Public-Private Partnerships to end Energy Poverty

"Program for Rural Electricity for Poverty Alleviation"

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The tragedy of common and traditional supply models afflicting supply of goods must to understand public and private partnerships

Access prevention	Excludable	Non-Excludable
Consumption Rivalry		
Rivalrous	Private Goods, e.g. sports car	Common Goods, e.g. natural resources
Non-Rivalrous	Club or Toll Goods, e.g. tollway, private club	Public Good, e.g. air, scenery

The tragedy of commons resides in the fact that individual self interest clashes with the interest of the humans as a whole, e.g. common goods being depleted by overuse.

Traditionally public provision of public goods was normative—efficiency, efficacy, and collapsing public purses compared to the growing needs for public infrastructure has changed this view

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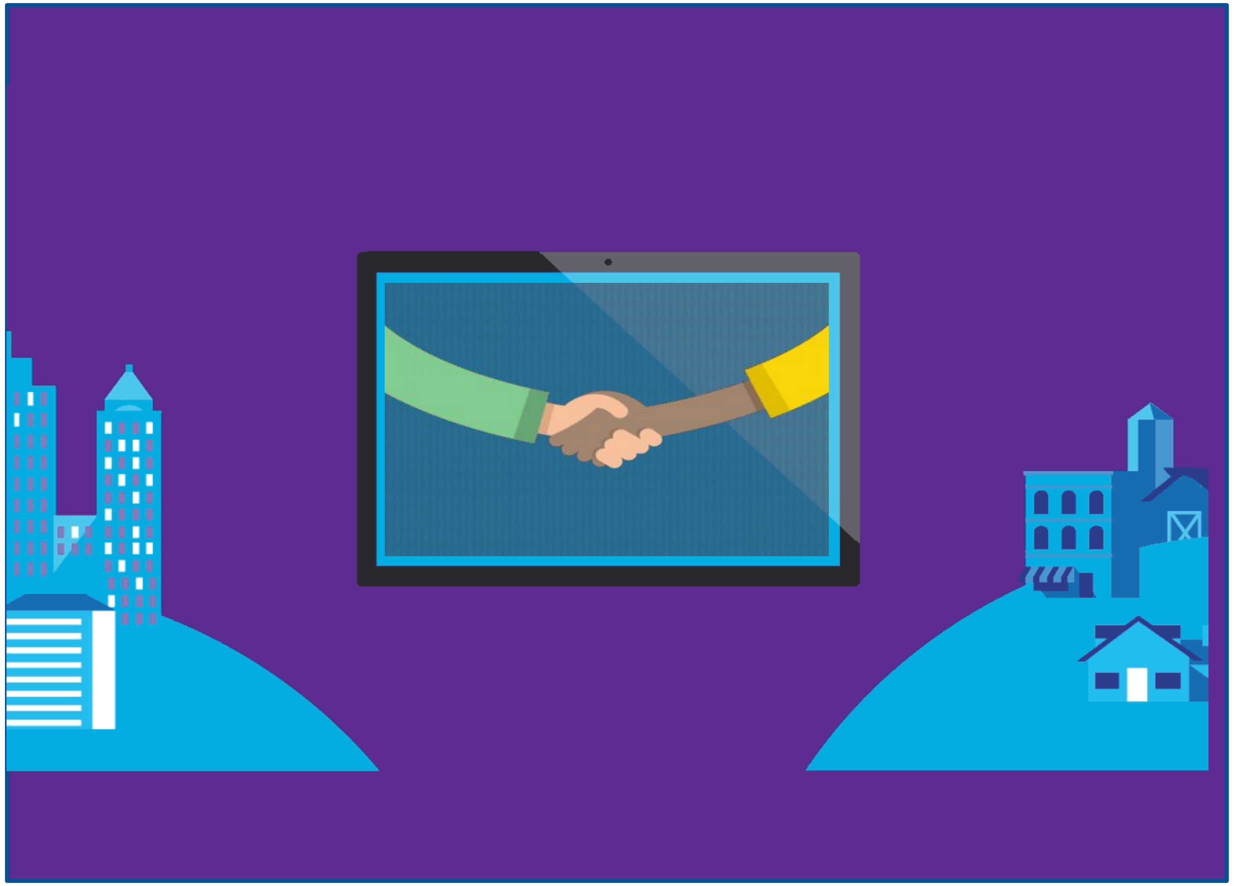
Public-Private Partnerships proven to improve delivery of public goods



Leverage the expertise and efficiency of the private sector, raise capital, and spur development.

Better allocation of risks amongst public and private—who can best manage it

Results show improvement in delivery of traditional public goods such as education, energy, transport, healthcare, and sanitation.

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Public-Private Partnerships : Benefits and Challenges

BENEFITS

Better Infrastructure solutions

Faster Project Completions

Risks are fully appraised early on to determine project feasibility.

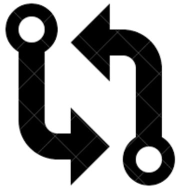
ROI
(Return of Investment)

CHALLENGES

Can increase government costs

Limit the competitiveness required for cost-effective partnering

Profits of the project can vary based on assumed risk, competition level, project complexity…



If the expertise of the partnership lies heavily on the private side, the government is at an inherent disadvantage

PPP in Energy Sector

With un-bundling of the traditional energy sector a natural opening emerged for PPPs – generation, transmission, distribution, and collection and regulation

Introducing alternate and renewable energy sources is risky; thus a natural candidate for PPP

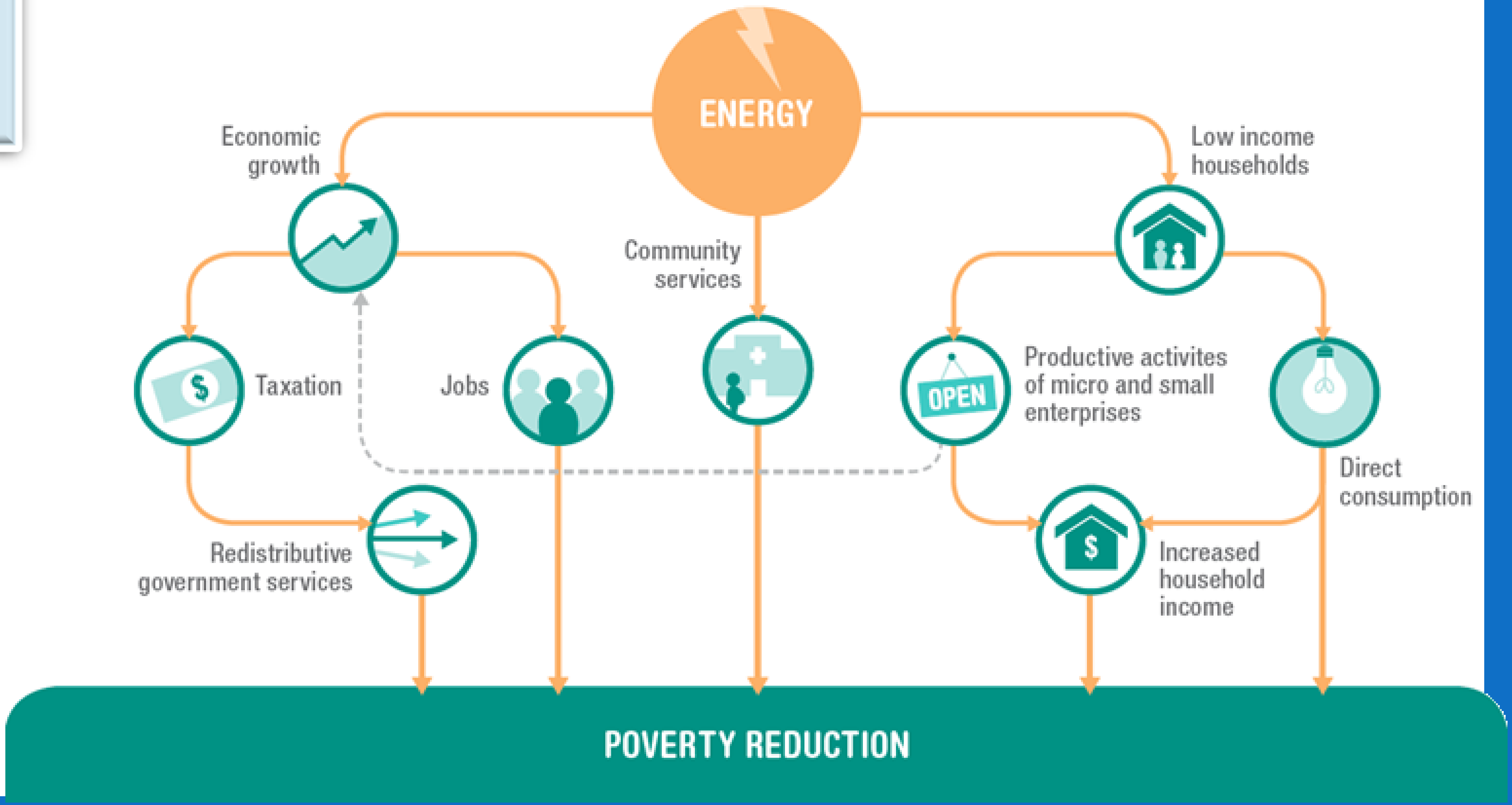
Public-Private Partnerships to Reduce Energy Poverty…

For example, Public-Private Partnerships between government and commercial entities can provide valuable solutions for addressing capital, facilities, or other needs, provided the details are optimally managed.

Professionalizing the sector

Mobilizing private equity

In order to reduce the energy poverty, there is a need for not only more modern technologies but also more updated governance and more collaborative cost, risk and resource-sharing.

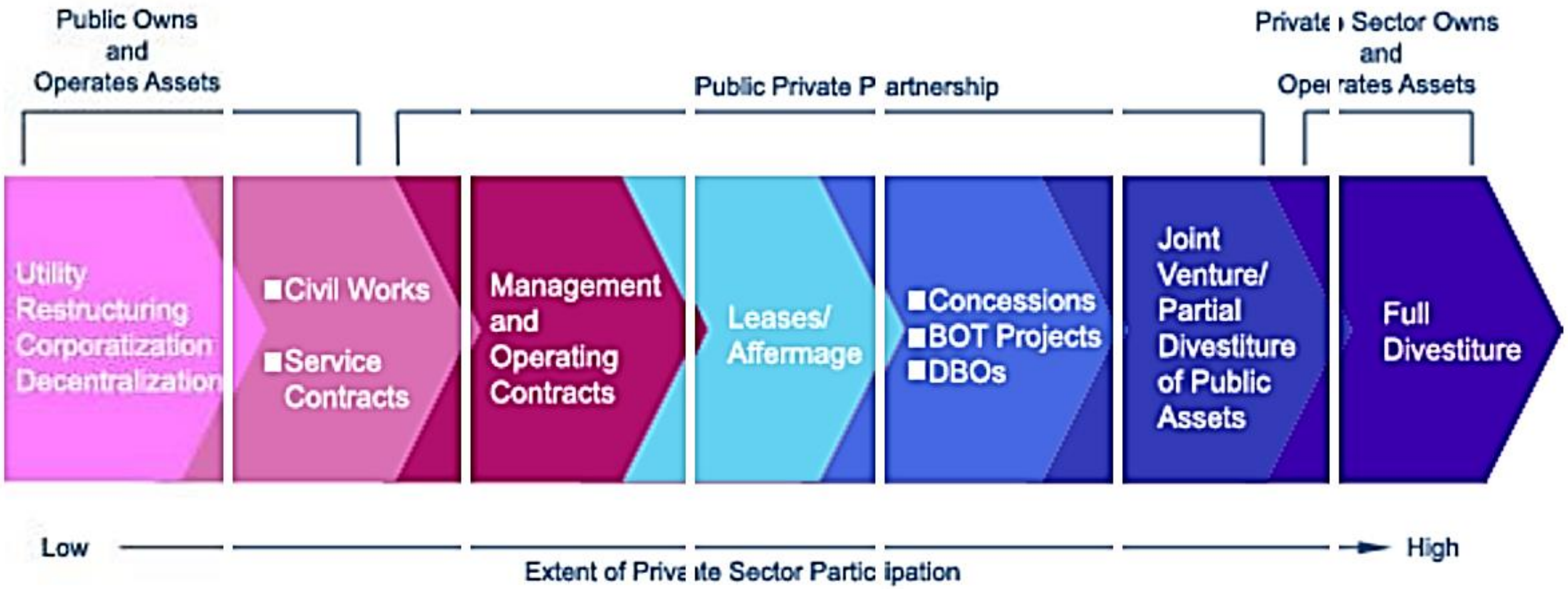


Spectrum of Public-Private Partnerships…

Contractual option	Operation and Maintenance	Commercial Risk	Capital Investment	Asset Ownership	Contract Duration
Publicly Owned	Public	Public	Public	Public	No contract
Out Sourcing or Service Contract	Public/Private	Public	Public	Public	1 to 2 years
Management Contract	Private	Public	Public	Public	3 to 5 years
Long Term Lease	Private	Private	Public	Public	8 to 15 years
Concession	PPrivate	Private	Private	Public	25 to 30 years
BOT *Build Operate Transfer*	Private*	Private*	Private*	Public/Private	20 to 30 years
Privatization	Private*	Private*	Private*	Private*	Indefinite or limited in time

*Or shared public/private in the case of mixed enterprise companies.

PPP Agreements And Ownership Structure



World Bank 2014

Politics, Finance, Regulations, and Technical Assistance drive the success of PPPs—even more so in energy

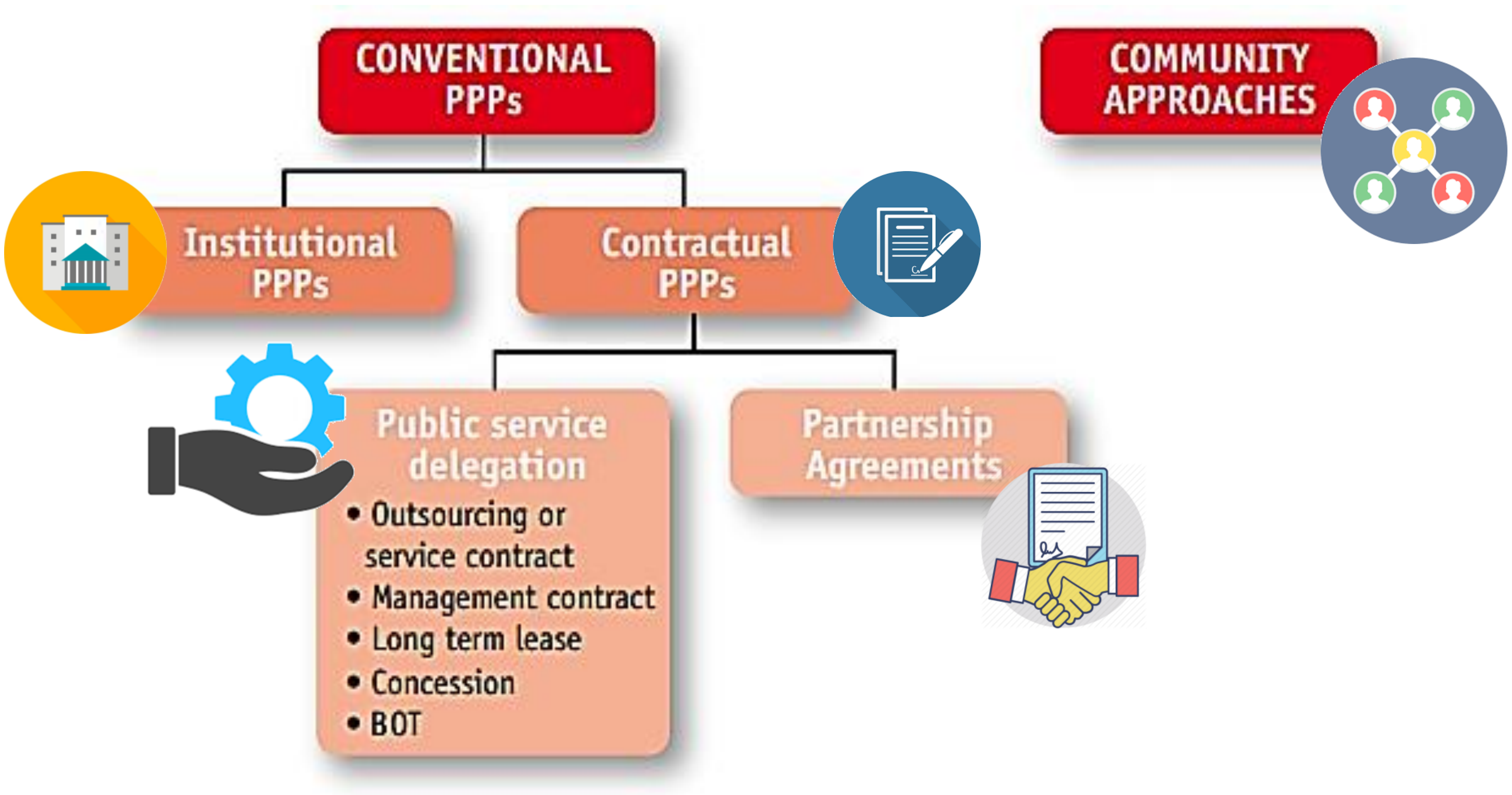
Politics

Financial Assistance

Regulations

Technical Assistance

Conventional PPPs vs Community based PPPs



Community Driven PPPs…

Organization systems to obtain and/or distribute services are **communities**

Community management is marginal to structured contractual management types

Advantage of **leveraging social collateral**—often useful in the face of the tragedy of commons

Operating an electrification service requires **technical and managerial skills** for electrical infrastructures, not (yet) enough in village populations or local authorities.

Often indispensable to assign this type of management to professionals by choosing a **public service management** delegation

However, many examples of **community management approaches** developed to facilitate access to public services in rural areas.

Often cumbersome as require to develop and sustain **'social contract'**

Water distribution in rural areas in **Ghana**; rural electrification sector in several **North American** and **Asian countries**; rare in Africa, for reasons described above

Often relying on structured private sector contracts—community power in Europe

Seoul: Public-Private Partnership Prevents Energy Poverty

The challenges

Seoul is committed to implementing programmes to prepare for the effects of climate change and reduce risks which disproportionally threaten low-income families, all the while adapting to rapid urbanisation and economic growth. The Energy Welfare Public Private Partnership Programme aims to contribute to the city's targets on greenhouse gas (GHG) emissions reduction while simultaneously reducing energy consumption and spending for low-income families.

Energy Welfare Public-Private Partnership Program

- Innovative and sustainable financing for low-income households
- Home energy efficiency upgrades
- Training and employing disadvantaged job seekers
- Innovative virtual power plant

Co-benefits

Economic The virtual power plant registered under the project has resulted in annual profits of more than $180,000 sent to the Seoul Energy Welfare Civic Fund.

Environmental Around 1,600 micro-PV panels have been installed at public apartments and low-income houses in disadvantaged communities under the program.

Social Fifty former energy consultants and energy social workers are continuing work in the industry, having founded eight cooperatives and four non-profit organizations.

PPP Reality in Rural Electrification Program

In Africa, many electrification programs made greater use of public concession loans for financing investments and relied on their national electricity companies to implement rural electrification programs.

Algeria, Tunisia and Morocco were able to achieve rural electrification by assigning this electrification mission, as well as financial resources management, to their national electricity companies, who in turn were responsible for delegating part of the mission to the private sector (Solar PERG in Morocco, for example).

Example of Rural Electrification PPPs in Rural Areas (Guatemala)

Political Dimension

The PER (Rural electrification program) launched following the electric sector reform in 1997, was the rural electrification trigger.

Financial Dimension

A fiduciary fund created to support PER implementation, with the unique characteristic that 30% of the fund was fed with resources from the public service electricity company privatization;

Technical Dimension

Selected companies brought in technical know how…

Public

The PER fund is controlled by a technical committee including representatives of the Ministry of Energy and Mines, of INDE, and of two private distribution companies.

Public and private entities

Private - Despite privatization, there is a de facto monopoly of Unión Fenosa, a company combining both distributors of the western and eastern zones. However, the private sector does not contribute any investment financing into this atypical PPP (except for existing asset replacement).

Summary

- PPPs to resolve energy poverty will require be-spoke designs
- Many of these PPPs will be in rural areas or in urban slums
- Will require community approaches to tap in social collateral for risk management
- Risk sharing appetite and structure of communities different than the traditional public sector
- Need to define clear models based on global and regional experience to date

THANK YOU.