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**TOWARDS A MODEL FOR PUBLIC PRIVATE PARTNERSHIP (P3) SUCCESS:
UNDERSTANDING THE CRITICAL SUCCESS FACTORS OF PUBLIC PRIVATE
PARTNERSHIPS (P3s) FOR LOCAL GOVERNMENT SERVICES AND
INFRASTRUCTURE DEVELOPMENT**

Abstract

This study focuses on the identification of factors that influence the success of Public Private Partnerships (P3) for local government services and infrastructure development. Public administrators from municipalities and counties in Florida will provide their perceptions of P3 critical success factors (CSF) identified from previous literature. Additionally, this paper introduces governmental agency entrepreneurial behaviors, such as innovativeness, proactiveness, effectual orientation, risk management, and mission orientation, as potential critical success factors which have been absent from previous P3 literature. Lastly, the study examines how external stakeholder influence from the government, private sector, and the end user moderates these success factors.

From the data collected, the study proposes a framework of the main success factors that influence the success of Public Private Partnerships (P3) while addressing research and managerial needs. Using this framework, local government agencies can assess future P3 opportunities and facilitate their decision making. The overarching goal of this model is to help improve local government agency P3 growth and success rates. In addition, theoretical arguments are made that government agencies that maintain a public entrepreneurial posture and understand the impact of the various stakeholders involved, influence the overall success of a P3.

Overall, the results will show that there are common economic, relationship, process/project management, and entrepreneurial orientation factors that influence P3 success. Additionally, this study will highlight the effect that stakeholders have on these factors. Furthermore, success building strategies will be outlined for managerial application.

I. Introduction

The challenges facing the public sector in the United States in the next fifty years are great. In public service areas ranging from public infrastructure (rated D+ by the American Society of Engineers with \$4 trillion in needs), affordable housing, transportation, environmental sustainability, education, healthcare, and parks, these challenges will come at a pace much faster than the government can handle on its own and taxpayers can financially support (“ASCE’s 2017 American Infrastructure Report Card | GPA,” 2017). These fiscal pressures will only increase as the aging baby boomer population living on fixed incomes continues to grow and millennials, the largest population in US history, face their own economic challenges resulting from student loans and increasing livability costs. Ultimately, while these challenges are on a national scale, the burden will heavily fall on state and local governments that own, maintain, and provide services for many of these economic and social infrastructure elements. With approximately 3 million people moving to cities every week, there is major pressure on their infrastructure, quality of life, health, and safety (Fishman & Flynn, 2019).

With these major challenges that lie ahead, states and cities are continuously considering alternatives for solutions to address these rapidly developing problems to deliver infrastructure projects and services efficiently while improving the quality of life for its citizens and limiting the direct fiscal impact to them. The reality is that implementation under a government sponsored funding model has been slow and the corresponding fiscal impact, both short and long term make it difficult for most states and cities. It is estimated that just 16 percent of cities can self-fund their needs in infrastructure (Fishman & Flynn, 2019).

One option, Public Private Partnerships (P3), are gaining popularity within states and cities. While it has been used as a procurement mechanism in the United States since the 1950s for infrastructure and urban renewal, it is currently experiencing a P3 renaissance period with over \$36 billion worth of projects saving taxpayers twenty (20) percent for most projects over the last decade (Coalition, 2018). Even with this recent renaissance, the US P3 market is developing slowly and remains relatively young in comparison to other countries around the world (Casady & Geddes 2016; McNichol 2013). On the other hand, the United Kingdom, has taken full advantage of P3s averaging over \$6 billion annually in capital investment compared to the U.S., an economy 6 times larger, is only at \$2.4 billion annually (PWC, 2016).

Some of the root causes for this unrealized potential for P3s have been found in their complex implementation and the lack of understanding of how to implement P3s successfully between stakeholders. Additional issues facing P3 implementation have been a lack of transparency in P3s, complex procurement, low P3 expertise amongst stakeholders, difficulties in cooperation amongst parties, equitable risk sharing, contracting challenges, insufficient private interest, and inflexible or no legislation. Overall, these problems have led local governments in the United States to shy away from the use of long term P3s (Martin, 2019; LA 2016).

From a business perspective, one way to address these implementation problems is to develop an understanding of what led to the success of the implementation of a P3 for future replication and decision making. There are many studies focusing on critical success factors in different country settings and applied to different infrastructure projects. However, there are no standard or universal empirically tested success models with groups of success factors that can be readily applied for local government or stakeholder use to evaluate P3s. Every government entity has a different approach of how to evaluate implementation (La 2016, Hardcastle, Edwards, Akintoye & Li 2005, Ward & Sussman, 2005).

As such, this study proposes to address these problems through the development of a theoretical model that seeks to understand and group the critical success factors (CSF) of P3s. This model will be developed utilizing success factors adopted from existing literature. In addition, factors of social entrepreneurial orientation (Dwevdi & Weewardena, 2019) and stakeholder influence (Li et al., 2018) will be introduced. These additional factors will gauge perceptions of public sector entrepreneurial behaviors on P3 success and provide an understanding of how stakeholder influence moderates these success factors with a goal of providing a model that can help local government agencies improve their P3 implementation rates.

Specifically, we will seek to answer the following research question: **What are the factors that influence the success of a Public-Private Partnership (P3) for local government services and infrastructure development?** Answering this question will allow for the development of a model that will support government project teams, enable them to transparently select a P3 versus a traditional procurement process, and to prepare P3 projects efficiently in early stages of development (La, 2016).

II. Literature Review.

Public-Private Partnerships Research: An Overview

Over the past 40 years, P3s have received much attention from researchers worldwide from various disciplines and fields ranging from economics, public administration, and management. In the areas of economic and management, much of the focus has been on the specific actions behind P3s such as bidding and operations. Specifically, in economics, the focus has been on the economic efficiencies with bundling services in lieu of how each step of the P3 process is completed by a single partner (Ross & Yan, 2015).

Another discipline with a large focus on P3s has been in construction and engineering where studies completed by Al-Sharif and Kaka (2004) and Ke et al. (2009) looked at P3 research trends and highlights research gaps over a ten-year period beginning in 1998. In their reviews, the issue of application and acceptance of P3s across a country context was evident with researchers reviewing a variety of implementation models. Tang et al.'s (2010) study reviewed studies performed over a ten-year period from 1998 to 2007 and took a comparative approach into research findings separating empirical and non-empirical studies. Recently, Wang et al. (2018) completed a systematic literature review from a Public Administration (PA) perspective following an evolution of P3 literature from 1983 through 2016. Their paper identified several themes and the main contributions of P3s across PA literature. Across these studies, their general findings have some similarities.

As the focus of this study, understanding what influences the success of a P3 is a specific area that has garnered attention by previous researchers. Warsen et al. (2018) sought to understand what makes P3s work analyzing the influence of trust and managerial effort on the perceived performance of them in a Dutch context. They found that both factors are important for the performance and cooperation between partners of the project. However, the specific elements of what makes these factors effective, such as the management and trust building strategies are absent from their findings and provide for opportunities with this study to extend their research further to develop a framework that can be applied for managerial use. In addition, examining these factors in a different country/state context can add validity to their findings while allowing for the integration of other relevant success factors found from previous research.

All the studies found that developed countries produce the most publications with the United Kingdom generating the most followed by the United States. General themes in P3

literature cover risk management, financing, governance, procurement, drivers for adoption, success factors, and performance evaluation. However, the main driver for this study was outlined in Hodge and Greve's (2007) international performance review of P3s. The authors found that there was minimal independent evaluation being conducted on these projects and that more careful assessments were needed to ensure that governments maintain their effectiveness and relationships with the stakeholders involved. The goal should be to reduce the uncertainty around P3s and help ensure that these long-term arrangements are successful.

For purposes of this study, a review of these studies provided a starting point and framework to review publications over a period from 1998 and 2020 for critical success factors (CSF) for this literature review. During this review, the Seghal and Dubey (2019), La (2016) and Li (2003) papers were identified that would provide the basis for the framework that would identify the P3 success factors that will be applied and tested for this study.

The Emergence of P3s: Theory behind the Practice

Various theories have been applied to support the creation and emergence of P3s. Literature shows that generally three different approaches are taken when developing theoretical frameworks to discuss P3s. The first is viewed from an economics perspective. Transaction cost economics, property rights and principal-agent theories are applied to analyze P3s from an optimal performance, contractual, and cost perspective. Second, it is viewed from a public policy lens. Governance theories such as public choice and New Public Management (NPM) are utilized to review the cooperation between public and private entities. Klein et al. (2010) proposed that a theory of public entrepreneurship can be established through empirical study. With their public/private interaction, P3s are prime opportunities to measure public entrepreneurial activity in which Klein, et al.'s (2010) framework can be applied in construct development for further theoretical development. This study proposes that research on entrepreneurial behaviors within partnerships provides empirical depth to Klein's theory. Lastly, stakeholder and institutional theories take an organizational management view on P3s ensuring stakeholders receive equitable benefits and look at P3s needing legitimacy as a process at an institutional level (Wang et. al, 2018).

From Theory to Model: Developing a P3 Success Framework

With theory supporting the emergence of P3s as a viable procurement mechanism, this study seeks to understand what are the critical success factors that lead to implementation of this

practice. Li (2003) developed an implementation model which considered the principal factors to consider in the first stage of the P3 process. According to Li, identifying these factors will help in the development of evaluation and appraisal models to fully evaluate P3s for decision making purposes in a transparent way. The factors considered by Li are the reasons for P3 adoption; attractive and negative factors of adoption; critical success factors of P3 projects; value for money (VfM) drivers of P3 projects; and attractions for the private sector involvement of P3 projects. Various studies have been utilized to study these factors in a country context. Most have focused on evaluating factors individually and not into theoretical groups as proposed in this study for a model in a country context. La's 2016 study applied Li's complete model to evaluate all these principal factors leading to P3 implementation in Vietnam.

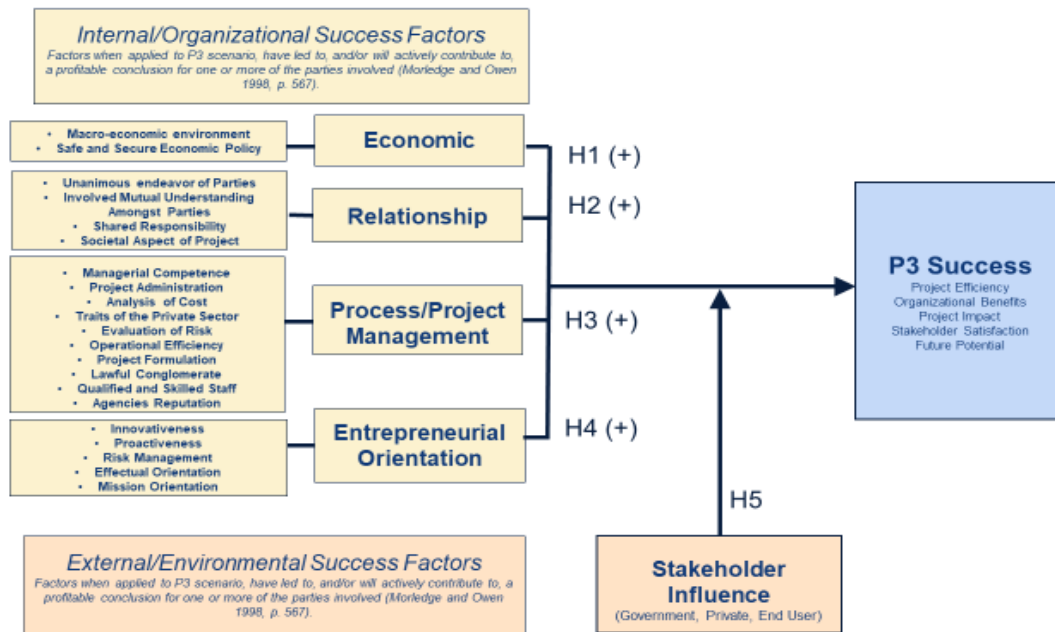
Both the Li (2003) and La (2016) studies provide a conceptual framework for this study that is supported by substantive literature. However, studies utilizing this framework are limited in a United States context as proposed for this study. This provides an opportunity to extend application of their framework further with an empirical evaluation of the critical success factors in a US context and make a unique contribution to literature by developing a P3 success framework that outlines and groups the factors that will increase the probability that a P3 project will be successful. For purposes of the study, CSFs are defined as the few factors when applied to P3 scenario, have led to, and/or will actively contribute to, a profitable conclusion for one or more of the parties involved (Morledge & Owen, 1998, p. 567). From a project management perspective, critical success factors assess the organizational or managerial factors that lead to success or failure and examine the reasons behind them (Santos et. al., 2019).

Several studies have reviewed CSF's in P3s in a country context. Starting from Li (2005) who studied 18 factors in a United Kingdom context and adopted by Cheung, Chan and Kajewski (2012) in Hong Kong and Australia and compared them to the British context; Cheung, Chan, Lam, Chan and Ke (2012) in Hong Kong and China; Chou et al. (2012) in Taiwan; Olusola Babatunde et al. (2012) in Nigeria; Ismail (2013a) in Malaysia and Indonesia. Kahwajian, Baba, Amudi and Wanos (2014), Alinaitwe and Ayesiga (2013), Hwang et al. (2013), Chou and Pramudawardhani (2015), Li (2016) examined newly created lists of CSFs in Syria, Uganda, Singapore, Indonesia, and Vietnam, respectively. Most recently, Sehgal and Dubey's (2019) study of P3 CSFs in India will be applied for the CSFs to be examined for this study.

In addition, we will seek to build upon these proposed success factors by introducing entrepreneurial orientation and behaviors such as innovativeness, proactiveness, effectual orientation, risk management, and mission orientation as a success factors that have not been traditionally considered in P3 CSF literature (Dwivedi & Weerawardena, 2018; Li et al., 2018). Also, the model will add stakeholder influence from the government, private sector, and end users as a moderator of these success factors.

III. Research Model and Hypotheses.

The proposed model was developed utilizing factors and measures adopted from the following studies: Sehgal and Dubey’s (2019) study of critical success factors of P3s, Dwivedi and Weerawardena’s (2018) study of social entrepreneurship, Li et al.’s (2018) study on quantifying stakeholder influence, and Santos et al.’s (2019) study on factors influencing project success.



This study will build on these studies in five ways: (1) evaluate existing CSFs from literature and group them into categories in a US state setting (2) evaluate whether entrepreneurial behaviors by government agencies contribute to P3 success, (3) determine the effect of stakeholder influence on P3 success factors, (4) propose a decision making framework that will enhance the probability of success for P3 project and (5) assess the impact of each of these factors within the model on P3 success.

The dependent variable for this study will be P3 success. For purposes of this study, P3 success is defined as short-term project management success (efficiency) as well as achievement of the long-term goals of the project (effectiveness) (Serrador & Turner, 2015). Traditionally, the success of a project is related to project goal achievement with time, cost, and quality being the predominant goals. However, project success should be viewed from a multidimensional perspective considering the traditional perspective and weave in stakeholder perspectives and the firm's project processes (Rodriguez-Segura, 2016).

Taking this into account, P3 success will be measured by applying Shenhar and Dvir's (2007) diamond model. This multidimension model accounts for both the traditional dimensions of project success as recognized in project management literature such as efficiency, cost, and time and dimensions incorporating the company's strategic objectives. The specific measures that will comprise project success will be project efficiency, organizational benefits, project impact, stakeholder satisfaction, and future potential.

A universal definition of what makes a P3 successful is difficult to establish as classifying what success is to a project may vary from project to project and from partner to partner. However, understanding what leads to success is critical to the continued growth and use of P3s by governments and their partners. Understanding that P3s involve a complex process where its main objective is to obtain a balance between the public and private sector for efficiency purposes for the success of the project, CSFs overall should positively contribute to achieving that balance (Wang, 2015). Twenty-one (21) CSFs will be grouped into categories and assessed to understand their effect on P3 success in Florida. Florida, 21.8 million pop., is unique in that it is well-positioned to compete for private investment in infrastructure using P3s. Florida has P3 enabling legislation, Florida Statute 334.30. Florida's P3 legislation is broad and includes local governments. The State is one of only four states with significant P3 experience. In a twenty-year period from 1996-2016, the state closed 28 P3 projects, third most to Texas and California, respectively (Institute, 2018).

These CSFs have been grouped into four (4) categories by type: economic, relationship, process/project management, and entrepreneurial orientation for data comparison and analysis purposes. The moderator will be a construct of stakeholder influence and consist of three (3) stakeholders, the government, private sector/owner, and the end user.

The model categories and their respective hypotheses are defined as follows:

Economic CSFs. Why do governments adopt P3s? Predominant reasons are mainly economic. Public infrastructure requires large capital investment to satisfy ongoing demand and to address needs. However, most government entities are unable to support all their capital investment needs on their own without incurring large debt obligations. P3s help reducing this burden by shifting the investment to the private sector while creating business for them. (Li, 2003; La, 2016). For the success of a P3 project, both partners need to evaluate the economic conditions in which they are operating in both externally and internally and how it affects them as an organization entering a P3. As such, these conditions affect the transactions costs involved in the project and the decision whether to enter a P3 arrangement. Having stable economic conditions facilitate the P3 process and project delivery. Seghal and Dubey (2019) found that the economic success factors of having a favorable macroeconomic environment and safe and secure economic policy enhanced the success of P3s. ***H1: Evaluating economic critical success factors will positively influence the success of a P3.***

Relationship CSFs. P3s require a strong, cooperative relationship between the parties involved. In applying stakeholder theory, the parties play a key role in P3s and are defined as any individual or organization who may impact, or be impacted, in a positive or negative manner through a project's lifespan (PMI, 2008). The public and private sectors are stakeholders that play an important role in the success of P3s. It should be a committed relationship with shared responsibility between the parties and a mutual understanding working towards the same goals. These goals should aim towards providing a positive social impact to the public (Seghal & Dubey, 2019). ***H2: Evaluating relationship based critical success factors will positively influence the success of a P3.***

Process/Project Management CSFs. The implementation of a P3 is a complex process and requires capable project management for its construction and operations to ensure success. It can ensure lower transaction costs and allocate resources efficiently. Seghal and Dubey (2019), highlighted managerial competence, which is people and task oriented with efficient leadership resulting in positive organizational results, as the most significant factor in this study of P3 CSFs. Their study also found that the project formulation process which requires a full study of

the project prior to implementation and the project administration process involving the coordination between parties and project elements is also essential to P3 success.

Other important factors highlighted by Seghal and Dubey (2019), were analyzing costs in each project phase, understanding the traits of the private sector and its uniqueness, properly evaluating the all of the risks involved in the project, ensuring operational efficiency to deliver a high quality project and services to end users, and having a lawful conglomerate that ensures the legality of the arrangement. Additionally, a qualified and skilled staff from both parties and the reputation of the agencies also influence project success. ***H3: Evaluating process/project management critical success factors will positively influence the success of a P3.***

Entrepreneurial Orientation. Klein, et al. (2010), presented a framework for analyzing public entrepreneurship behaviors in relationship to private entrepreneurship. While there are some similarities between the two, there are differences in definitions and objectives, environmental selection, and the goals for economic gains. Through analysis under this framework, a theory of public entrepreneurship can be established. However, there has been limited attention and efforts to operationalize and quantitatively test the framework.

Dwivedi and Weerawardeena (2018) proposed a social entrepreneurship construct with behavioral measures with the goal of describing the organizational behaviors of social purpose organizations in their strategic decision making. Social entrepreneurship differs from commercial organizations as they operate in uncertain conditions, are resource constrained, compete for funding, and their mission guides their strategic postures to provide social value (Dwivedi & Weerawardeena, 2018). In applying effectuation theory, Dwivedi and Weerawardeena (2018) outlines that effectuation can support social entrepreneurial behaviors as it allows entrepreneurs to maximize resources such as abilities, expertise and networks in resource constrained environment. It can be argued that government agencies have similar objectives as social organizations as they strive to provide public value in resource constrained environments. Hence, application of Dwivedi and Weerawardeena's (2018) construct in a government context may provide insights into public entrepreneurial behaviors in a P3 context. Moreover, understanding whether these behaviors impacted the success of a P3 project, may assist government agencies looking to pursue a P3 to build public entrepreneurial capability internally. These implications cut across many areas within the government service sector and

may further extend Klein, et al. (2010) theoretical framework to incorporate entrepreneurial orientation of the agency.

The behaviors and their definitions that will be applied to this study as outlined in Dwivedi and Weerawardeena (2018) are: innovativeness, the development and promotion of new ideas and solutions to issues that are different than typical norms; proactiveness, the active review of the environment both internally and externally to account and prepare for future uncertainties; risk management, the ability to recognize and take reasonable risks and promote planning prior to risk taking; effectual orientation, an agency behavior of managing resource constraints to obtain an optimum solution; and lastly, mission orientation, the agency's dedication to its public mission.

With their public/private interaction, P3s are prime opportunities to measure public entrepreneurial activity in which Dwivedi and Weerawardeena's (2018) framework can be applied in construct development for further theoretical development. Klein, et al. (2010) proposed that research on entrepreneurial behaviors within partnerships clarifies public entrepreneurship. Specifically, "firm-government interactions are where much of the action of contemporary exchange resides, and thus, a nuanced and sophisticated theory of public entrepreneurship will increase both the theoretical rigor and practical relevance of our management discipline" (Klein et al., 2010). This study proposes that each of these behaviors can influence the success of P3 project. ***H4: A local government that has an entrepreneurial orientation will positively influence the success of a P3.***

Stakeholder Influence. As mentioned previously, stakeholders play a key role in P3s and are defined as any individual or organization who may impact, or be impacted, in a positive or negative manner through a project's lifespan (PMI, 2008). In P3s, there are various internal and external stakeholder groups ranging from government, the private sector, and the end user that may have an influence on the project (Takim, 2009). Stakeholder influence levels on the decision-making process of projects, which include the assessment of critical success factors, need to balance the interests of these groups to ensure seamless project completion (Li et. al, 2018). Based on this, understanding the moderating effect of stakeholder influence on P3 success factors can help government agencies properly manage and measure the influence of

different stakeholders on critical success factors when determining whether prospective P3 will be successful.

To measure stakeholder influence, Li et al.'s (2018) study quantifying stakeholder influence on sustainable construction in China proposes a factor of stakeholder influence. This factor is measured in two ways through a value of stakeholder attributes (power, legitimacy, and urgency) and an index of stakeholder vested interest in a project (vested interest level and influence impact level). This study will apply these measures to three separate groups that influence P3 projects: the government entity, the private owner, and the end user. ***H5: The impact of the proposed critical success factors on P3 success is moderated by stakeholder influence.***

IV. Methodology.

To obtain a holistic view of P3 success factors in the Florida, this assessment will be conducted using a quantitative, deductive approach using a cross-sectional questionnaire survey. The study uses a post-positivist perspective that supports the use of quantitative experiments or survey research to assess and explain relationships among variables (Tashakkori & Teddlie, 2009).

A cross-sectional survey tool in a Likert scale format with the option to add qualitative comments will be utilized. This method allows for the collection of data at one point in time and increases validity and generalizability of results (Yin, 2009). An informed consent will be provided to the participants at the commencement of the survey. To establish validity for the survey questionnaire, the questions and scale items are derived from La (2016) and Li (2003) and used by Cheung et al. (2009), Cheung (2009), Cheung et al. (2009), Cheung, Chan, Lam, Chan and Ke (2012), Ismail (2013), and Seghal and Dubey (2019) for critical success items (economic, relationship, and process/project administration); Li et al. (2018) for stakeholder influence items; Dos Santos et al. (2019) for project success items; and Dwevdi and Weerandeen (2019) for entrepreneurial orientation items. Questions and items will be tailored to the proposed research topic.

For further content and face validity, a copy of the survey was sent to fifteen (15) individuals (city employees and doctoral students) for an informed pilot. Feedback was provided on the wording of certain questions, grammar, format, and the overall survey experience. Changes were made to the survey tool based on this feedback. Thereafter, a formal pilot test of

the survey will be conducted with thirty (30) city and county parks directors for review of wording and format, assess inter-rater reliability, and any revisions that will need to be made for content. Recommendations from Podsakoff and Organ (1986) to minimize common method biases, such as avoiding identifying a respondents most successful project, instead the questionnaire asks to select one P3 project completed. Also, the informed consent provides for confirmed anonymity.

The final questionnaire design will consist of two (2) parts. Part one (1) will collect municipal information, survey respondent organizational position, and will ask whether the agency has implemented a P3. Agencies will continue the survey and provide information on P3 types, quantities, reasons for implementation, and an evaluation of one (1) P3 project using the P3 success factors that will be assessed using a five-point Likert scale format. A narrative will also be collected on their overall P3 experience.

Part 2 of the survey will collect the data to evaluate the P3 critical success factors using a five-point Likert scale. Stakeholder influence will be evaluated for each stakeholder group (government, private sector/owner, and end user) using a five-point Likert scale that will rank attributes of their influence. Additional data will be collected for overall perceptions of P3s for descriptive data, success strategy development and future research using a five-point Likert scale format. These scales will provide the numeric data to examine factor importance.

The final survey will be web-based using the Qualtrics survey web platform and distributed via email with a weblink to the survey sent to a convenience sample of participants from all Counties (67) and municipalities (412) in the Florida. An email database of municipal representatives will be developed for survey distribution in a Microsoft Excel format from publicly available email address information on city websites that will include the chief elected/appointed officer of each entity, such as city council members and city managers. The survey will initially have a fourteen (14) day response window which will be extended for up to sixty (60) days to ensure that a maximum number of complete responses are captured. Individualized follow up emails will be sent to non-respondents during this period.

In addition to the survey, descriptive information regarding region in Florida, population size, form of government (Council- Manager/CAO, Council-Weak Mayor, Council-Strong Mayor), county type, and incorporation date of the responding municipalities will be collected to assess groups, for comparison purposes, and for future extensions of this study.

V. References

- Alinaitwe, H. and Ayesiga, R. (2013), 'Success Factors for the Implementation of Public- Private Partnerships in the Construction Industry in Uganda', *Journal of Construction in Developing Countries* **18**(2), 1–14.
- Al-Sharif, F. and Kaka, A. (2004), PFI/PPP topic coverage in construction journals, in 'Proc., 20th Annual ARCOM Conference', Vol. 1, pp. 711–719.
- (n.d.). ASCE's 2017 American Infrastructure Report Card | GPA: D+. Retrieved April 2, 2020, from <https://www.infrastructurereportcard.org/>.
- Casady, C. B., Eriksson, K., Levitt, R. E., & Scott, W. R. (2018). *Examining the State of Public-Private Partnership (P3) Institutionalization in the United States*. 8, 23.
- Casady, C. B., Eriksson, K., Levitt, R. E., & Scott, W. R. (2019). (Re)defining public-private partnerships (P3s) in the new public governance (NPG) paradigm: an institutional maturity perspective. *Public Management Review*, 1–23. <https://doi.org/10.1080/14719037.2019.1577909>
- Casady, C., & Geddes, R. (2016). Private Participation in US Infrastructure: The Role of PPP Units. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3306259>
- Chan, D. W., Chan, A. P. and Lam, P. T. (2006), A feasibility study of the implementation of Public-Private Partnership (PPP) in Hong Kong, in 'Proceedings of the CIB W89 International Conference on building Education and Research', British Columbia Government, pp. 10–13.
- Cheung, E., Chan, A. and Kajewski, S. (2010), 'Suitability of procuring large public works by PPP in Hong Kong', *Engineering, Construction and Architectural Management* **17**(3), 292–308.
- Cheung, E., Chan, A. P. and Kajewski, S. (2009a), 'Enhancing value for money in Public- Private Partnership projects: Findings from a survey conducted in Hong Kong and Australia compared to findings from previous research in the UK', *Journal of Financial Management of Property and Construction* **14**(1), 7–20.
- Cheung, E., Chan, A. P. and Kajewski, S. (2009b), 'Reasons for implementing Public- Private Partnership projects: Perspectives from Hong Kong, Australian and British practitioners', *Journal of Property Investment & Finance* **27**(1), 81–95.
- Cheung, E., Chan, A. P. and Kajewski, S. (2012), 'Factors contributing to successful Public Private Partnership projects: Comparing Hong Kong with Australia and the United Kingdom', *Journal of Facilities Management* **10**(1), 45–58.

- Cheung, E., Chan, A. P., Lam, P. T., Chan, D. W. and Ke, Y. (2012), 'A comparative study of critical success factors for Public-Private Partnerships (PPPs) between Mainland China and the Hong Kong Special Administrative Region', *Facilities* 30(13/14), 647–666.
- Chou, J.-S., Ping Tserng, H., Lin, C. and Yeh, C.-P. (2012), 'Critical factors and risk allocation for PPP policy: Comparison between HSR and general infrastructure projects', *Transport Policy* 22, 36–48.
- Chou, J.-S. and Pramudawardhani, D. (2015), 'Cross-country comparisons of key drivers, critical success factors and risk allocation for Public-Private Partnership projects', *International Journal of Project Management* 33(5), 1136–1150.
- Coalition, T. P. B. B. (2018). Mayors and governors urge congress to pass legislation expanding Public-Private Partnerships (P3s) for public buildings. Retrieved August 4, 2019, from <https://www.prnewswire.com/news-releases/mayors-and-governors-urge-congress-to-pass-legislation-expanding-public-private-partnerships-p3s-for-public-buildings-300607139.html>
- Deloitte (2013), Funding the infrastructure investment gap, Discussion report, Deloitte Touche Tohmatsu India Private Limited.
- Did You Know that Florida's Population Could Increase to Nearly 26 Million by 2030? – Florida Chamber of Commerce. (n.d.). Retrieved August 13, 2019, from <https://www.flchamber.com/did-you-know-that-floridas-population-could-increase-to-nearly-26-million-by-2030/>
- Duffield, C. and Raisbeck, P. (2007), Performance of PPPs and Traditional Procurement in Australia, Discussion report, Infrastructure Partnerships Australia.
- Dwivedi, A., & Weerawardena, J. (2018). Conceptualizing and operationalizing the social entrepreneurship construct. *Journal of Business Research*, 86, 32-40.
- EIB (2012), 'The guide to guidance: How to prepare, procure and deliver PPP projects', European Investment Bank (EIB), Luxembourg, Belgium.
- Field, J., & Peck, E. (2004). Concordat or contract: Factors facilitating or impeding the development of public/private partnerships in healthcare in England. *Public Management Review*, 6(2), 253–272. <https://doi.org/10.1080/1471903042000189128>
- Fishman, T. & Flynn, M. (2018). *Using public-private partnerships to advance smart cities Part two: Funding and financing smart cities series*. Retrieved from Deloitte Website: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/Public-Sector/gx-ps-public-private-partnerships-smart-cities-funding-finance.pdf>

- Hardcastle, C., Edwards, P., Akintoye, A. and Li, B. (2005), 'Critical success factors for PPP/PFI projects in the UK construction industry: A factor analysis approach', *Construction Management and Economics* 23(5), 459–471.
- Hodge, G. A., & Greve, C. (2007). Public–private partnerships: an international performance review. *Public administration review*, 67(3), 545-558.
- Hwang, B.-G., Zhao, X. and Gay, M. J. S. (2013), 'Public-Private Partnership projects in Singapore: Factors, critical risks and preferred risk allocation from the perspective of contractors', *International Journal of Project Management* 31(3), 424–433.
- Institute, T. J. M. (2018, October 2). Florida is Well-Positioned to Compete for Federal and Private Infrastructure Financing. Retrieved May 2, 2019, from James Madison Institute website: <https://www.jamesmadison.org/florida-is-well-positioned-to-compete-for-federal-and-private-infrastructure-financing/>
- Ismail, S. (2013a), 'Critical success factors of public private partnership (PPP) implementation in Malaysia', *Asia-Pacific Journal of Business Administration* 5(1), 6–19.
- Ismail, S. (2013b), 'Drivers of value for money Public-Private Partnership projects in Malaysia', *Asian Review of Accounting* 21(3), 241–256.
- Ismail, S. (2013c), 'Factors attracting the use of public private partnership in Malaysia', *Journal of Construction in Developing Countries* 18(1), 95–108.
- Ismail, S. (2014), 'Driving forces for implementation of public private partnerships (PPP) in Malaysia and a comparison with the United Kingdom', *Journal of Economic and Administrative Sciences* 30(2), 82–95.
- Ismail, S. and Azzahra Haris, F. (2014), 'Constraints in implementing Public Private Partnership (PPP) in Malaysia', *Built Environment Project and Asset Management* 4(3), 238– 250.
- Ke, Y., Wang, S., Chan, A. P. and Cheung, E. (2009), 'Research trend of Public-Private Partnership in construction journals', *Journal of Construction Engineering and Management* 135(10), 1076–1086.
- Klein, P. G., Mahoney, J. T., McGahan, A. M., & Pitelis, C. N. (2010). Toward a theory of public entrepreneurship. *European management review*, 7(1), 1-15.
- Kwak, Y. H., Chih, Y. and Ibbs, C. W. (2009), 'Towards a comprehensive understanding of Public-Private Partnerships for infrastructure development', *California Management Review* 51(2), 51–78.

- La, A. T. (2016). *Principal factors for Public-private partnership (PPP) implementation in Vietnam: A mixed methods study*. 322.
- Li, B. (2003), Risk management of construction Public-Private Partnership projects, Published PhD thesis, School of the Built and Natural Environment, Glasgow Caledonian University, Glasgow, Scotland.
- Li, B., Akintoye, A., Edwards, P. and Hardcastle, C. (2005a), 'Perceptions of positive and negative factors influencing the attractiveness of P3/PFI procurement for construction projects in the UK: 'survey'', *Engineering, Construction and Architectural Management* 12(2), 125–148.
- Li, B., Akintoye, A., Edwards, P. J. and Hardcastle, C. (2005b), 'Critical success factors for P3/PFI projects in the UK construction industry', *Construction management and economics* 23(5), 459–471.
- Li, H., Zhang, X., Ng, S. T., & Skitmore, M. (2018). Quantifying stakeholder influence in decision/evaluations relating to sustainable construction in China—A Delphi approach. *Journal of cleaner production*, 173, 160-170.
- Li, J. and Zou, P. (2011), 'Fuzzy AHP-based risk assessment methodology for P3 projects', *Journal of Construction Engineering and Management* 137(12), 1205–1209.
- Martin, L. L. (2019). State public-private partnership (P3) legislation and P3 project implementation: An exploratory investigation. *Journal of Public Procurement*, 19(1), 55–67.
<https://doi.org/10.1108/JOPP-03-2019-025>
- McNichol, D., & Fund, S. A. I. (2013). The United States: The World's Largest Emerging P3 Market. Star America Infrastructure Fund and AIG.
- Morledge, R. and Owen, K. (1998), Critical success factors in PFI projects, *in* 'Proceedings of the 14th ARCOM Annual Conference, University of Reading', pp. 565–574.
- Ng, S. & Wong, James & Wong, Kelwin. (2013). A public private people partnerships (P4) process framework for infrastructure development in Hong Kong. *Cities*. 31. 370–381.
 10.1016/j.cities.2012.12.002.
- Ng, S. T., Wong, Y. M., & Wong, J. M. (2010). A structural equation model of feasibility evaluation and project success for public–private partnerships in Hong Kong. *IEEE Transactions on Engineering Management*, 57(2), 310-322.

- Olusola Babatunde, S., Opawole, A. and Emmanuel Akinsiku, O. (2012), 'Critical success factors in Public-Private Partnership (PPP) on infrastructure delivery in Nigeria', *Journal of Facilities Management* **10**(3), 212–225.
- Osei-Kyei, R., & Chan, A. P. (2015). Review of studies on the Critical Success Factors for Public–Private Partnership (PPP) projects from 1990 to 2013. *International journal of project management*, 33(6), 1335-1346.
- Parker, D. W., Dressel, U., Chevers, D., & Zeppetella, L. (2018). Agency theory perspective on public-private-partnerships: international development project. *International Journal of Productivity and Performance Management*, 67(2), 239–259. <https://doi.org/10.1108/IJPPM-09-2016-0191>
- Pmi, A. (2008). guide to the Project Management Body of Knowledge. In Project Management Institute.
- Podsakoff, P.M., Organ, D., 1986. Self-reports in organizational research: problems and prospects. *J. Manag.* 12 (4), 531–544.
- PWC. (2016). *Public-private partnerships in the US: The state of the market and the road ahead*. Retrieved from PWC Website: <https://www.pwc.com/us/en/industries/capital-projects-infrastructure/library/public-private-partnerships.html>
- Rodriguez-Segura, E., Ortiz-Marcos, I., Romero, J. J., & Tafur-Segura, J. (2016). Critical success factors in large projects in the aerospace and defense sectors. *Journal of Business Research*, 69(11), 5419-5425.
- Ross, T. W., & Yan, J. (2015). Comparing public–private partnerships and traditional public procurement: Efficiency vs. flexibility. *Journal of Comparative Policy Analysis: Research and Practice*, 17(5), 448-466.
- Santos, I. A. M. D., Barriga, G. D. C., Jugend, D., & Cauchick-Miguel, P. A. (2019). Organizational factors influencing project success: an assessment in the automotive industry. *Production*, 29.
- Sehgal, R., & Dubey, A. M. (2019). Identification of critical success factors for public–private partnership projects. *Journal of Public Affairs*, 19(4), e1956.
- Serrador, P., & Turner, R. (2015). The relationship between project success and project efficiency. *Project management journal*, 46(1), 30-39.
- Shenhar, A. J., & Dvir, D. (2007). *Reinventing project management: the diamond approach to successful growth and innovation*. Harvard Business Review Press.

- Shi, S., Chong, H. Y., Liu, L., & Ye, X. (2016). Examining the interrelationship among critical success factors of public private partnership infrastructure projects. *Sustainability*, 8(12), 1313.
- Tashakkori, A., Teddlie, C., 2009. *Foundations of Mixed Methods Research. Integrating Quantitative and Qualitative*. SAGE Publications Inc., USA, Thousand Oaks, CA.
- Takim, R. (2009). The management of stakeholders' needs and expectations in the development of construction project in Malaysia. *Modern Applied Science*, 3(5), 167-175.
- Tang, L., Shen, Q. and Cheng, E. W. L. (2010), 'A review of studies on Public-Private Partnership projects in the construction industry', *International Journal of Project Management* 28(7), 683–694.
- Unido (1996), 'Guidelines for infrastructure development through BOT projects', United Nations Industrial Development Organization, Vienna.
- Wang, Y. (2015). Evolution of public–private partnership models in American toll road development: Learning based on public institutions' risk management. *International Journal of Project Management*, 33(3), 684–696. <https://doi.org/10.1016/j.ijproman.2014.10.006>
- Wang, Y., & Zhao, Z. J. (2018). Performance of Public–Private Partnerships and the Influence of Contractual Arrangements. *Public Performance & Management Review*, 41(1), 177–200. <https://doi.org/10.1080/15309576.2017.1400989>
- Wang, H., Xiong, W., Wu, G., & Zhu, D. (2018). Public–private partnership in *Public Administration* discipline: A literature review. *Public Management Review*, 20(2), 293–316. <https://doi.org/10.1080/14719037.2017.1313445>
- Ward, J. L. and Sussman, J. M. (2005), 'Analysis of the Malaysian Toll Road Public- Private Partnership Program and Recommendations for Policy Improvements', Massachusetts Institute of Technology Engineering Systems Division Working Paper Series.
- Warsen, R., Nederhand, J., Klijn, E. H., Grotenbreg, S., & Koppenjan, J. (2018). What makes public-private partnerships work? Survey research into the outcomes and the quality of cooperation in PPPs. *Public Management Review*, 20(8), 1165-1185.