal / cement trains. - Access to track needs to be assured. 	<ul style="list-style-type: none"> (i) BOT (ii) Concession (iii) Government 	Only in conjunction with infrastructure
9. Track Right of Way	<ul style="list-style-type: none"> - High investment cost with long payback period. - Availability and quality/safety needs close regulation. - Environmental issues need to be addressed. - On high density routes could be subsequently operated and maintained under PSP or full privatization. 	Government	Low
10. Train Control Signaling	<ul style="list-style-type: none"> - Usually closely associated with track and its institutional structures. 	Government	Conventionally low potential
11. Track Maintenance and Equipment Maintenance	<ul style="list-style-type: none"> - Often Government initially, but potential for PSP if the service and its specifications can be defined. - International precedent recently for KPS. - Regulatory Body required. 	Government	Conventionally low potential
12. Training	<ul style="list-style-type: none"> - Initially Government - sponsored, but with growth of experienced PSP operators this activity could be assumed by the private sector. 	Private/Government	Could be contracted out
13. Ticketing	<ul style="list-style-type: none"> - As for rail equipment, there is potential for PSP on high-density routes. - The more sophisticated the service in terms of quality, the greater the need for hi-tech ticketing system. - Inter-modal ticketing system could be owned and operated under PSP, provided service and regulatory regime defined. 	<ul style="list-style-type: none"> (i) Government (ii) BOT 	Possible potential

Sources: PPITA-MOT Consultants (2006) & "Private Sector Participation in the Transport Sector Project", GIBB Asia in association with PT Deserco Development Services (Indonesia) and Coudert Brothers (USA), Ministry of Communications, ADB TA No. 2527-INO, 199

These types of projects will need a careful market feasibility study, as they need to have significant number of passenger to generate sufficient revenue to be viable. The modalities options can be in forms of BOT or concession.

Public-Private Partnerships can also be implemented in Urban Mass Transit facilities, such as terminals or stations, but it demands considerable volume of traffic and commercial opportunities for them to be feasible. Other projects of infrastructure, Train Control, Signaling and Track and equipment maintenances are considered as low potential. Light-Rail System, BRT and Urban Rail consider being potential, as they required lower investment costs than mass transit, and they could be better implemented through concession.

Rail link from Manggarai Station to Soekarno Hatta International Airport (SHIARL), for example, is one of potential project that can be targeted. The demand for transport in this route is expected to be highly demanded, where middle to upper class consumers expected to consume considerable shares of sales (imposing a business ticket fare would likely acceptable). Potential competition only comes from road transportation, particularly toll road both private cars and shuttle buses. However, railway transportation can provide a faster transportation because it will not have problem with road traffic jam that most likely occurred in road transportation even the presence of toll roads. So far, there are ten interested investors in Rail link Manggarai – Soekarno Hatta International Airport according to PT Rail Link sources, a joint venture developer owned by PT Angkasa Pura II and PT Kereta Api . Public-Private Partnership can be formed for this project. Government/ Local government and investors can build the rail tracks and stations. Afterwards, a concession can be made to service provider to manage and operate the track and train services¹¹.

Historically, more railway project in freight transport is awarded to private sector than in passenger project. This may be useful information for the government to push partnership with private sector in freight transport area. Recently, foreign investors have expressed their interest to invest in freight

railway transport for coal or other natural resources in Central Kalimantan. This will include new investment and build new railway tracks. Inviting local governments to directly involve in the project may contribute additional benefits to this project.

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¹¹ A direct appointment status to any rail developer prone to be controversial, as experienced by PT Jakarta Monorel recently. To go for tender while pursuing an unsolicited arrangement, according to Presidential Regulation Number 67/ 2005 on PPP in Infrastructure Provision, there should be no government support required. Such a condition should be fulfilled by PT Raillink and her strategic partners. This can only be obtained via line ministry decision i.e Ministry of Transport, having submitted documents i.e. feasibility study, business and implementation plans. Other requirements such as service provider permit as demanded by Law 23/2007 on Railway shall be acquired later on, the procedure of which is now being developed in the MoT through a Government Regulations.

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