

‘Clean energy for all’: the implementation of Scaling Solar in Zambia

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Abstract

Purpose – The purpose of this paper is to review critical success factors (CSFs) for the implementation of the Scaling Solar Programme in Zambia, the first solar public-private partnership (PPP) in the country.

Design/methodology/approach – The single case study is based on stakeholder interviews and the evaluation of primary and secondary sources of data. As a first step, the study illustrates the implementation of Scaling Solar in Zambia and links it to the formal PPP framework of the country. The second step compares central CSFs for PPPs identified by previous research with the current framework of the programme. Furthermore, it analyses whether these CSFs have affected the PPP project implementation in Zambia. Based on these findings the question discussed will be which CSFs can be identified that impacted the implementation of the programme in a third step.

Findings – The case study found that the design of the Scaling Solar Programme largely mitigated the main financial and political risks identified in previous studies with regard to the uptake of energy infrastructure processes in developing countries. It reveals that government stakeholder alignment and institutional capacity are the central CSFs which impact the roll-out of the programme in Zambia.

Originality/value – The study suggests that a pre-implementation phase of a complex PPP project should comprise government stakeholder alignment which can be based on approaches to Relationship Management Theory. By suggesting a stakeholder management approach, the study indicates how a PPP framework, with a redefined role of a horizontally integrated, independent Public-Private Partnership Unit, can support this approach.

Keywords Zambia, Renewable energy, Sustainable Development Goals, Public-private partnerships, Photovoltaic, Scaling Solar

Paper type Case study

1. Introduction

The implementation strategy of access to clean and affordable energy for all is the seventh of the UN's Sustainable Development Goals (SDGs) and is closely related to other SDGs, such as climate change mitigation, economic growth, and an end to poverty. This is relevant to most developing countries in Sub-Saharan Africa which face serious energy shortcomings, due to growing energy demand, a lack of infrastructure investment, and the impact of climate change, which itself particularly affects those countries with a high dependency on hydropower (International Energy Agency, 2014). The World Bank has designed the Scaling Solar Programme as an initiative to increase access to clean energy according to the SDGs (IFC, 2017a, b). This programme is designed as a “one-stop-shop” solution for governments in Africa to facilitate privately funded on-grid photovoltaic (PV) energy projects which can be implemented in a timely and cost-effective manner (Fergusson *et al.*, 2015). The Scaling Solar Programme has been set up as a public private partnership (PPP) comprising an auction-based government-led procurement and PV site-selection processes to achieve competitive tariffs. In addition, the programme offers advisory services, staple financing, and long-term risk guarantees in order to mitigate operational risks in a nascent PV market, and the creation of bankable projects in a comparably short timeline (Fergusson *et al.*, 2015).



Scaling Solar, launched in 2015, was first rolled out in Zambia, where a second procurement round is currently taking place. In October 2016, a similar tender process was initiated in Senegal, and in Ethiopia during the Summer of 2017. The intention is to expand Scaling Solar to other countries in the region (Tsagas, 2017; IFC, 2017a, b).

The Scaling Solar Programme is a high political priority in Zambia, and was initiated after a directive to the Zambian Industrial Development Corporation (IDC) from the Zambian President Edgar Lungu to procure 600 MW of solar power in order to overcome the national energy crisis (Industrial Development Corporation, 2015). Due to lower rainfall during the 2014/2015 rainy season, the hydro-dependent country suffered a serious shortage of electricity which resulted in regular power outages of eight hours per day (Mukanga, 2015). One year later, the central aim of Scaling Solar in Zambia, which was to procure solar PV energy at cost-competitive tariffs, was achieved. The first procurement round, composed of two solar PV power projects totalling an installed capacity of 73 MW, secured winning bid prices of US\$ 6.02/kWh and US\$ 7.84/kWh. These non-indexed tariffs were among the world's lowest utility scale solar PV feed-in tariffs at that time.

However, despite the political support which the roll-out of Scaling Solar in Zambia has received, project implementation faces challenges that are currently delaying financial close and commissioning.

This paper analyses these challenges, from a PPP perspective during the implementation stage of the first round of the Scaling Solar Programme in Zambia, which is considered to be the first solar PPP in the country (Keele, 2017). The aim is to illustrate critical success factors (CSFs) and examine PPP framework developments in the country.

2. Method, data, and approach

This paper is focussed on the following question:

RQ1. Why the roll-out of the first round of Scaling Solar in Zambia is currently delayed, and how these causes can be linked to the current structure of the PPP framework in Zambia?

The analysis is designed as an explanatory case study based on the definition of Yin (2013, p. 13). A three-step approach is applied to answer the research question. In the first step, the design and roll-out of the Scaling Solar Programme in Zambia will be illustrated and compared to the formal design of the PPP framework in Zambia. As a result the implementation status of the PPP framework in Zambia will be evaluated against the question whether the roll-out of Scaling Solar was aligned with the PPP framework structure in Zambia. In the second step, the concept of CSFs in the context of the implementation of PPP projects will be introduced. There will be an analysis as to whether the most central CSFs that have been identified in previous empirical studies for the implementation of PPP projects also play a critical role during the implementation of Scaling Solar, Round 1 in Zambia. The third analytical step asks for the factors that caused delays in project implementation in Zambia which could not be composed by the CSFs described in the studies discussed, and whether they can be linked to the institutional arrangement of the Scaling Solar implementation process in Zambia.

The case study follows a holistic approach (Feagin *et al.*, 1991) by taking into account a multi-actor perspective of governmental and non-governmental stakeholders. The analysis is thus based on primary data which are derived from ten comprehensive stakeholder interviews with developers that participated in the bidding process and passed the first qualification stage of the programme, public stakeholders from Zambian government agencies, and non-governmental stakeholders which were involved in the design and implementation of the programme. The semi-structured interviews have been focussed on two central areas. The first is composed of open questions that ask about the

implementation status of the programme in Zambia and the challenges the project implementation is currently facing. The second set of open questions asks about the institutional arrangements that underlie the implementation of SS in Zambia in relation to the formal PPP framework and the role of certain governmental actors such as the Zambian Public-Private Partnership Unit (PPP Unit) in the implementation of the programme.

A second central basis of the analysis is data derived from reports issued by the Zambian Parliament as well as governmental agencies such as the Zambia Development Agency (ZDA).

3. Findings

3.1 *The implementation of “Scaling Solar” Round 1 in the context of the PPP framework in Zambia*

The definitions of PPPs, whether formulated by researchers or practitioners, vary with regard to the scope of what can be considered as a PPP, its content, and applicable services (Gardiner *et al.*, 2016; Grimseu and Lewis, 2016). The World Bank Group (2014) defines a PPP as a “long-term contract between a private party and a government agency, for providing a public asset or service, in which the private party bears significant risk and management responsibility” (p. 17). The Zambia Development Agency (ZDA) (2014) considers “any form of partnership between public authorities and the private sector for the construction, management and/or provision of an infrastructure or public service [...] a PPP”.

The Scaling Solar Programme was designed by the International Finance Corporation (IFC) on this basis and combines a number of services provided by The World Bank Group (2017) under a single point of contact. It aims to close critical energy infrastructure gaps in Zambia and increase the reliability and security of power supply in the country by providing a “one-stop-shop” solution for the government to implement privately funded, grid-connected, solar projects at competitive tariffs within two years. The three main components of the programme are a standardised tender process, developed templates of bankable project documents and provision of competitive finance and insurance options.

The first round of the Scaling Solar PPP is composed of two separate projects which, as a result of the tender process, have been estimated as having an installed capacity of 45 and 28 MW of solar PV power. The responsibility for development, financing, construction, operation, and maintenance of the solar PV power plants lies within a project company acting as a special purpose vehicle (SPV). The SPV is co-owned by the winning private sector company which holds 80 per cent of the shares and the public sector which in this case is the IDC. The IDC holds 20 per cent of the SPV shares and also managed the procurement process. The SPV acts as an independent power producer to the off-taker, which is the Zambia Electricity Supply Corporation Limited (ZESCO) through a 25-year power purchase agreement (PPA). ZESCO is a vertically integrated, state-owned enterprise (SOE) which is currently responsible for the generation of approximately 95 per cent of the electricity in the country, as well as the transmission and distribution of power in Zambia (Energy Regulation Board Zambia, 2015). In 2015, the ownership ZESCO was transferred to the IDC which acts as a shareholder of the SPV. This model of co-ownership of the project company establishes an “inter-relationship” between the shareholders of the SPV by incorporating the off-taker (IDC) into the project company. These kinds of interrelationships have been previously identified as posing a risk for a potential conflicts of interest (Delmon, 2009).

The first round of Scaling Solar in Zambia is currently facing challenges that have caused a current project delay of approximately 14 months as illustrated in Figure 1 and despite the conclusion of the PPAs in 2017, only one of the two projects has to date reached financial closure.

The PPP framework in Zambia is a recent concept which was legally formalised in the Public-Private Partnership Act in 2009. By July 2017, four different PPP projects, which differ



Notes: ^aFinancial close for project 1 was reported to be achieved in December 2017 with construction commencing in February 2018. The financial close for project 2 is still open (as of March 2018)

Sources: The World Bank Group (2017) and www.scalingsolar.org

Figure 1.
Scaling Solar:
estimated project
timeline and actual
project status Round
1, Zambia

by type and sector, had been set up under the PPP framework in Zambia (National Assembly of Zambia (NAZ), 2017) including the 120 MW Itezhi-Tezhi Hydropower Plant which was realised by ZESCO and the TATA Group of Companies and is considered to be the first PPP in the power sector in Zambia (African Development Bank Group, 2014). The implementation of the project was managed by a Project Implementation Unit which was composed of representatives from ZESCO and TATA (African Development Bank Group, 2012).

The PPP Act of 2009 institutionalised the PPP Unit and formally allocated the responsibility “for ensuring the proper implementation, management, enforcement and monitoring of any agreement and the reporting by a concessionaire on an agreement” to the PPP unit (Art.5, PPP Act, Zambia). The PPP Unit was initially attached to the Ministry of Finance but was not properly constituted, which resulted in the Unit having a limited capacity to successfully implement PPPs in Zambia (ZDA, 2014). In November 2013, the Zambian Cabinet approved a measure to subsume and institutionalise the PPP Unit functions into the ZDA in order to strengthen the Unit’s coordinating role among central stakeholders of PPP projects (ZDA, 2014). As these efforts did not yield in increased efficiency, at the end of 2015 the PPP Unit was officially moved to the State House where it underwent substantial restructuring. Since the end of 2016 it has been placed at the cabinet office (National Assembly of Zambia, 2016). In January 2017, the Zambian Government announced plans to establish the PPP Unit as a stand-alone statutory body in order to enhance the efficiency and independence of the body (Lusaka Times, 2017), and to overcome weaknesses in relation to stakeholder coordination. These have limited the Unit in asserting its role in more efficiently coordinating and promoting PPP projects in the country (NAZ, 2017).

The PPP Act of Zambia formally established a three-stage PPP implementation process. In the first stage, a PPP project proposal is formally subject to review by the PPP Unit which is meant to play an advisory and coordinating role. This is then followed by a second stage which is the formal submission of a project proposal to the PPP Technical Committee (PPPTech Committee) for evaluation. The role of the PPPTech Committee which is composed of senior government officials and technical experts is to primarily act as an advisory body in the PPP process (Axis Consulting, 2013). After the technical review and

PPP feasibility studies, the proposal is transferred to the PPP Council, the third body that is formalised in the 2009 PPP Act and one with the final authority to approve PPP project proposals and is chaired by the Ministry of Finance.

The review indicates, that despite the establishment of the PPP framework in 2009, this framework had not yet been fully utilised and the implementation process not completed. As a result, various stakeholders have criticised a lack of efficiency in implementing PPP projects in Zambia (ZDA, 2014; NAZ, 2017).

3.2 CSFs of Scaling Solar in Zambia

PPPs are perceived to bear a number of advantages described in the literature about risk-outsourcing potential from the public to the private sector and enhanced service delivery (Chou and Pramudawardhani, 2015) in an environment where public authorities can focus on their core competencies including policymaking, planning, and regulation (The World Bank Group, 2014). With regard to the role of PPPs in climate finance, Gardiner *et al.* (2016) identified three key drivers for PPPs: an enhanced “value for money” resulting from adequate risk allocation and sharing, “improved implementation and service delivery”, and “increased financial leverage”.

Taking these drivers into account, the Scaling Solar Programme, which is designed as a procurement programme for governments to catalyse private investments in their energy markets, incorporates the principle of suitable risk allocation and sharing, and also provides a number of financial and policy instruments. The central elements of these marketed advantages are a short project implementation timeline, a reduction in project development costs which are expected to result in low energy-tariffs, and enhanced leverage to deliver privately funded energy projects in order to strengthen energy security and provide clean energy according to the SDGs (IFC, 2017a, b).

Despite the potential advantages of a PPP for the implementation of infrastructure projects, they face a number of challenges which can lead to the delay or failure of the PPP projects. Despite the slow implementation, which has been an issue for many PPP infrastructure projects globally (Zhang and Asce, 2005), PPPs have encountered problems related to political instability (Ogunlana, 1997) or opposition by public stakeholders (Pahlman, 1996).

The question arises as to which reasons cause the current delay, and whether CSFs which have been identified by previous studies of PPPs are also relevant with regard to Round 1 of the Scaling Solar Programme in Zambia.

A common definition for CSFs that has been used in previous research (Liu *et al.*, 2015; Osei-Kyei and Chan, 2015; Chou and Pramudawardhani, 2015) has been presented by Rockart (1982) who defined CSFs as “the key areas of activity necessary to be focused to ensure competitive performance towards an organisation’s strategic goals” (Rockart, 1982, p. 4). CSFs can either be analysed with regard to the whole lifespan of a PPP project including its operational phase (Liu *et al.*, 2015; Zhang and Asce, 2005), the operational efficiency of a PPP project (Osei-Kyei *et al.*, 2017), or with a specific focus on the planning and implementation stage of a PPP project (Osei-Kyei and Chan, 2015). The specification of the research focus in this regard is central, since different CSFs have been identified in previous research for the various phases of a PPP project. To identify CSFs for the implementation of PPP projects, Osei-Kyei and Chan (2015) conducted a content analysis of the success factors for PPPs which included a comprehensive review of 27 single case studies, mainly focussed on Asia and Europe, presented in academic journals between 1990 and 2013. The comparison revealed a total of 57 CSFs for the implementation of PPP projects. The top 5 central CSFs which were identified by most studies are “(1) appropriate risk allocation and sharing, (2) strong private consortium, (3) political support, (4) community/public support and (5) transparent procurement” (Osei-Kyei and Chan, 2015, p. 1342).

The following analytical step focusses on the five main CSFs for the implementation of PPP projects identified through the previous case studies performed by Osei-Kyei and Chan (2015) and the question addressed was whether these factors affected the implementation stage of Scaling Solar in Zambia. In the second step, the discussion will focus on which factors caused the current delays with regard to the implementation of the Zambia programme, and how they relate to the country's institutional PPP framework.

3.2.1 Adequate risk allocation and sharing. The general importance of adequate risk sharing between public and private stakeholders can be considered as a main objective of PPPs and is a recurring topic in PPP-related research (e.g. Liu *et al.*, 2015; Chou and Pramudawardhani, 2015). It has consequently been identified by Osei-Kyei and Chan (2015) as a top CSF for PPP projects. Adequate risk allocation and sharing does not, however, mean the simple outsourcing of perceived project risks from the government stakeholders to the private sector. This would significantly increase the cost of capital of a project. It would also limit the preparedness of private stakeholders to participate in PPP projects, especially in the nascent PV energy markets of developing countries. Rather it is a comprehensive risk identification and allocation between the stakeholders (Zhang and Asce, 2005).

Eberhard *et al.* (2017) have illustrated that risk mitigation and credit enhancement are important factors influencing investment in energy projects in Sub-Saharan Africa. This is due to the long contract durations, the poor credit ratings of African countries, political instability, and administrative inefficiencies. This means that for a solar PV project which is based on a 25-year PPA, the financial risks of payment defaults due to illiquidity of the state-owned utility or political risks are substantial.

The Scaling Solar Programme seeks to mitigate these risks by providing a risk management and credit enhancement package composed of fully developed project agreements and credit-approved term sheets which allow bidders to access financing through the IFC investment operations, political risk insurance provided by the Multilateral Investment Guarantee Agency, and partial risk guarantees which are composed of payment and loan guarantees through the International Development Association (The World Bank Group, 2017). In this regard, the proportional risk allocation is shifted from the government to a third party: The World Bank Group in the Scaling Solar PPP.

3.2.2 Experienced and solid private sector participants. The CSF for the implementation stage of PPPs that was the second most identified in the studies reviewed by Osei-Kyei and Chan (2015) relates to the competency of the private sector company or a consortium which participates in the PPP. Due to the complexity of PPP infrastructure projects it is essential that the private sector partners combine managerial, technical, and operational capacity (Zhang and Asce, 2005).

The formal Request for Qualification (RFQ) process of the Scaling Solar Programme which has been applied in Zambia aims at ensuring the reliability and capacity of the private sector participants by setting technical, financial, and legal criteria which must be met by prospective bidders in order to qualify for the second round. According to the technical criteria, bidders must demonstrate substantial experience in developing, constructing, and operating PV power plants, and the financial criteria require prospective bidders to prove a substantial net worth of at least USD75 m, and a net worth to total assets ratio of at least 15 per cent (Industrial Development Corporation, 2015). In addition to this framework, potential bidders had to document that they met a number of legal criteria in regard to their management and shareholder structure. As a result of that tender process, the two projects of Round 1 were awarded to bidders with a substantial track record with over 1,000 MW (Neoen) and over 2,000 MW (Enel Green Power) installed RE capacity at competitive tariffs.

3.2.3 Political support. Political support for PPP projects has been identified as a third major CSF by Osei-Kyei and Chan (2015), and is directly linked to the political framework of

a given country. Political support relates to the general political acceptability of PPP projects (Hardcastle *et al.*, 2005), the approval for public expenditure (Jacobson and Choi, 2008) and support from political leaders which is especially important in emerging markets to attract private investors in participating in PPP tenders (Organisation for Economic Co-operation and Development, 2008). With regard to Zambia, the questions of institutional capacity to attract investors and to implement PPPs (ZDA, 2014) as well as direct political support can be considered as important elements of this third CSF.

The level of political support for the implementation of the Scaling Solar Initiative can mainly be deduced from two conditions. The first is the power of the presidential directive in Zambia (Prempeh, 2008), which preceded the launch of the Scaling Solar Programme in 2015, and the second lies within the structure of the procuring institution IDC which also implements the programme in Zambia. IDC is a SOE, of which 100 per cent of the shares are owned by the Ministry of Finance, and which is incorporated as a company limited by shares under the Companies Act. IDC manages a portfolio of 34 companies, including ZESCO. IDC is closely linked to the line ministries through the IDC board which comprises the Cabinet Ministers of Finance, Commerce Trade and Industry, and Agriculture, civil servants, the Secretary to the Treasury and Permanent Secretary for Commerce Trade and Industry and is chaired by the Zambian President. IDC is responsible for pre-feasibility studies, the management of the site allocation in co-operation with the ZDA, as well as the management of the whole tender process (The World Bank Group, 2017).

3.2.4 Public and community support. Number 4 in the ranking of the CSFs identified by Osei-Kyei and Chan (2015) relates to public and community support for the implementation of PPP projects as public opposition can delay PPP projects, for example, with regard to land acquisition (Osei-Kyei and Chan, 2015). The Scaling Solar Programme is aimed at promoting public and community support for the projects of Round 1 by facilitating meetings with local communities immediately affected by the implementation of the project, for example, by relocation measures, and broader public consultations. These consultations, which mainly revealed concerns with regard to community benefits of the project but no immediate opposition, resulted in a stakeholder engagement plan for those groups that are closely affected by the project and the commitment of the developer to establish a Community Development Plan to address residual social risks by providing community-level benefits (Neoen SAS, 2016).

3.2.5 Transparent procurement. A fifth major CSF for implementing PPP projects is the transparency of the procurement process, which provides traceability of outcomes of the selection process that can be achieved through openness and communication among stakeholders and the public (Liu *et al.*, 2005). A lack of transparency can result in public opposition towards the implementation of a project which, in turn, can cause delays (Osei-Kyei and Chan, 2015). The analysis of the procurement process during Round 1 of the Scaling Solar Programme in Zambia, which was a two-stage process, reveals a high degree of transparency. All relevant information including the selection criteria and the names of the pre-qualified bidders was published during the RFQ in Round 1. The second stage of the process entailed an RFP process and the selection of the winning bidders was based on an auction scheme. Accordingly, the two projects of Round 1 were awarded to the lowest bidders and their positioning among all competing bids of the process was published.

3.3 Public stakeholder alignment and institutional capacity – critical CSFs for scaling solar in Zambia

The discussion above shows that the design and approach of the Scaling Solar Programme could largely mitigate the five central most risks which were identified by studies with regard to the implementation of PPP projects, and thus questions appear as to why the project implementation in Round 1 is significantly delayed.

Being asked for the reasons of the current delay in terms of project implementation, among minor problems, respondents identified two major issues that have been significantly stalling the project:

- (1) The first are issues related to the project site (see Kruger *et al.*, 2018) which was chosen and allocated by the ZDA, such as geotechnical problems, ambiguity in terms of the land titles of the allocated site, or data inaccuracies.
- (2) A second major issue which caused delays of the project implementation is rooted in the regulatory energy framework in Zambia which did not fully account for utility scale solar PV projects, which, in turn, caused enhanced coordination efforts between government authorities, delays in the permitting process, and an increased risk perception of the developers which delayed the financial close.

On the question as to why these issues occurred, stakeholder interviews reveal that a major cause is a lack of governmental stakeholder alignment among those bodies, which facilitate the implementation of the programme in Zambia. This perception is also supported by the analysis of the implementation status of the PPP framework in Zambia. Some respondents issued the concern that the commitment of some governmental stakeholders in acknowledging the urgency of the implementation process was overlaid by the interest of maintaining the status quo which also caused frictions between certain Zambian agencies without alleging, however, that certain institutions would delay the process willingly. Related to the lack of early stage stakeholder alignment, a second cause for these issues is a limited understanding of the specific requirements of a utility scale PV project among a number of officials since these types of projects are novelty in the country.

The analysis has revealed that the major issues that caused the delay of the first round of Scaling Solar in Zambia are rooted in the complexity of such a PPP and the number of stakeholders involved (stakeholder alignment). They are also related to limitations in terms of institutional capacity among the public stakeholders in implementing the first large-scale solar PV projects due to a lack of understanding of the specific requirements that such a development imposes, for example, with respect to the project site, or specific regulatory issues. With this regard, public stakeholder alignment and institutional capacity and expertise can be considered as two important CSFs that critically impacted the implementation of the first solar PV PPP in Zambia (Figure 2).

4. Conclusion and implications for further research

By comparing the formal design of the PPP framework in Zambia and the implementation approach of Scaling Solar, Round 1, the analysis has revealed that the formal structure of the PPP framework has not yet fully been implemented and that Scaling Solar was largely set-up outside this formal structure which presumably caused a lack of public stakeholder alignment which, in turn, delayed the project implementation significantly. In relation to that, limitations in terms of governmental expertise and understanding of the specific requirements the implementation of a utility scale solar PV project entails have contributed to the significant delay of the project.

The analysis also illustrates that a high political prioritisation of a certain project and a centrally managed implementation process does not automatically create commitment and alignment among the central governmental stakeholders. This finding is aligned with the research of Smyth and Edkins (2007) who have emphasised the importance of relationship management for the implementation of PPP projects in the UK. The basic metrics of a “partnership” are trust and confidence among the stakeholders in their case the SPV and the public client. They demonstrated that SPV-public client relationships are often weak and dysfunctional and their study suggests that stakeholder relationship management, which increases trust and confidence among stakeholders, could improve

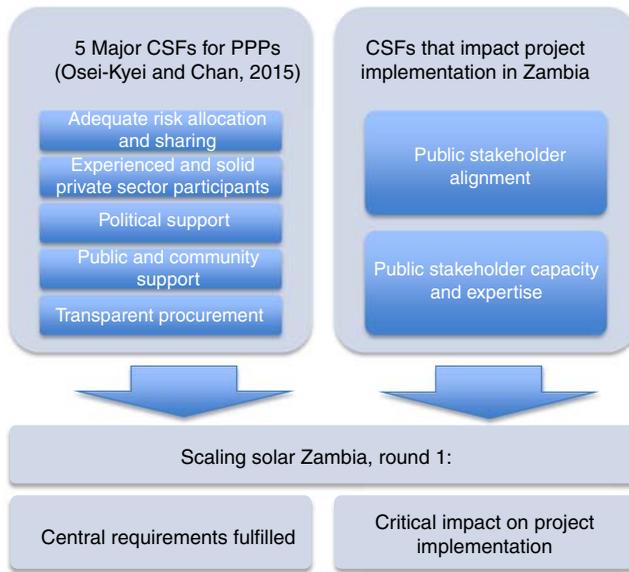


Figure 2.
Overview: results and impact of specific CSFs on the PPP project implementation in Zambia (Scaling Solar, Round 1)

government performance “through behavioural competencies and underpinning project management systems” (Smyth and Edkins, 2007). The analysis thus suggests that, apart from the structural design of a complex PPP such as Scaling Solar which largely focusses on financial and political risk mitigation as well as a quick, transparent, and efficient procurement process, the questions of adequate institutional frameworks and public stakeholder management as well as institutional capacity building are important CSFs at a pre-implementation stage in developing countries (see also Jamali, 2004) especially where utility scale solar PV is still new concept. Within a potential future conceptual analysis of suitable institutional frameworks by integrating stakeholder relationship management approaches it may be worth exploring whether a PPP policy framework which provides for an independent, horizontally integrated unit that performs a coordinating function among relevant stakeholders, and which is equipped with the capacity and the understanding of the requirements of complex RE projects, might facilitate the implementation of future PPP energy projects in Zambia and other developing countries. These considerations are in line with the observations of the Zambian Parliamentary Committee on Economic Affairs, Energy and Labour, which further emphasised the significance of efficient stakeholder coordination for the success of PPP projects in Zambia (NAZ, 2017).

This single case study implies that coordinated efforts to ensure stakeholder alignment, and a common understanding of the complex requirements of a PPP project which might require capacity-building measures among these stakeholders are important pre-implementation stage measures in nascent markets. The paper thus aims to stimulate a further discussion on the optimal design and implementation of institutional PPP frameworks (see Zhang *et al.*, 2015) in relation to stakeholder management approaches (e.g. Freeman, 2010) in the context of implementing PPP projects in developing countries which are currently strongly focussed on the projected outcome in relation to cost and time efficiency while less attention is given to the prior stakeholder arrangement which can have a decisive influence on the successful project implementation as the Zambian case illustrates.

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