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Determinants of Success in Islamic Public-Private Partnership Projects (PPPs) in the Context of SDGs

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Abstract: Public Private Partnerships (PPPs) should not be assumed as a panacea in development finance since regardless of decades of infrastructure development by Multilateral Development Banks (MDBs) and local governments, human misery in the form of poverty and hunger persists on earth. Given the persistence of such stalemate in the development arena, the main aim of this paper is to bring the ignored aspects of infrastructure PPPs into the light, propose guidance based on the priorities of Islamic economics and finance and initiate a discussion on the success factors of infrastructure PPPs. As a methodology, qualitative technical review for stock-taking of real-life examples is employed. The analysis focuses on Islamic-finance perspective. The major finding of the research is that putting infrastructure PPPs within priorities of Islamic finance as a method can illuminate the path to success in achieving sustainable development goals. While identifying the three pillars for success: maqasid al-shari'ah, shari'ah compliance, and resource mobilization from Islamic capital markets, a framework table is proposed to signal the likelihood of success in Islamic PPPs as a result of such systematic evaluation. Traditional risk issues are well addressed in PPPs with vast real-life experience and have been subject of many academic studies, hence, this paper dwells on Islamic finance aspects alone.

Keywords: PPPs, SDGs, Sukuk, Blended Finance, Project Finance, Ijara, Istisna

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Introduction

Islamic public-private partnership (PPPs) projects emerged as a viable solution to assist in bridging the huge infrastructure investment gap related to sustainable development goals (SDGs). SDGs are ambitious, and the available development

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finance resources fall short of what is needed for SDGs (World Bank, 2015a, pp. 1-2). It is estimated that from 2016 to 2030, about US$ 5–6 trillion annual infrastructure investment is needed for SDGs and this amount is twice that of present infrastructure investment (Bhattacharyna, Oppenheim, & Stern, 2015, p. 9; Woetzel, Garemo, Mischke, Hjerpe, & Palter, 2016, pp. 17-31). The global infrastructure development-level ranking reveals that Organization of Islamic Cooperation (OIC) countries' median of 88 has fallen behind the world median of 81 (Aijaz & Abayomi, 2017, p. 11). The infrastructure gap may be filled with blended finance, though with repercussions, and capital market securitization through private sector involvement.[1] Given the potential of asset-backed features, there is a natural fit between infrastructure PPPs and Islamic finance in the context of SDGs (Aijaz & Abayomi, 2017, p.24). Gundogdu (2018b) proposed an Islamic finance framework and related SDGs to specific development finance programs and Islamic resource mobilization methods to scale up these programs. As indicated in Table 1, Islamic PPPs are presented as an instrument to address:

SDG #7: Affordable Energy

SDG #9: Industrial Innovation and Infrastructure Development

SDG #8: Decent Work and Economic Growth

A systematic securitization of Islamic PPPs with infrastructure investment sukuk to mobilize private sector resources is proposed as a viable solution to avail more funds for infrastructure development.

1 OECD Definition of Blended Finance: "Blended finance is the strategic use of development finance for the mobilization of additional finance towards sustainable development in developing countries with additional finance referring to commercial finance." Available at: http://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/OECD-Blended-Finance-Principles.pdf last accessed on 25th of October 2018.

Table 1. Matching resource mobilization with SDGs and their programs

Proposed Islamic Resource Mobilization		SDGs	Programs
1. Commercially Priced Loans: Islamic Finance Modes (funds returned from beneficiaries of finance, principals plus market markups, to fund providers).	Economic Empowerment Funds Developmental Waqf	SDG #1: Poverty	Economic Empowerment Program: Islamic Microfinance in Value Chain
	1. Investment Sukuk 2. Two-Step Murabaha	SDG #7: Affordable Energy SDG #9: Industrial Innovation and Infrastructure Development SDG #8: Decent Work and Economic Growth	1. Public-Private Partnership 2. Small and Medium-sized Enterprise Line of Financing
2. Grants: Zakat (direct transfer of funds from the rich to the poor; neither principals nor markups go back to fund providers).	Zakat Platform	SDG #2: Zero Hunger SDG #5: Gender Inequality SDG #10: Inequality Within and Between Countries	1. Support for Microfinance Beneficiaries to Eradicate Hunger 2. Wealth Distribution Programs as Opposed to Social Transfer, Food Stamps, and Social Security Systems
3. Concessional Loans: Qarz-e Hasan (funds returned with principals plus market markups; markups spent on programs for beneficiaries, with the principals returned to the fund providers).	Complementary Currency Crowd funding Cash Waqf/Cash Waqf Sukuk	SDG #3: Health SDG #4: Education SDG #6: Clean Water and Sanitation SDG #11: Sustainable Cities	Flagship Programs Related to Social Investment

Source: Gundogdu (2018b)

It is quite clear that SDGs and resource mobilization efforts to fill the infrastructure gap to achieve SDGs are also an opportunity to grow Islamic finance industry. More importantly, given the alignment of SGDs with maqasid, it is an excellent opportunity to expand Islamic finance while observing maqasid al-shari'ah. Should Islamic PPPs become more widespread, Islamic financial institutions would find leeway to invest in tangible assets produced by PPP projects. The securitization of Islamic PPPs with asset-backed sukuk would attract pension funds, wealth funds, and takaful companies and provide more liquidity management outlets to treasury departments of Islamic banks. Nevertheless, private sector investment is based on risk-reward consideration and it is crucial to provide viable investment opportunities for which low return is balanced with low risk in a way that the private sector is convinced that this alternative is better than high-risk & high-return options. In this regard, there are elements related to the risk that need to be assured by Islamic PPPs for private sector involvement. As a general practice, financiers of PPPs factor these risks in the risk matrix attached to their credit documents and mitigate them. Besides, project related holistic risk assessment has been subject of many academic works (Marcus and Chen, 2004, p. 14).

On the other hand, there remains a substantial risk for countries regarding scaling up Islamic PPPs with blended finance and tapping into capital markets with infrastructure investment sukuk. While attracting private investment to Islamic PPPs with risk mitigated by sovereign commitment, reckless scale-up would give rise to issues of debt sustainability and consequently deteriorate the livelihood of poor people, who are most affected by the side effects of public debt (Kemal, 2001, p. 267). Since the adoption of the Millennium Development Goals (MDGs) in 2000, the development finance landscape substantially changed. Regardless of GDP growth of emerging economies, inequality within many countries continues to rise and the gap between the richest and the poorest is growing (World Bank, 2015a, p. 5). This alone indicates that regardless of GDP growth with Multilateral Development Banks' (MDBs) intervention and capital inflows, the issue of poverty has not disappeared because, perhaps, some key success factors in poverty alleviation have been ignored. The formidable dilemma that, regardless of infrastructure investment, poverty does not disappear from this planet needs to be addressed.

It is time to ask intriguing questions as such, who pays and shoulders the burden of these projects? In terms of financing infrastructure projects, resorting to available domestic resources is an option as a large number of OIC countries have

reached a 15 percent tax to GDP ratio.[2] However, the alternative of utilizing domestic financial resources may not assure the success of infrastructure projects due to politico-economic constraints, the need to import capital expenditure (CAPEX) for projects, and as it leaves the protracted issue of managing Foreign Exchange (FX) earning capacity unattended, particularly for least developed countries. Most importantly, a recent increase in tax to GDP ratio in OIC countries is the result of transaction taxes (most notorious value added tax), which increases the burden on the poor while the people above the poverty line most likely gain most of the benefit from infrastructure projects (Salti & Chaaban, 2010, p. 11; Songco, 2002, p. 45).

In this context, SDGs put wider economic priorities over the mere interest of corporations and financial institutions and have some similarities with Islamic finance. Such conversion should be welcomed by Islamic finance industry as the truth is the ultimate outcome of human reflection. SDGs are definitely well aligned with maqasid al-shari'ah, and hence, draw attention from the Islamic finance community (Ahmed & Mohieldin, 2015, pp. 14-30). However, defining economic priorities and aligning them to Islamic finance should be a concern. Reflection alone might not be enough and recourse to faith-based guidance can define sustainable methods to address the shortcomings of human reflection. Thus, the issue of putting SDGs in the context of priorities of Islamic economics and finance for infrastructure PPPs requires extra attention. Hence, the gist and the objective of this paper to bring the ignored aspects of infrastructure PPPs into the light and propose guidance based on the priorities of Islamic economics and finance.

Islamic Finance for PPPs and Mapping the Best Islamic Structures[3]

Perhaps, the best way to define Islamic PPPs is by unrevealing the difference between Islamic PPPs and conventional PPPs. Unfortunately, there is no universally accepted definition of conventional PPPs (Ong & Leonard, 2002, p. 2). The International Monetary Fund and Organization for Economic Co-operation and Development (OECD) have their own definitions. According to IMF, PPP is "an arrangement where the private sector supplies assets and services that traditionally have been provided by the government. In addition to private execution and financing

2 As of 2015, the average tax-to-GDP ratio for developing countries is around 12 percent, which is only 3 percent lower than high-income countries (World Bank data).

3 Islamic PPP structures are extensively explained in the 2017 joint report "Mobilizing Islamic Finance for Infrastructure Public-Private Partnerships, by World Bank and Islamic Development Bank." One may refer to the report for Islamic PPPs case studies.

of public investment, PPPs have two other important characteristics: there is an emphasis on service provision, as well as investment, by the private sector; and significant risk is transferred from the government to the private sector." According to OECD, PPP is "an agreement between the government and one or more private partners (which may include operators and financiers) according to which the private partners deliver a service so the service delivery objectives of the government are aligned with the profit objective of the private partners and the effectiveness of the alignment depends on a sufficient transfer of risk to the private partners (World Bank, 2015b)."

Indeed, each PPP is different and unique, yet the main motivation is the quick delivery of public services and risk sharing with reduced financial burden on government (Osei Kyei et al. 2017, p. 113). The key characteristics of PPPs are the delivery of public services by the private sector and transfer of associated risk and rewards to the private sector. Apparently, the provision of PPPs in sharing risks and rewards is aligned, at least in theory, to Islamic finance. However, modern PPP structures reveal little evidence concerning the transfer of risks to the private sector. There is substantial evidence to accuse PPPs of being a wealth transfer from the poor to corporations and financial institutions. According to World Bank (2015b, pp. 8-9), there is no evidence of PPPs in as-is structures contributing towards poverty alleviation. All of these suggest that some aspects of infrastructure PPPs are missed. The same may hold for contemporary Islamic PPPs. In fact, in comparing financing cost against conventional alternatives, the difference between Islamic and conventional PPPs is not so much related to a structure but more to the financing contracts and commercial consideration of project sponsors (equity investors). The report in the name of "Mobilizing Islamic finance for infrastructure public-private partnerships" as prepared by World Bank and Islamic Development Bank provides a thorough understating of Islamic PPPs that are implemented across OIC countries. The key features of Islamic PPPs, provided as case studies in the report, shall be resorted to hereafter in the context.

PPPs are fundamentally infrastructure projects. Resources for projects can be obtained in two forms: corporate and project finance. In corporate finance, financiers take the risk of loan seeker corporate, and they are paid even if the project is not performing properly. Hence, the lending decision is based on financial analysis of the balance sheet of the loan seeker. In the case of project finance, however, the debt repayment comes from the cash flow generated by project assets and there is only recourse to project assets and the loan seeker in the case of default. On the

other hand, project finance with PPPs relieves corporates, namely private sector project sponsors (equity investors), from the risk of exposing their all assets in case the project fails. Since project sponsors are both not willing and not permitted to guarantee project loans in Islamic finance and incur due balance sheet liability, special purpose vehicles (SPVs) and government off-take guarantees are introduced to mobilize resources from financiers. These features allow project sponsors to mobilize debt from financiers.

Nevertheless, financiers, in addition to government off-take guarantee and expect the project sponsor to insert equity. Hence, standard PPP project resources are composed of equity from the private sector and debt from financial institutions. In musharaka structures, financiers insert equity instead of debt, but such models would give rise to moral hazard and are likely to work against financiers. The debt-to-equity ratio would be 70:30 or even higher depending on risk assessment by financial intuitions. Proportioning capital participation based on risk is advisable from an Islamic finance perspective. In case the project risk is perceived to be higher or there is not enough historical data to evaluate project risk, financiers ask for higher equity participation from project sponsors. For example, if there is only six months data available for wind quality in the region, a financier may back off from wind energy projects or request higher equity participation from project sponsors to mitigate the risk. Financiers' debt and project sponsors' equity insertion together constitutes SPV's capital. Presence of SPV distinguishes PPPs from corporate finance and ordinary project finance since SPV is a pivotal party that (is) (Ahmad, et.al. 2018, p.3):[4]

1. Signs a concession agreement with the government to provide public services.
2. Signs a financing agreement with financiers as an istisna contractor to deliver assets and as a lessee to make repayments (the most common Islamic PPP structure).
3. Signs contract with EPC contractors to construct the project (parallel istisna),
4. Responsible for the operations and maintenance of project assets to provide public services as per concession agreement.[5]

4 To have a clear understanding, for any PPPs, it is vital to approach them from the viewpoint of an SPV. Ahmad at.al. (2018) defines PPP operation cycles based on interviews with stakeholders.

5 According to ijara agreements, maintenance, repair, and insurance of project assets are the responsibility of the lessor, that is, the financier. As a general practice, Islamic banks delegate these responsibilities, as well as ownership tax responsibilities, to the lessee, SPV, via a "Servicing, Maintenance, and Insurance Agreement."

Since the SPV is a separate legal entity, financiers are relieved from the risk associated with asset ownership. In addition, even if project sponsors become insolvent at any time during a PPP, since the assets are registered in the name of SPV, projects would not be affected by such issues. All these features are strengthened by government off-take agreements or guarantees. Because the government and project sponsors/SPV are independent legal personalities, the repayment risk is mitigated in a shari'ah compliant manner. According to Islamic shari'ah, a project sponsor cannot give a guarantee to a financier for SPV's loan repayment obligation as they are connected parties. Independent third-party off-take arrangement and guarantee by a government makes PPPs also excellent sources of sukuk securitization. Unlike PPPs, it is quite difficult to securitize many infrastructure projects as shari'ah compliant fixed income sukuk.

As it can be discerned, Islamic and conventional PPPs are very similar structures and the documented experiences of Islamic PPP experiences are similar to conventional ones (Abdul-aziz & Kassim, 2011, p. 151). This is quite normal since the presence of bona-fide transaction and risk management practices in project finance converges conventional finance to Islamic finance in PPPs. Accordingly, Islamic and conventional banks on parallel can finance the same PPPs.[6] However, this does not mean that there is no difference between Islamic and conventional finance in terms of PPPs. The presence of an Islamic finance agreement alone would assure fairness to all parties. It ring-fences and protects loan seekers and corrects imbalance found in conventional finance agreements. As a general principle, there are no upfront or commitment fees or default interest penalties incurred by Islamic banks in Islamic project finance contracts, that is, murabaha, ijara, istisna, though, in practice some Islamic banks do not comply with such strict rules (Beck et.al., 2010, pp .3-4).

Concerning contract types, from a risk point of view, murabaha is the least risky and istisna is the riskiest one for financiers; ijara lies in the middle: Istisna and Ijara involve ownership risk in addition to credit risk. In case of Istisna, there also exists asset production risk. It is also worth mentioning the musharaka and mudaraba options for PPPs. An Islamic bank may opt for equity investment in SPV

6 The major obstacle for Islamic-conventional parallel financing is the pari passu clause. Unlike conventional banks, since Islamic banks own project assets according to most Islamic finance contracts, they would have debt seniority due to such ownership if the project fails. Conventional banks cannot have recourse to project assets. In practice, Islamic banks waive their seniority rights to ensure pari passu in parallel financing.

via musharaka contract together with the project sponsors. However, such an arrangement would decrease the merit of PPPs. Although Ariffin et.al. (2009, pp. 153-163) categorized Islamic finance contracts as risk-sharing (musharakah and mudarabah) and mark-up based (murabaha, ijara and istisna), such categorization might not be perfect. The contracts based on profit-loss sharing may appear more Islamic, yet, musharaka and mudaraba, are contracts by which Islamic banks mobilize resources for loans.[7] Such resource mobilization contracts should not be used for financing. The only exception for the advisability of musharaka and mudaraba for financing is microfinance projects (Gundogdu, 2018b, p. 383). Apart from microfinance, commercial loans are better to be financed through debt contracts (istisa, ijara, murabaha) to avoid moral hazard and encourage healthy development of related securities for Islamic capital markets, which is key to the expansion of Islamic finance. From a shari'ah viewpoint, PPPs should not be financed with bogus commodity murabaha, also known as organized tawarruq contracts since, according to the Islamic Fiqh Academy, such contracts are clearly not shari'ah compliant (Gundogdu, 2016, p.251).

If there is no civil work component of PPPs, murabaha and ijara agreements can be used to fulfill the needs of SPV, for example, a financier can procure turbines for power PPPs or port cranes for transport PPPs. Although murabaha and ijara agreements appear similar, there is substantial difference between them. Murabaha makes PPPs asset-based while ijara contracts make PPPs asset-backed.[8] In many jurisdictions, the state would not give ownership directly to financiers due to legal constraints.[9] Under such circumstances, financiers opt to make a murabaha sale. In the case of a murabaha sale, since the ownership of the asset is transferred, there is no possibility of a secondary market should the PPP be securitized with sukuk. In the case of ijara, a financier can securitize their lease proceeds from SPV, as they legally own project assets and can transfer ownership of these assets with sukuk. It is important to note that in most of the countries, local rules do not allow a

7 Islamic banks can tap into conventional funds using the mudaraba structure to make more funds available for Islamic PPPs. The Islamic Development Bank employed mudaraba contracts to make use of the OPEC Fund and Saudi Fund for Development. (World Bank, 2015a).

8 There are asset-backed murabaha practices, but only for trade finance. In the case of project finance, asset-backed structures can be established with ijara contracts.

9 The case of PPP Hospitals in Turkey. "Mobilizing Islamic finance for infrastructure public-private partnerships." Available at: http://documents.worldbank.org/curated/en/898871513144724493/Mobilizing-Islamic-finance-for-infrastructure-public-private-partnerships last accessed on 30th of October 2018.

lien on government-owned public assets. Hence, additional arrangements can be made to separate simple ownership to rest with the government and use to rest with the financier. Accordingly, an alternative more purposeful solution to increase asset-backed options can be to take advantage of certain legal rights, such as use of usufruct right, by separating simple ownership to make it rest with the state.[10]

Use of usufruct right is a viable solution since, in the case of most PPPs, there are civil work components; asset needs to be created. Istisna contracts are used to create assets. After the creation of an asset, subsequent murabaha or ijara agreements can be employed to make an arrangement with the SPVs. The most common structure in Islamic PPPs is the istisna-ijara structure (Aijaz & Abayomi 2017, pp. 25-39). In order to mobilize resources, an istisna agreement followed by an ijara agreement structure would provide the most conducive environment to tap into tradable sukuk. However, in order to ensure the health of the sukuk market and protect investors, securitization should start only after asset creation. That is, istisna should not be the subject of sukuk securitization to avoid exposing investors to production risk that may destroy the trust in the market should the project be delayed, which happens frequently, or fails, which also happens.

Success Factors for Islamic PPPs

The viability and merits of PPPs are generally accepted and the question of success factors in PPPs has been the subject of many studies. For example, robust engineering design and procurement have been identified as critical success factors (Osei Kyei et al. 2017, p.113). Perhaps, a look from Islamic finance aspect can provide more valuable insight to the discussion. The asset-backed possibilities and emphasis on risk sharing by Islamic finance make infrastructure PPPs an excellent area for Islamic banks to focus on. However, in order to reap the benefit of PPPs for the Islamic-finance industry, proper preparation of bankable projects is as vital as identifying the most relevant resource mobilization methods, aligned to maqasid al-shari'ah, to finance Islamic PPPs. It is also important to note that transaction tax is not welcomed in Islam. Muhammad (PBUH) in his opening of Madina Market stated: "This is your market, let its space not be diminished and let no tax be taken in it" (as cited by Kister, 1965, p. 274). Indeed, the hostility of Islamic economics

10 The case of PPP of Madinah International Airport. "Mobilizing Islamic finance for infrastructure public-private partnerships." Available at: http://documents.worldbank.org/curated/en/898871513144724493/Mobilizing-Islamic-finance-for-infrastructure-public-private-partnerships last accessed on 30th of October 2018.

and finance towards tax and particularly transaction taxes contradicts the blended finance approach as proposed by the development committee in the "From Billions to Trillions" report.

Accordingly, Islamic PPP projects should be better commercially priced rather than blending concessional loans from public resources with commercially priced private sector resources to incentivize corporations and banks. Commercially priced loans would ensure that project appraisal is based on realistic financial projection (such as internal rate of return) and impede the transfer of public resources to project sponsor/developers and banks. Incentivizing the private sector, as proposed by the blended finance approach, contradicts the general tendency to avoid subsidies to the public. Subsidies, such as fuel, deteriorate the livelihood of the poor due to the transfer of resources from the poor to the middle- and upper middle-income classes (Granado, Coady, & Gillingham, 2012, pp. 2234-2248). There is also no evidence that food subsidies alleviate poverty rather they keep the poor in a state of poverty. The Islamic proposition for poverty alleviation and hunger has little to do with project finance or social transfer based on tax, it is instead related to wealth transfer, zakat, and economic empowerment to provide an enabling business environment to the poor (Gundogdu, 2018b, pp. 389-390).

Hence, from Islamic economics and finance perspective, there are enough reasons to question the merit of incentivizing the private sector with blended finance in the context of poverty alleviation. Regardless of decades of huge infrastructure development by MDBs and governments in developing countries, poverty persists and it is time to, question the effectiveness of development finance for poverty alleviation and, identify the bottleneck in infrastructure development projects. The issue may be related to a focus on mere infrastructure development while ignoring value chain and using incorrect resource mobilization approaches. The infrastructure projects related to basic human needs (social infrastructure) that are covered under:

- SDG #3: Health
- SDG #4: Education
- SDG #6: Clean Water and Sanitation
- SDG #11: Sustainable Cities

should not be financed with PPP. The problems linked with the use of PPP in social infrastructures are vastly listed in the literature (Abdul-aziz & Kassim, 2011,

p. 155). Commoditization of basic human needs is against maqasid al shari'ah. Similar is the case with transaction tax collection to avail concessional public resources for incentivizing the private sector with blended finance to undertake PPPs in these sectors. To date, there is no evidence showing that blended finance has a positive impact on poverty alleviation (OECD, 2016, p. 10). Hence, the use of blended financing is not suitable for PPPs. However, blended finance should be used to address the aforementioned SDGs related to basic human needs or social infrastructure to avail more concessional loans (Qard'al Hasan) via following platforms (Gundogdu, 2018b, p. 382):

- Complementary Currency
- Crowd funding
- Cash Waqf/Cash Waqf Sukuk

Given the resource distribution effect at the expense of the poor, from a maqasid point of view, PPPs should be financed with commercially priced loans without blended finance, and infrastructure projects related to basic human needs, social infrastructure, should not be subject of PPPs but Waqf and Qard.

The success of infrastructure projects under Islamic PPPs structures should be related to their alignment with Maqasid Al-Shari'ah and Shari'ah compliance. These aspects need to be assured before scaling up Islamic PPPs and tapping them into capital markets. The general risk factors and mitigation methods associated with PPPs are not considered in this paper as they are available in the annex of any PPP credit document and are vastly evaluated in the literature. Instead, this paper proposes a framework to identify PPPs fulfilling certain Islamic finance criteria. The PPPs fulfilling these criteria should be the subject of scale-up while unsuitable PPPs need to be avoided by Islamic financial institutions. The methodology of evaluating Islamic finance products, employed herein, suggests that any Islamic finance products contradicting maqasid al-shari'ah give rise to project related/systematic risk or spur shari'ah compliance issues in legal documents (Gundogdu, 2019, p. 17). Being shari'ah compliant with risk-sharing features and asset-backed schemes do not guarantee alignment with maqasid al-shari'ah either. In addition to alignment to maqasid al-shari'ah and shari'ah compliance, PPP projects should also allow development of Islamic capital markets with asset-backed tradable sukuk to attract resources to infrastructure projects and scale up infrastructure investment without public resources.

Supporting trade is a pillar of Islam as Muhammad (PBUH) stated: "nine out of ten portions of sustenance are from trade" (Ğaribu'al Hadis cited in Kayed &

Hasan, 2013). As a result, the selection of appropriate sectors to develop economic infrastructure related to value chain, transport (railroads, roads, airports and seaports) and to lesser extent the energy and irrigation sectors, vs. sectors related to basic human needs (social infrastructure) such as health, education, and housing is key to success in Islamic PPPs. The projects that support capacity building of local value chains and connecting these to the global value chain would be successful as they can increase the FX earnings potential and loan repayment capacity of a country. Hence, the most successful PPPs should primarily be economic infrastructure related; particularly transport sector, as long as they are within the aid-for-trade and trade facilitation strategy of the country; enhance FX earning capacity of the country; financially feasible (as evidenced by financial calculations on repayment without recourse to government guarantees), and should have a fair price formation in the off-take market.

As a general principle, asset-backed PPP structures, in which financiers have access to assets created during the life of the repayment, are superior to asset-based PPP structures from an Islamic finance viewpoint. Asset-based structures are shari'ah compliant, yet unlike asset-backed PPPs, sukuk would not permit secondary market trading. Hence, one of the most important benefits of PPPs is to create a sukuk pool for Islamic banks' liquidity management need, which is missed with asset-based PPPs. More important than securitization, the issue of fair risk sharing should be addressed. Risk, and also reward, should be shared fairly among the parties involved (financier, government, and sponsor) according to the principles of Islamic finance (Mirakhor, 2015, pp. 85-115). Hence, PPP structures in which governments bear all risk are not acceptable from a maqasid point of view. Cross et. al. (2012, p. 4) argued that profit should not be assured and therefore fixed return on investment should not be guaranteed in Islamic finance. However, the usufruct right of financiers can give the opportunity to rent the project assets to the government and in the case of default, the asset owner (financier) should be able to have control over the asset to make it generate income in the market.[11]

As a separate account, greenfield sukuk should be avoided since it may create negative carry for issuers as the sukuk amounts would be disbursed in lump sum and delays or failure in project completion would discredit Islamic capital markets.

11 The government is not able to confer simple ownership of assets due to legal restrictions. In addition, there can be no lien on state property, so participating in certain ownership rights is a viable solution for financiers.

Hence, the availability of project completion bonds in the form of takaful is of utmost importance. Given that the takaful industry may not have the capacity to provide such products, Islamic banks can continue to resort to risk mitigation arrangements to ensure proper completion of the projects by project sponsors. However, governments should not provide any guarantee for completion so as to avoid moral hazard. It is not feasible to make PPPs totally free from any risk to make them attractive to Islamic financial institutions. In the end, Islamic banks should also take risks like any other economic actors. In order to count a PPP as successful, there should be no recourse to government guarantee, therefore, the availability of completion bonds in the form of takaful would make a substantial contribution to the success of Islamic PPPs. Even without this, financiers and project sponsors should assume project completion risk as they are supposed to be specialized in the sector and this is their economic value added. The project completion risk should not, as stated above, be assumed by the government as the cost would be reflected on the poor. The use of takaful to mitigate project completion risk, political risk insurance, and sovereign offtake obligation risk should be encouraged. Under the presence of such comprehensive takaful, even greenfield sukuk for PPPs would be possible. Even then, the issue of mandatory and voluntary early repayment of lease proceeds should also be addressed and factored to ensure the fixed income nature of infrastructure investment sukuk to be offered in Islamic capital markets. Besides, the production of additional assets after projected asset creation under an istisna agreement would alter the repayment schedule and the effect on fixed income sukuk should be addressed and factored in.

As should be expected, transactions should be free from maysir (speculation or gambling) and PPP contracts should be clear of gharar (uncertainty). In order to ensure nonexistence of maysir and gharar, the decision to finance PPP projects should be based on realistic financial projections (such as internal rate of return), robust engineering design, and environmental safeguards. Apart from this, PPPs are naturally free from maysir, with investment in bona-fide projects, and gharar with well-defined content regarding lump sum, turn-key, and EPC.[12]

12 EPC refers to engineering, procurement, and construction. In infrastructure projects, these aspects are managed by defined guidelines based on decades of project experience.

Table 2. Determinants of Success in Islamic PPPs

Maqasid Al-Shari'ah	Shari'ah Compliance	Resource Mobilization
-No commoditization of basic human needs. Avoid social infrastructure: such as education, health, and housing sectors for Islamic PPPs.	-No use of commodity murabaha, aka organized tawarruq, for financing projects.	-No blended finance and concessional loans, but commercially priced sukuk.
-Focus on economic infrastructure such as transport sector PPPs to improve local value chain and connect it to the global value chain to enhance FX earnings capacity of the country.	-Independent third-party guarantees only. No related party (such as project sponsor) guarantees to ensure loan repayment.	-Asset-backed structures (such as istisna in asset creation to be followed by ijara or stand-alone ijara PPPs) to allow sukuk to be tradable in the secondary market to enable liquid management opportunities for Islamic banks.
-Assure fair price formation in the market for goods and services to be provided (no monopoly & no subsidy).	-Robust maintenance and operational arrangement of PPP assets as a requirement of ijara contract.	-No greenfield sukuk unless there is a comprehensive takaful coverage for project completion risk and project delay risk. Infrastructure investment sukuk should be issued only after project completion to prevent project completion risk impacting on Islamic capital markets.
-No government guarantee to financiers for project completion risk related to EPC contractors or project sponsor.	- No upfront fee and commitment fee in the financing agreements.	
-Ensure realistic financial projections, robust engineering design, and environmental safeguard to avoid moral hazard due to government's offtake commitments and inflicting a burden on the local population.		-The issue of additional asset creation, mandatory or voluntary early repayment of lease proceeds should be addressed to avoid repercussions in Islamic capital markets via infrastructure investment sukuk.

From a risk point of view, Islamic PPPs may exclude civil work elements of the project and focus on CAPEX. That is, ijara structures are more likely to succeed as opposed to istisna vis-à-vis asset production risk. However, the value added of Is-

lamic banks is higher with istisna. The use of ijara instead of istisna would increase the probability of success, but it will be at the expense of the principles of Islamic finance to fully engage with real economic activities. Hence, as their contribution to the economy, Islamic banks should engage in asset production to ensure the feasibility of the project as well as the timely and proper implementation of asset creation. Ideally, istisna contracts may be followed by ijara at the end of the production period and, these agreements should be free from upfront fee and commitment fee (Gundogdu, 2018c, p. 4).

Robust maintenance arrangements and capacity assurance of the entity that shall operate assets created, such as toll roads, airports, power plants, and so on, needs to be designed during the project appraisal stage. This is vital for the success of any Islamic PPPs as maintenance and proper operation of assets are primarily the obligation of financiers in ijara agreements. Most importantly, the prices of goods and services to be provided with PPPs should be determined in a well-structured competitive market: fair price formation is an integral part of Islamic economics (Gundogdu, 2019, pp. 56-57).

Conclusion

If these Islamic finance propositions as shown in Table 2 are observed, in addition to standard risk mitigation measures with PPP finance, Islamic PPPs can fill the infrastructure gap in the context of SDGs while repercussions on the poor will be eliminated. SDGs are not only related to enabling infrastructure but also alleviating poverty and hunger. We should be ready to question infrastructure development as a panacea for poverty alleviation and hunger since regardless of decades of massive infrastructure investment by MDBs and local authorities, both poverty and hunger still persist in the world. While addressing certain SDGs related to economic development, Islamic PPPs should not undermine SDGs related to poverty and hunger. The framework proposed based on maqasid al-shari'ah, shari'ah compliance, and securitizing Islamic PPPs with sukuk for resource mobilization reveals that certain types of PPPs are more likely to succeed and be fruitful for all parties involved while not deteriorating the conditions of the poor. Hence, Islamic PPPs should focus more on economic infrastructure, particularly transportation sector, under aid-for-trade and a trade facilitation agenda to enhance the capacity of local value chains and should connect these to the global value chain to enhance FX earning capacity for countries. These types of projects should not be implemented on an ad-hoc basis without strategic priorities related to the value chain. Development

programming should begin by addressing supply-side constraints to enhance value creation in local markets and subsequently, or in parallel, invest in economic infrastructure in a way to enhance countries' FX earnings capacity. Such an approach would increase foreign exchange earnings capacities and assure repayment of FX dominated loans.

The success of Islamic PPP projects depends on project appraisal to decrease the probability of recourse on sovereign guarantees, robust engineering design, and environmental safeguards to ensure the durability and sustainability of project assets as well as securitization opportunities of projects financed in Islamic capital markets. The alternative infrastructure development approaches with tax resources should be avoided. Although financing cost of PPPs is higher, privately led asset creation and maintenance can bring procurement and maintenance gains to compensate the higher capital cost of the private sector (OECD, 2008). Besides, sponsor involvement in project design can increase value-for-money. Hence, the PPP concept is the right approach for infrastructure development should the priorities of Islamic economics and finance be observed. The determinants of success proposed herein should not be taken as conclusive and further studies may be needed for enhancement while evaluating infrastructure projects from the perspective of maqasid al-shari'ah, shari'ah compliance, and resource mobilization before scaling up Islamic PPPs.

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