

Vision Valley. The government provides tax incentives to attract RM6.5 billion (\$1.5 billion) in investments and create 14,000 jobs.

#### 4. Thailand

Thailand announced its Transport Infrastructure Development Master Plan 2015–2022 in 2015 with a total investment of B1,913 billion. The objectives of the master plan are to strengthen social and economic security, increase transport safety, improve the quality of life, and enhance competitiveness and gain potential benefits from the ASEAN Economic Community (Nitithanprapas 2016).

The plan includes several big projects, namely:

- (i) upgrading rail and its facilities, and building a double-track railway network and its extension to the border;
- (ii) constructing four-lane road networks connecting growth centers with border areas;
- (iii) extending the metro rail transit, procuring new buses, and improving quality of roads and bridges in Bangkok;
- (iv) developing a multimodal transport system and cross-border logistics center;
- (v) developing seaports on Thai gulf and Andaman Sea; and
- (vi) increasing airport capacity and improving airport-related services.

Apart from the master plan, Thailand has an annual investment action plan (IAP) which started in 2015. IAP 2015 comprises 59 projects with an investment cost of B848 billion. Of this, B56 billion is expected to be disbursed in 2015 and the rest would be carried over during the next 7-year period from 2016 to 2022. IAP 2016 was planned with 20 projects worth B1.8 trillion. By the end of 2016, the Ministry of Transport announced that seven projects with a total investment of B874 billion were postponed.

### III. APPROACHES TO PUBLIC-PRIVATE PARTNERSHIPS IN SOUTHEAST ASIA

Infrastructure investments are typically large, with stable but modest returns. When investors deal with governments of emerging countries with less mature PPP policy, they face higher risks of changing regulations or being guided by unclear rules. Investors spend months and millions of money to secure a contract and yet the government may cancel or postpone the bidding process without proper reason. This leads to high sunk costs in many infrastructure projects. Therefore, contracts play a significant role despite the presence of specific PPP laws.

Apart from the public sector capacity challenge discussed in section I, the other challenge is less developed financial market. Emerging economies in Southeast Asia have yet to utilize potential funds that need capital market mechanisms to channel them. Large potential institutional investors, such as pension funds and insurance companies, have less access to diversify their portfolios into infrastructure projects in emerging economies. Enhancing capital markets in emerging economies requires long-term and consistent efforts, given its complexities and linkages to other economic sectors.

PPP terms have broad variations and definitions across the world. Emerging economies in Southeast Asia also use terms with different levels of implementation. As PPP can take various forms of approach, this paper defines it as long-term arrangements featuring private capital at risk and the allocation of transactional risk to the private party, including responsibility for life cycle costs (Zen and Regan 2015). The variations in implementation depend on the stage of PPP policy adopted by the country (Table 3).

**Table 3: Transactions Included in Public–Private Partnership Policy**

	Early Stage or Initial Stage PPP Policy	Intermediate Stage PPP Policy	Mature Stage PPP Policy
Privatization of state businesses enterprises	X		
Privatization of state assets	X		
Privatization with residual interest	X		
Private finance initiative	X	X	X
Build-operate-transfer, build-own-operate, and build-own-operate-transfer contracts	X	X	X
Design-renovate-build-operate contracts	X	X	X
Operation and maintenance contracts	X	X	X
Design-build-finance-operate contracts	X	X	X
Renovate-build-operate contracts	X	X	X
Concessions	X	X	X
Management and service contracts	X	X	
Traditional construction contracts			

PPP = public–private partnership.

Source: Zen, Fauziah, and Michael Regan. 2015. *Financing ASEAN Connectivity*. Indonesia: Economic Research Institute for ASEAN and East Asia.

PPP in emerging Southeast Asia is less expected to bring great innovation or sophisticated financial engineering. However, it helps build the infrastructure and fill some of the gaps. What governments need to do is to set realistic expectations on their PPP targets, while pushing forward their system improvements and capacities.

Within this context, we can categorize the ASEAN member states into two general groups; namely, countries with progressive and more developed PPPs (Indonesia, Malaysia, the Philippines, Singapore, and Thailand), and countries with less developed PPPs (Brunei Darussalam, Cambodia, the Lao PDR, Myanmar, and Viet Nam). Both groups have their own challenges. In terms of infrastructure financing, there are four major factors that determine the attractiveness, options, and size of financing; namely

- **Stage of economic development.** This determines the types of available projects, economic demands, and the fiscal and knowledge capacity to carry out a project.
- **Fiscal management.** This determines the capacity to provide fiscal support, guarantees, cofunding, and securing loans for infrastructure financing.
- **Capital market development.** This determines the confidence level to invest in a project and the available financing channels, especially for long-term investors.
- **Regulatory framework.** This determines the ease of investing in a PPP, the level of secured investments, and cost efficiency.

Countries belonging to the progressive and more developed PPP group have similarities with these four factors. They typically have capacity to secure loans or cofund infrastructure projects, and grow demand for infrastructure projects, especially in urban areas. They have a mature fiscal management system that minimizes the potential to default and provides support for infrastructure

projects. Their capital markets have been developed and some are already at a mature stage, allowing institutional investors to channel their long-term funds. The legal system in this group is generally complete, relatively clear, and predictable, with some variations across countries.

Typical challenges are to maintain and speed up the improvement efforts. This step could be complicated largely due to political economic factors. It requires strong leadership to make stakeholders consistently move forward.

**Table 4: The Global Competitiveness Index 2017–2018 Rankings for Southeast Asian Countries**

Rank	Economy	Driver	Areas for Improvement
3	Singapore	Innovation	None
23	Malaysia	Transition from efficiency-driven to Innovation-driven	Higher education, innovation
32	Thailand	Efficiency-driven	Institutions, health, primary education, higher education, labor market, and innovation
36	Indonesia	Efficiency-driven	Institutions, infrastructure, health, primary education, higher education, market efficiency, and innovation
56	Philippines	Transition from factor-driven to efficiency-driven	Institutions, infrastructure, health, primary education, higher education, market efficiency, and innovation
46	Brunei Darussalam	Transition from factor-driven to efficiency-driven	Institutions, macroeconomic, infrastructure, higher education, market efficiency, and innovation
55	Viet Nam	Transition from factor-driven to efficiency-driven	Institutions, macroeconomic, infrastructure, health, primary education, higher education, market efficiency, and innovation
94	Cambodia	Factor-driven	Institutions, macroeconomic, infrastructure, health, primary education, higher education, market efficiency, and innovation
98	Lao PDR	Factor-driven	Institutions, infrastructure, health, primary education, macroeconomic environment, market efficiency, and innovation

Lao PDR = Lao People's Democratic Republic.

Note: Myanmar is not included in the 2017 index report.

Source: World Economic Forum. 2017. *The Global Competitiveness Report 2017–2018*. Geneva.

Countries belonging to the early stage of PPP policy group also share similarities with these four factors. Lower demand for infrastructure is influenced by population size and its geographical distribution, and purchasing power. It is also shaped by the development stage since it defines the types of infrastructure projects to be prioritized. Some countries are struggling with narrow fiscal capacity, debt management, and macroeconomic stability. They have not yet gained investment grade rating, and their capital market is at a very early stage or does not exist. They have a long way to go to reach PPP-ready systems. Before that, they have to become investment-friendly countries. Therefore, the important step is to improve their investment climate. Referring to the WEF Global Competitiveness Index Report 2017–2018, the countries in this group occupy the bottom rank among ASEAN member states (Table 4).

The institutions factor is among the main challenges for majority of ASEAN member states. It shows that, apart from having regulations on the table, the capacity to manage is equally important. Policy makers should have sufficient knowledge about markets and investments to be able to design and manage efficient and effective institutional setups.

## A. Risk Management and Support

Risk management is central in PPP management. Failure in managing risk may lead to large and long-term damages. A critical element of risk management lies on the ability of governments to choose optimum trade-offs among possible schemes to maximize benefits and minimize risks, and assess future risks of the agreed scheme. In many cases, governments tend toward risk-averse choices, leaving the private sector in a risky position that may end the negotiation process. On the other hand, some projects end up with the government bearing excessive liabilities, causing authorities to behave as risk-averse decision makers.

Potential challenging situations may also come from unclear procedures on when the project faces problematic situations and what necessary actions need to be taken. Failed projects do not come in 1 day; there would have been measurable indicators showing the situation. The absence of mitigation monitoring on a regular basis may lead to unawareness of bigger problems.

## B. Public–Private Partnerships Compared with Other Funding Options

While PPP has an increasing role in infrastructure development, there has not been much change over the last decade in terms of its real contribution to overall infrastructure investment. PPP contribution has been stagnant, even in the Philippines, which has a progressive PPP campaign program. Low private sector participation in infrastructure development is not because there is a lack of financiers or contractors in the region, but because of the following classical problems: (i) there is no good pipeline; (ii) ineffective and inefficient legal system; (iii) lack of public sector capacity to assess risk sharing and incentives, and to negotiate; and (iv) lack or absence of supportive financial market. In the end, the public sector may get frustrated in dealing with PPP procedures and decide to choose public funding through the state budget or assign SOEs to take over the project.

In the case of Indonesia, assigning SOEs to develop infrastructure projects has both advantages and disadvantages. The benefits include fast realization, support SOEs' financial leverage, and expected returns from public funds. At the same time, it also has a limitation. It could crowd out private sector participation as there is only a limited fund available for infrastructure investment. SOEs are heavily dependent on public capital placement, given their relatively low capacity to issue bonds or find new equity sponsors. In the absence of market discipline, one should be careful in assessing real returns of SOEs to avoid overoptimism that can create future liabilities. Further, there is the classic problem of soft budget constraint. Executives of SOEs may take moral hazard, knowing that there is no strict penalty for poor performance.

## C. Public–Private Partnerships to Support Master Plan of Association of Southeast Asian Nations Connectivity 2025

Another expectation from public–private partnership implementation in Southeast Asia is how it can be utilized to support ASEAN Connectivity 2025. Public–private partnership can be used as one possible approach to infrastructure development. The Master Plan for ASEAN Connectivity (MPAC) 2025 proposes five initiatives, namely: sustainable infrastructure, digital innovation, seamless logistics, regulatory excellence, and people mobility (ASEAN 2016). The strategy for sustainable infrastructure initiatives consists of three objectives: (i) increase public and private infrastructure investment in each ASEAN member state, as needed; (ii) significantly enhance the evaluation and sharing of best practices

on infrastructure productivity in ASEAN; and (iii) increase the deployment of smart urbanization models across ASEAN.

To achieve the first strategy objective, MPAC 2025 proposes Initiative 1, which is to establish a rolling priority pipeline list of potential ASEAN infrastructure projects and sources of funds. It aims to address both the information issues and the capability gaps associated with developing a strong infrastructure pipeline in ASEAN member states. Since its launch in August 2016 and formal adoption by ASEAN leaders in September 2016, there has not been much progress in pushing forward this initiative. Given the complexities of public-private partnership, and the loose relationship between ASEAN member states, it is understandable that there is no strong push to realize this initiative. In terms of the project list, MPAC 2025 is continuing the incomplete projects in MPAC 2010, which consists of 52 projects that fall into the following four strategic areas: ASEAN Highway Network, Singapore-Kunming Rail Link, integrated and seamless multimodal transport system, and developed ASEAN Single Aviation Market.

#### IV. POTENTIALS OF PUBLIC-PRIVATE PARTNERSHIP FOR SOCIAL INFRASTRUCTURE

Applying the public-private partnership scheme for social infrastructure is relatively new in emerging Southeast Asia and is considered an advanced approach. The focal argument is on utilizing private sector capacity to finance, design, and build, as well as operate the facilities efficiently. Thus, public authorities can reallocate their resources to other functions that cannot be delegated to the private sector. The efficiency arguments are actually valid and strong for public-private partnerships in advanced economies since public-private partnership requires mature policies and implementation. In emerging economies, public-private partnership is typically used to fill some financing gaps in infrastructure demand.

Since public-private partnership is relatively a new concept in Southeast Asia, its application for social infrastructure is still limited. The Philippines has education infrastructure projects (school buildings) built under the public-private partnership framework, while Malaysia has hospital support services. Thailand is still trying to implement public-private partnership in the health sector with support from the Asian Development Bank.

##### **Opportunities and Challenges**

PPP for social infrastructure can take several schemes such as design, build, operate, and maintain the facilities or certain parts of facility; concessions; operations and maintenance; and renovation. The important features are output-based service delivery, private capital takes on some risks from a public entity, and under a long-term contract (covering life cycle). The social infrastructure is typically a medium-sized PPP. Since education and health care are usually local responsibilities, the public agency in charge is the subnational government. This gives some opportunities to develop PPP at the local level.

There are also views that medium-sized PPPs are simpler and, thus, more applicable, which is not always the case. PPP requires a set of complex procedures, including legal actions, technical requirements, intraparty contracts, and many others that will trigger significant costs. The high administrative and legal costs of drafting PPP contracts cannot be justified for the project size under a particular threshold. The proposed solution is to have a “lite PPP,” which simplifies PPP procedures

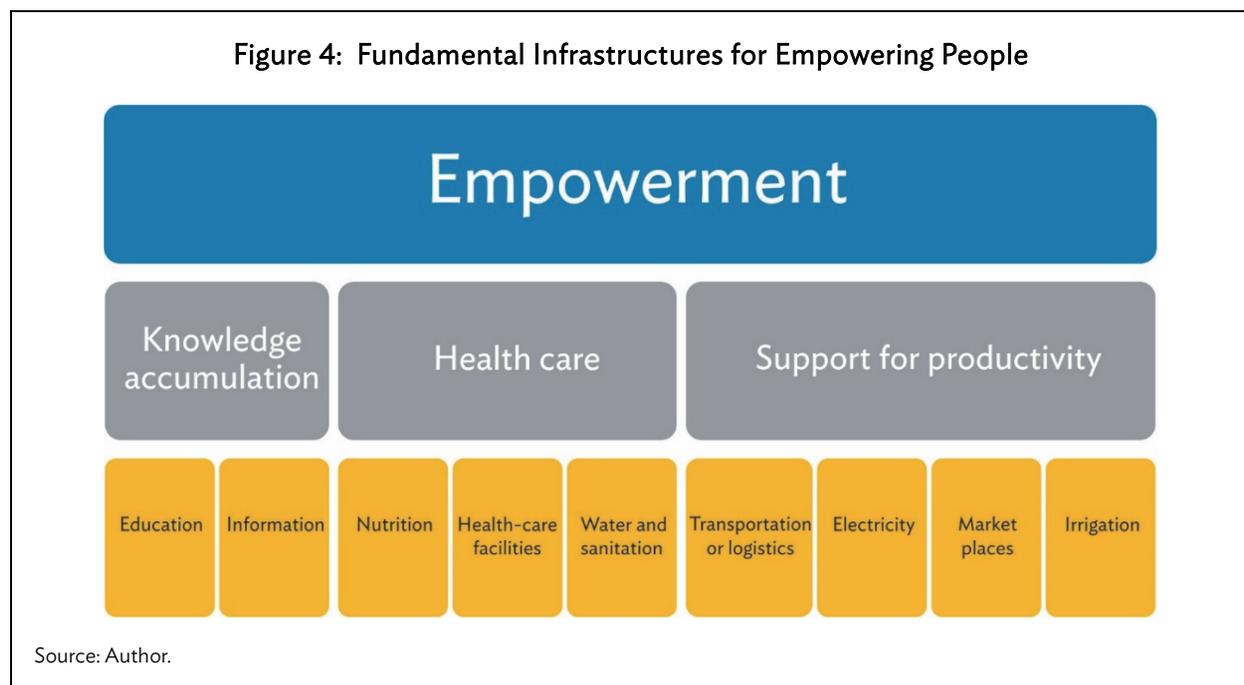
without losing prudent actions (Zen and Regan 2015). The Philippines' school projects might be the only case study available of a successful social infrastructure PPP.

Malaysia's health service PPP is a bit vague since it is more a partial privatization or management contract rather than a PPP scheme. There is also long delay in the design-build-operate-maintain PPP projects for the multistory car parks, day care center, pathology laboratory, and blood bank of Sarawak General Hospital. The project was promised in 2003, the request for proposal was announced in 2012, and the tender documents were out in 2013, but it has not yet been executed until now. The failure is not solely because of PPP or social infrastructure factors. As in many other failed projects, it is usually not because of a single cause. In many cases, the capacity of the public agency, including mitigation ability, plays a key role in determining a successful PPP.

## V. PRO-POOR PUBLIC-PRIVATE PARTNERSHIP

The objective of PPP in public service provision does not differ much from other modalities. Since one of its features is output-based performance, the measures can be very clear and straightforward. On the other hand, traditional public procurements often use several variables that are neither necessary nor sufficient for measurement. For example, the cost of capital from state budget is always considered zero. Thus, opportunity costs of a project are not provided as comparison.

Poverty is a complex issue and it has no single cause. There are many types of vulnerable groups such as minorities, old-age persons, women, children from poor families, and persons with disabilities. Exclusion from public services can drive out people from opportunities to empower themselves. In this context, building infrastructures that are accessible for larger users, including the poor, will make significant changes for them. There are certain types of basic infrastructures essential to fulfill basic human needs and foundations of welfare that can provide opportunities to empower people. Those infrastructures are related to knowledge accumulation, health care, and support for productivity (Figure 4).



ASEAN member states can have pro-growth infrastructures such as the following:

- (i) Knowledge accumulation
  - (a) education: schools, training centers, and research and development facilities;
  - (b) information: telecommunication, internet, broadcasting, and others that support both formal and informal education.
- (ii) Health care
  - (a) health-care facilities: hospitals, community health centers, information and communication technology for health care;
  - (b) water and sanitation system;
- (iii) Support for productivity
  - (a) transport: roads, logistics system, seaports, airports, bridges, and railways; seamless connectivity will improve efficiency and reduce high cost economy. Many Southeast Asian countries face geographical challenge in their domestic connectivity, adding the burden to the poor and reducing access to welfare and production facilities.
  - (b) electricity: renewable and clean energy, micro and small power plants for remote areas; IEA (2017) reports that there are some 65 million people, approximately 10% of Southeast Asia's population, without access to electricity in the region. In archipelagic countries, such as Indonesia and the Philippines, or in remote areas in the Mekong region, building power supply and its transmission and distribution system are expensive and financially nonviable due to economies of scale. This opens opportunity to have PPPs at small and medium scale off-grid electricity.
  - (c) market: conventional and financial markets; and
  - (d) irrigation for farmers and preservation system.

The abovementioned examples are necessary requirements for empowering people, regardless of their social status. It is not a sufficient condition for alleviating poverty. To have impact on poverty reduction, the following are some additional requirements:

- (i) accessible to the poor: it is available to be accessed legally (no exclusion),
- (ii) affordable: the poor can pay or consume it legally,
- (iii) quality standard: reliable services, and
- (iv) efficiency: no incentive for overconsumption.

There are no conflicting principles between the PPP system and pro-poor infrastructures. Like other infrastructure projects, pro-poor PPP projects shall fulfill basic principles, such as:

- (i) The government must have solid arguments for buying the project. This means the project should return net benefits for the economy. The cost-benefit analysis (CBA) of infrastructure projects should use economic approach instead of financial approach. As long as the socioeconomic CBA turns to be positive, the government still has justification to buy the project, subject to other spending priorities.
- (ii) The government contracting agency must have sufficient level of understanding of PPP principles and procedures, especially in legal action, contract management, risk sharing, fiscal support, and negotiation. Technical capacity can be outsourced, if needed.
- (iii) Listen to the stakeholders, especially the users. The government contracting agency should understand the real condition and demands of end users. Particularly if the PPP is aimed as a pro-poor project, the government must be sensitive with real demand, purchasing ability, and dynamics of migration.

A pro-poor program is based on an output or outcome policy. Hence, it does not matter whether the pro-poor project is developed by using traditional procurement or PPP, as long as it can maximize socioeconomic output. Theoretically, a PPP has the advantages of being more public-resource efficient, enforcing market discipline (targeted beneficiaries rather than public subsidy), providing opportunities for knowledge transfer, and enhancing transparency and accountability. For the private sector involved in PPP for pro-poor projects, not only do they receive benefits as socially responsible companies, but they also nurture their market. Better welfare means higher potential to become consumers of private products.

### **A. Opportunities and Challenges**

Having proper economic CBA can increase transparency, improve understanding and skills, and enhance opportunities for having better mechanisms in choosing project modality. The main challenge of this method is the difficulty of making proper CBA due to constraints in data availability and debatable methodologies. However, the government does not need to make a perfect CBA. A proper CBA is open to public discourse and improves project planning subsequently.

Several social sectors are generally perceived to have larger impact on reducing poverty or improving welfare such as basic and middle education, health care, education-related services, public transportation, water and sanitation, and electricity. Projects that fall under these areas usually have the privilege of receiving minimum objection from stakeholders or the public. Thus, there is a greater chance to have a PPP project that is in line with pro-poor programs.

The United Nations Economic and Social Commission for Asia and the Pacific (2017) wrote the following in its thematic report: “In 2014, approximately 348 million people in the region still lacked access to electricity: a major gap, but a substantial reduction since 2012, when the number was estimated at 426 million. In 2015, 300 million people did not have access to safe drinking water, and 1.5 billion people lacked basic sanitation.” The figures have two consequences: if we ignore them, there will be increasing number of unfilled demand and growing poverty; or if we can cover their demand, in the future, the economic demand will increase because poverty reduction creates additional middle-income households that can pay the services at their economic price.

Even though the consequences are clear and rationally all governments will opt for poverty alleviation, it is not an easy undertaking. First, to provide the services to poor households, governments need huge funds. Not only to build the project, but also to provide subsidy to make them able to consume the services at sufficient level. The cost will increase, especially when it tries to reach the unreachable. Second, there are complications in designing funding for the project, including incorporating subsidy in funding schemes, without creating moral hazard or being abused by the nonpoor.

To make PPP projects work, leaders should recognize their importance as additional ways to support poverty alleviation programs. The challenge of having PPPs that are pro-poor is the low purchasing power of end users. This means that the revenue stream cannot rely on user fees without government subsidies. On the other hand, there is limited fund available in the public sector to finance pro-poor programs. Realistically, we can expect that the advantages of PPP such as efficiency, transparency, accountability, and VFM will positively impact the pro-poor programs. However, we cannot expect that many pro-poor projects can use the PPP approach because of budget limitation and its complexities.