

# Public Private Partnerships: Systematic Review of Available Models for Improving Health Care Services

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**Abstract:** Given the constraints of governments to deliver health care, engaging private investment in the form of public-private partnership (PPP) is gaining popularity. The aim of present study is to review the rationale and types of public private partnerships in improving capacity of healthcare systems. The study adopted a systematic literature review. Based on existing data, this study provides important information on structuring roles and responsibilities of the private and public sector players in PPP arrangements. Well-designed PPPs in healthcare have been associated with financial benefits, quality improvement and access to health services. The findings of this study can be adopted by PPP experts, health policy designers and implementers when making choices to engage PPPs especially at a time when health systems are under stress due to COVID-19 outbreak.

**Keywords:** COVID-19, Healthcare, Health system, Public private partnerships

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## 1. Introduction

In the human journey, a hospital is a place where at least 90% of humans will spend at least a minute. This fact has made the health care sector the most important sector in any economy. The World Health Organization shares such a view, taking a position that the success of economies has been associated with the robustness of the health sector (World Health Organisation, 2020). For instance, earlier studies reveal that the coefficient between health and economic growth as measured in terms of per capital income and life expectancy has been rated at 0.85 (Preston, 1975). Good health is argued to result into longer life expectancy which is associated with 10-25% contribution to GDP. Equity in health care service delivery has been associated with gender and emancipation benefits. To protect and improve the health of citizens, governments are involved in providing three elements of health care: infrastructure, clinical services and soft facilities (Cruz & Marques, 2013). The infrastructure element, involves building of hospital and installing all of the systems necessary to ensure acceptable conditions, such as elevators, catering, air conditioning, elevators, ventilation, water, energy and waste management systems. Clinical services comprise the recruitment and managing health and

related administration personnel, materials and other activities related to the provision of medical treatment. Soft facilities include: cleaning, laundry services, catering, parking facilities. According to Cruz *et al.* (2013), soft facilities as laundry and security are those that are not directly related to medical activities. Medical equipment (e.g. computed axial tomography) might be included in infrastructure or in clinical services depending on the project.

Traditionally, governments have delivered health-care with support from tax and non-tax revenue alongside debt. However, existing studies indicate that health sector continue to receive lower funding compared to other sectors. While in some instance, such funding has increased, it has increased at a declining rate compared to other sectors (Ergo *et al.*, 2019). This trend has resulted into gaps in health care service delivery, attracting private sector players into the traditionally undeserved sector by state monopoly. It has been asserted that over the past two decades, private sector participation in managing public hospitals and health centers has been on the rise (Cruz *et al.*, 2013). In such cases, the private and public sectors co-exist in the same facility under governance schemes that are usually called public private partnerships (PPPs).

While private sector participation has been on the rise, models and features for private sector engagement under frameworks like PPP projects have varied across countries. However, in some instances it is possible to identify homogeneity in the application of PPP participation models across countries. Due to such trends, the virginity to spend by citizens has been stricken as citizens now spend out of their pocket or have signed up for insurance policies to cater for their own healthcare bills (Ergo *et al.*, 2019; International Health Partnership, 2017). Faced with underfunding, and increase in out of pocket spend on health by citizens new initiative in health services delivery, public private partnerships have found their way in health care residences of countries (Cruz *et al.*, 2013; Baxter & Casady, 2020). Generally, PPPs have been defined as a new language in public management that defines PPPs as "cooperative institutional arrangements between public and private sector actors" (Hodge & Greve, 2007). On another front, PPPs are viewed as established procedures for the involvement of private organizations in the delivery of public services (Linder, 1999). PPPs tend to develop some central rules for regulating the association between the partners in an official agreement, but they are more dynamic and sustained by a strong distribution of decisions, resources, risks, and benefits (Kouwenhover, 1994).

In the healthcare industry, PPPs are defined "as a collaborative relationship which transcends national boundaries and brings together at least three parties, among them a corporation (and/or industry association) and an intergovernmental organization, so as to achieve a shared health-creating goal on the basis of a mutually agreed division of labor (Buse & Walt, 2000). It has been acknowledged that most PPPs in the healthcare have involved civil society organizations, a term that alternates with Non-Government organisation (Storeng *et al.*, 2018; Boyle & Patel, 2008; Storeng & Puyvallée, 2018). Birn (2014) opines that the engagement of private not for profit actors like CSOs and NGOs has been historically based on philanthropy reasons. CSOs and NGOs have been involved due to their existing direct links with communities where the most vulnerable persons reside. In essence CSOs as non-state partners in health service delivery have been a partner of choice due to their community network capacity.

According to Ergo *et al.* (2018), Suchman *et al.* (2016) and Birn (2014), PPPs are now adopted as solutions

to address global public health challenges starting with HIV/AIDS to road traffic accidents, malnutrition development and distribution of vaccines and other health commodities (Sekhri *et al.*, 2013; Storeng & Puyvallée, 2018). It is also acknowledged that the objectives of healthcare PPPs have included; greater efficiency, reduced spending, and improved health-care management (Witjas-Paalberends *et al.*, 2018). Recently calls for adoption of PPPs in healthcare have been prompted by the fracture that COVID-19 pandemic that has caught governments by surprise and as asserted by Baxter and Cassady (2020) without "flexible surge capacity". Resulting into outstripping number of COVID patients alongside other existing health care standing order health services required for HIV Aids, malaria, cancer, and blood sugar, the health care system dominated by monopolies has gone into bizzare. Amidst this situation, is the need for partnership of private sector to boost health care systems in times of crisis and beyond. Coupled with this need, the COVID-19 pandemic has further showed that state monopoly of health care systems is outdated, hence the need to engage private sector participation under PPPs in strengthening healthcare systems to deliver more for citizens (Baxter, 2020).

## 2. Theoretical Foundations

It is generally known that title of ownership of resources to meet perceptions and expectations in the delivery of public services such as healthcare services can no longer be helped by state monopoly. This relates to the assertion that resources are scarce to governments which constrains their ability to find solutions to the numerous challenges confronting them alone (Vinogradov & Shadrina, 2018). Notwithstanding governments are considered corrupt, lack necessary equipment, desired innovation, customer experience, existing theories lay sufficient foundation for such assertions. Advocates of New Public Management (Osborne, 2006, 2010b) have championed collaboration of the private sector in service delivery on grounds of inability for the public sector to deliver on its own due to existing constraints hosted in the public sector domain.

In extension of new public governance (NPG), thinking has also advocated for the need for less new participatory and networked processes based governance and processes with features such as interdependency, collaboration, and trust. They focus on improving processes and outcomes in

public policymaking and public service delivery in the light of increasing expectation, demands, growing complexity and fragmentation (Torfing & Traintafillou, 2013). Such studies are consistent with studies that advocate for the potential for improving public policymaking and public service delivery by adopting more participatory and collaborative forms of governance (Koppenjan, 2012).

While Koppenjan (2012) in characterising the features of good public service notes that meaning for instance home care based in critique of new public management, indicates If home care is managed solely on the basis of costs, the service provider may not have any time available for social chat with clients. In other words, there are 'soft' aspects to the quality of public service delivery that suffer from an exclusive emphasis on cost and efficiency (Koppenjan, 2012). While this may be true to some extent, the motive of agents is multifaceted for instance to satisfy customers, that ultimately determines concession renewal for agents and revenue.

This study was guided by the collaborative advantage theory. The collaborative advantage theory as advanced by Huxham (2003) points to the view that no institution can do it alone. The theory asserts that parties must collaborate in order to achieve synergy outcomes that are increasingly viewed as desirable (United Nations, 2010). According to Huxham (2003) when parties collaborate, they are able to achieve synergy benefits which supersede benefits that parties may have achieved in operating solo (Trafford & Proctor, 2006). By collaborating through PPPs, organizations including public entities are able to compensate for deficiencies in knowledge and capacity to deliver services and goods (Walker & Johannes, 2003). The collaborative advantage theory is supported by other theories such as resource dependency theory. This is because the resource dependency theory has also consistently called for collaboration in order for organisation to reduce environmental uncertainties caused by internal resource deficiency (Celtekliligil, 2020; Ozturk, 2020).

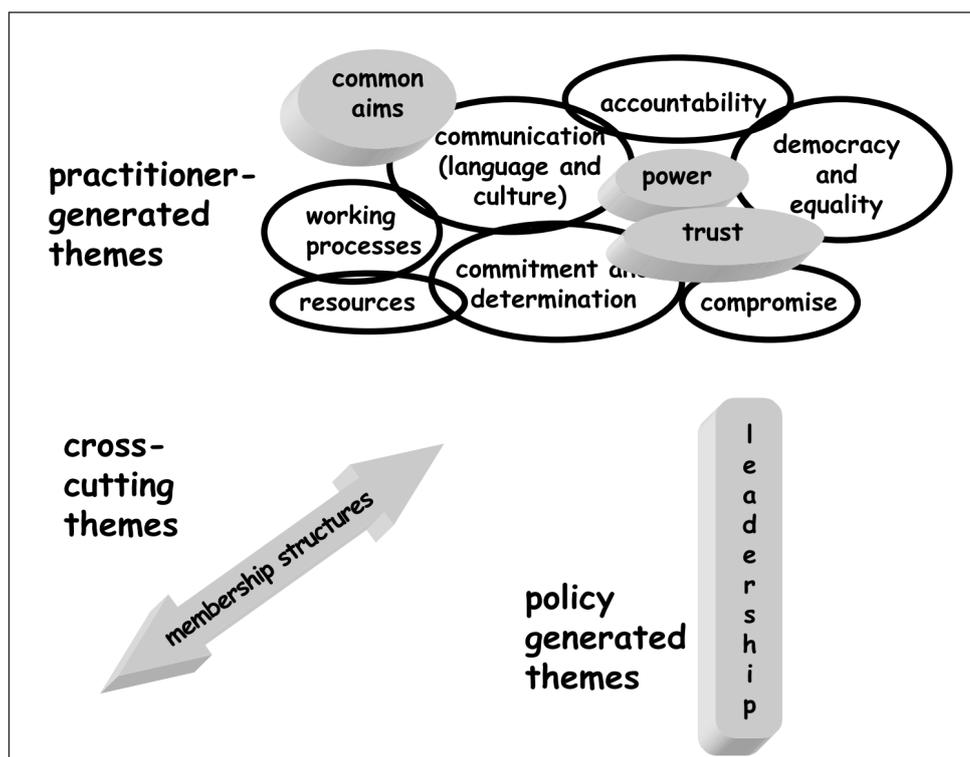
Similarly, it has been argued that when governments partner with the private sector in service delivery, citizens achieve much more and are able to receive services much earlier they would have otherwise received delivery of such services (Nduhura, 2019; Nduhura *et al.*, 2020). In line with such views, Baxter & Casady (2020b) have further argued that due to

current COVID-19 circumstances, the engagement of the private sector under PPPs is needed more than ever as traditional procurement that operates under normal circumstance may not be able to deliver the much needed impact, calling for unsolicited bids under PPP arrangement. In line with this view, there exists argument that the process for engagement should be more flexible and not bureaucratic. The heed to such call has started in some circumstances as countries like USA have signed partnerships with pharmaceutical firms to develop COVID-19 vaccines. Nonetheless, it has been argued that operating in collaboration exposes organizations to what is termed as "collaborative inertia", a situation that resides with the achievement of desired outcomes through collaboration but with stories of pain, hard grind and generally difficult experiences (Huxham, 1996). To improve collaborative outcomes while reducing the collaborative inertia the study adopts the themes of collaboration as further advanced by Huxham (2003).

In Figure 1 on the next page, Huxham (2003) promotes the idea that collaboration in partnerships yields positive outcomes when parties to the partnership devise appropriate membership structures, able leadership and reciprocity in terms of transparent communication, mutual goal setting, power sharing, trust, resources, alongside accountability, compromise and commitment of all parties to the partnership. While the themes are desirable, power dynamics continue to define the outcomes of partnerships across a range of sectors.

According to Taylor (2018), private partners in health care have become more powerful than the public sector manager due to power imbalances arising due to information asymmetry and the politics of global health care. It can be argued that power imbalances have resulted into difficulty in monitoring achievement of health care performance targets alongside deteriorating service delivery. This view has consistently been re-echoed by proponents and critiques of agency theory as the foundation theory for empirical and theoretical studies on PPPs (Nuwagaba, 2019; Kisitu, 2018; Nduhura, 2019; Twinomuhwezi, 2018). Despite the challenge of PPPs, such service option remains a necessary evil that can offer resolution to continents like Africa that continue to remain severely stressed in offering healthcare services to its citizens. This problem has been escalated with COVID-19 and associated lockdown affecting closure of airports, eventually creating a situation

Figure 1: Themes of Collaboration



Source: Huxham (2003)

that calls for improving healthcare systems amidst public purse constraints and diversified priorities. The situation is now worse as the rich who used to fly out of the country in search of better healthcare services are barred from flying out of their countries. The question of how do we improve local healthcare services within the constraints of resources and under PPPs remains a daunting task. In this paper, we delve into the concept of PPPs and its application to salvaging stressed healthcare systems. To achieve this objective the study was guided by the following respective research questions:

**RQ1:** What is the rationale for use of PPPs in health service delivery?

**RQ2:** What are the types of PPPs models in the health care sector?

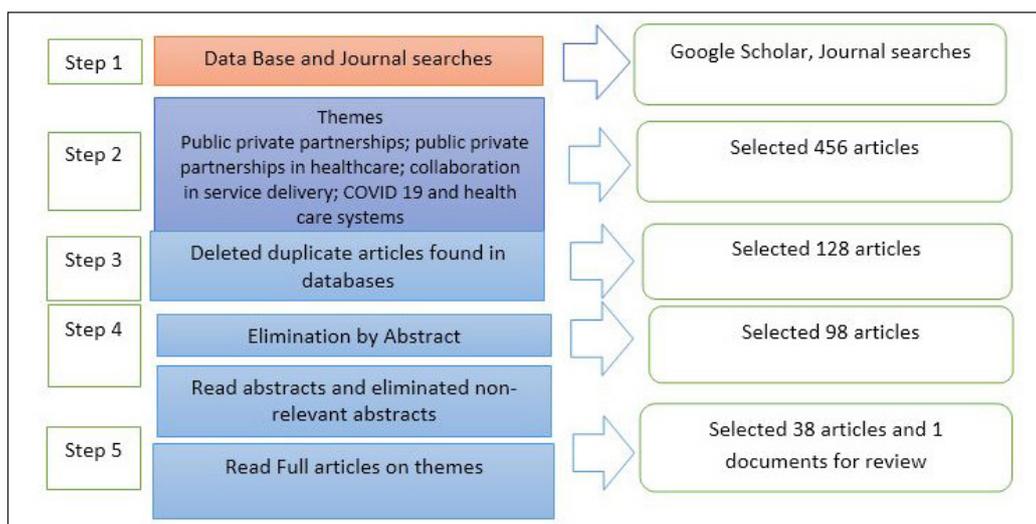
### 3. Methods and Material

A systematic review of existing data on PPPs in healthcare is undertaken. Existing studies by Tang *et al.* (2010), Osei-Kyei & Chan (2015), Bao *et al.* (2018) and Hodge and Greeve (2015), have adopted and recommend systematic reviews as a desirable approach to obtaining data for influencing policy

actions. To collect data, the study searched for key words using engines such as Google scholar for articles using search words like health partnerships, public private partnerships; public private partnerships in healthcare; collaboration in service delivery; COVID-19 and health care systems. By review of articles, from google scholar searches, the search extended to popular journals from which the searched articles were published. From this search the study attracted over 456 articles.

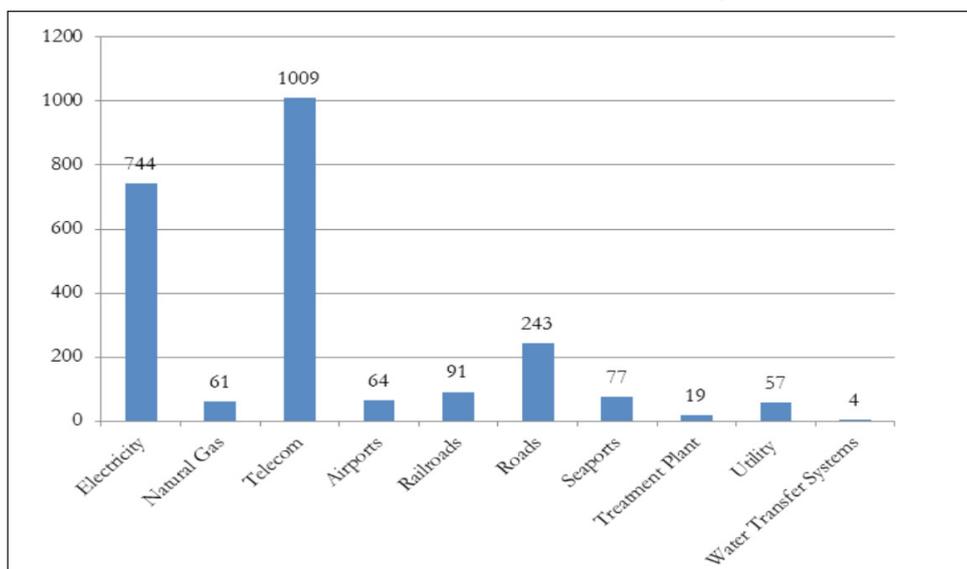
The search within the articles was then narrowed down by reading abstracts and full papers on public private partnerships in health, from which 98 and 75 articles and 7 documents were respectively selected for review. The rationale behind the reduction of the data collected was based on the commonality of the words, found in existing data. Drawing from a review of literature, this paper concludes that PPPs in healthcare delivered some strides like PPPs in other sectors like transport and energy. Like in other sectors, PPPs in healthcare have some limitations. From the synthesis of the reviews, this study was able to arrive at types of PPPs in health, challenges faced in adoption of PPPs in health while providing practical and theoretical implications for practice and future research.

**Figure 2: Research Process**



Source: Compilation by authors

**Figure 3: Total Investment Commitments in USD Billions by Subsector (1990 - 2014)**



Source: PPI Investment Database - World Bank (2014)

#### 4. Results and Discussion

Based on a review of existing data, several sectors have received considerable uptake of PPPs.

Figure 3 indicates that for the period 1990-2014, the telecom sector received higher investment in PPPs that any other sector followed by the energy sectors and road . From the analysis it can also be deduced that while developing countries that are hugely characterized by low income need more infrastructure investments and require a surge in service delivery, uptake of PPPs has remained low. Similarly, as other sector evidenced increasing

uptake, the health sector, that has proved a foundation to sectors, appears to have received negligible investment in PPPs despite the financial and capacity gaps that the sector continues grappling with. Note the less, to some extent are recognized to have been adopted (Cruz *et al.*, 2013; The Global Health Care Group, 2010; PWC, 2010). PPPs have been adopted in the healthcare.

#### 5. Rationale for Adoption of PPPs in Healthcare Service Delivery

Various studies acknowledge that PPPs have a place in the health sector (Cruz *et al.*, 2013; Lukamba *et al.*,

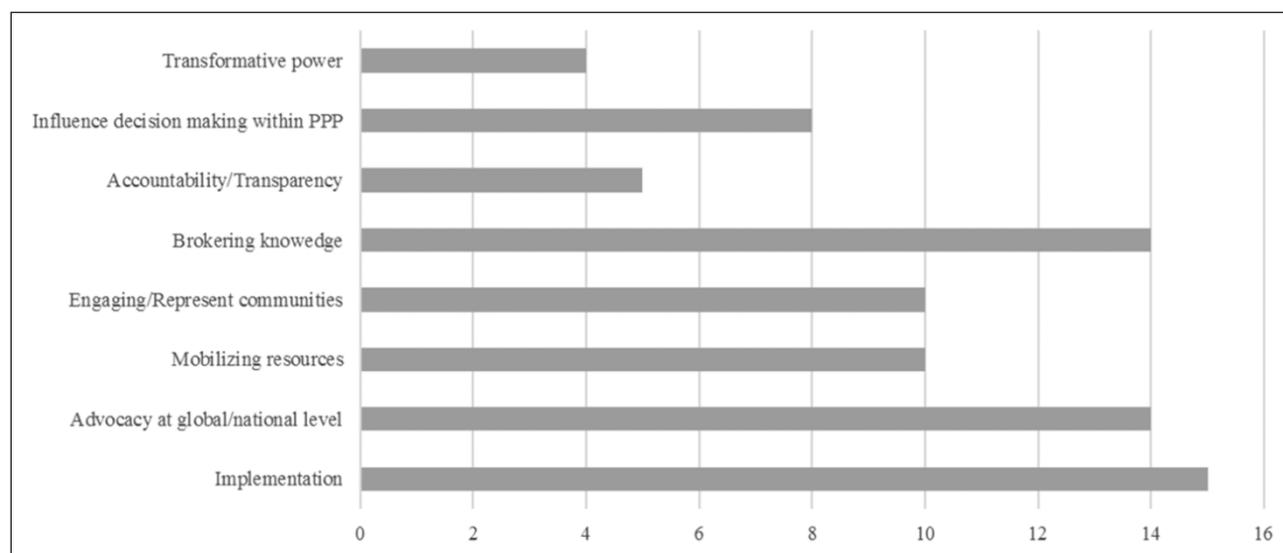
2020; Khan *et al.*, 2015). Traditionally studies indicate that partnerships have been developed with NGOs/CSOs (Storeng *et al.*, 2018; Suchman *et al.*, 2018). The objective of the CSO partnership in health has been largely to assist governments to extend basic health care services such as immunization, blood donations, HIV prevention and treatment (Suchman *et al.*, 2018). Storeng and Béhague (2016) opine that partnerships have also been evident in promotion of maternal health, championed by global rather than local actors under global health initiatives. In this same argument it is noted that PPPs have been adopted to improve efforts in an attempt to reduce the fragmentation of global health actions that have been characterized to some extent with uncoordinated efforts. The deployment of PPPs has hence force been more tuned to issue-specific efforts (Soreng *et al.*, 2016b).

However, new conditions in the delivery of the healthcare services have prompted the adopted of PPPs types in varying ranges. See Figure 4.

Existing literature on the reasons for PPPs adoption cites variances across countries. However, existing studies point to the need for brokering knowledge, the need to support implementation of health programs, improve capacity and advocacy reasons. Other reasons that are popular include the need to tap into private finance in mobilizing resources and for engaging communities and representing communities in health matters and programs. On the other front, PPPs have also been adopted to

support accountability and transforming power imbalances in the health sector space. The view is re-echoed by Strong *et al.* (2018) that partnerships with CSOs have been motivated due to the need to address deficits in democracy, leaning to the view that PPPs have come in to provide a democratic right to health services that have been left out by their public institutions (Strong *et al.*, 2018). While studies by Huxham (2003) as cited in Figure 1, assert that knowledge has been one of the drivers, recent studies in low- and medium-income countries such as Kenya indicate that evidence of cross knowledge transfers from the private to public sector remains lacking (Suchman *et al.*, 2018). Other earlier studies carried out in South Africa and Senegal indicate that there is greater accuracy of health diagnostics with private clinics at 85% compared with public hospitals selected that delivered 68% accuracy. A similar study in Senegal only revealed that 97% of patients in private sector had received treatment in compliance with National Health guidelines compared to 85% in clinics in the public sector. Khan *et al.* (2015) acknowledges that governments have acknowledged private sector participation in delivery of public health services especially in South East Asian countries like India, Pakistan and Bangladesh. It is asserted that this has been due to the ability of private actors to increase universal health coverage (Khan *et al.*, 2015). Consistent in this view, it is opined that the private sector possesses capacity to reach out to individuals that public institutions in health may not be able to cover (Suchman *et al.*, 2018).

**Figure 4: Reasons for PPPs Adoption in the Healthcare Sector**



Source: World Health Organisation & World Bank (2017)

A similar study in Uganda by Omaswa (1999) undertaken in 5 districts and Kampala, her capital city suggested that 81% of Malaria and 65% of pneumonia cases were managed correctly in 164 private healthcare units sampled in a study. Notwithstanding, studies in countries like Kenya acknowledge the role of the private sector in health service provision by asserting that despite the limits in quality of service provision, the private sector has played a crucial role (Mutemi, 2003). Based on this view, it is argued that the private sector as a partner in the healthcare sector should be aided to increase her own capacity in supporting co-production and co delivery approaches in the health sector (Marek *et al.*, 2005; Marsh, 2003).

While there is no size choice that fits it all, studies in South Africa further reveal that people perceive better quality services with private sector health service provision than services of the public sector. The choice of such choice is attributed to treatment with respect and prompt service notwithstanding the exceptional cases. In delivering prompt service, a study done in South Africa, indicates that in private sector clinics, waiting time was 10-40 minutes while in the public clinics waiting time was 50 minutes up to 3 hours (Marek *et al.*, 2005).

MacQuid and Sherrer (2010) attribute the uptake of PPPs in service provision generally due to the promises of resource availability, efficiency and quality of delivery grounds. This view is partly in consistent with views of Khan *et al.* (2019) that associate PPPs to quality in health services delivery. Other studies reveal that PPPs in health care have been adopted to boost the available equipment of low capacity with budgetary constraints to maintain the already existing infrastructure.

Both the public and the private sector recognize their individual inabilities to address the emerging public health issues that continue to arise (Torchia *et al.*, 2015; Reich, 2000). While literature on motivation of PPPs in healthcare has been of high magnitude, there exist disincentives for the private sector engagement in PPPs. According to Sadeghi *et al.* (2020), limited private sector engagement in health care PPPs, has been attributed to low and uncertain return on investment since pricing is dictated by government. It is also noted that once the private sector players are engaged, governments tend to be reluctant in reimbursements or payments to the private party for the services provided especially where

concessions include the payment of reimbursable, salaries and generally availability payments where the users are paid for by the state for the services consumed in privately operated health facilities (Sadeghi *et al.*, 2020). Earlier studies have also pointed to the lack or inadequate guarantees by the state in hospital environments (Sadeghi *et al.*, 2016) that has restricted foreign direct investment in PPPs, while Africa's healthcare provides investment opportunities for attraction of foreign direct investments (FDIs).

## 6. Options for Engagement of PPPs in Healthcare Sectors

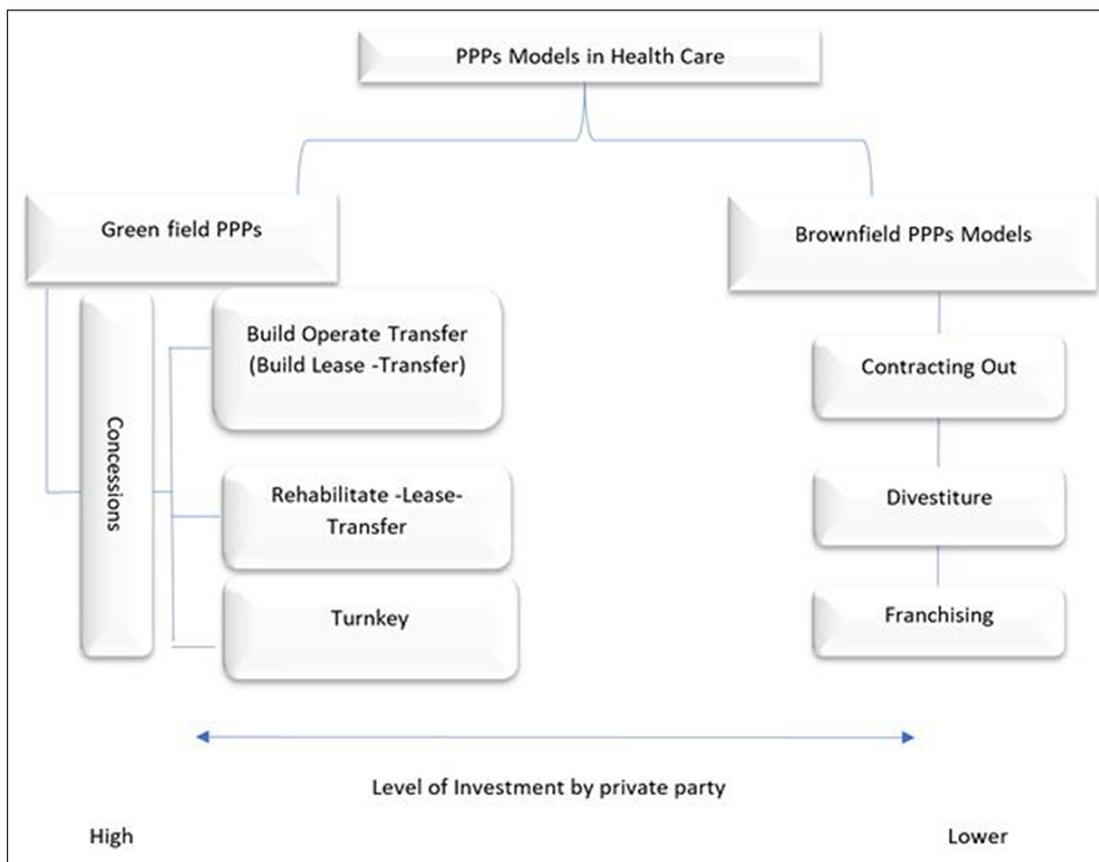
The adoption of PPPs in the healthcare defers from one country to another, but for early adopters of PPPs, a review of literature indicates that PPPs can be classified as greenfield or brownfield projects. A brownfield project is where there exists hospital infrastructure or equipment and it is handed over to the private party for rehabilitation, operation and maintenance in exchange for incentives. On the other hand, a greenfield project is where the private partner, design build, operates and manages a hospital facility (building or infrastructure) in exchange for incentives such as collection of user charges or availability payment.

In Figure 5 on the following page, the study provides a discussion of the popular types of PPPs in the healthcare sector where PPPs in the healthcare industry can be categorized as either green field or brown field. A greenfield refers to the PPP project that sets out to deliver an activity or provide infrastructure where it has not existed before, for instance it may involve construction of infrastructure on unused land (World Bank, 2017).

### 6.1 Build Operate Transfer (BOT)

This type of PPP model is sometimes referred to as Build, Lease and Transfer which involves two dimensions. Firstly, it is argued that it involves acquiring of hospital equipment such as laboratory or diagnostic equipment using the lease option or the leasing of existing hospital equipment or facilities to a private operator. The initial dimension can help public hospitals or government in general to increase the facilities and equipment in hospitals to serve citizens with limited cash outflow (Park *et al.*, 2020). On the other hand, the private investor provides the facility or equipment leases and transfers the

Figure 5: Models of PPPs in Healthcare Sector



Source: Analysis by authors

management of facilities to new administration that manages the facility or assets on behalf of government. This mode is also referred to as the Transfer of Operation rights (<https://eres.architexturez.net/documents?f%5Bauthor%5D=31218>), (Arslanli & Dokmeci, 2017). Both options also enable government to offset facility or equipment maintenance, since under lease agreements, the leaser has got such an option. The incentive provided to the leasee or private party is either allowing the private party to charge user fees or payment in form of availability payments from the public entity. Countries like Turkey are argued to have adopted the Build-Lease-Transfer PPP model (Pekdemir, 2017) in the PPP legislation in 2013. The model is opined to have been popular among city hospitals and medical campuses in Turkey.

In the BLT, the private party finances, builds and then leases the hospital to a public entity. The public entity provides health services in the leased facility for a period up to 30 years. The private party commits to undertake a specified routine maintenance schedule. The incentive to the private operator is

scheduled payments over the lifetime of the lease. While this model has been popular in Turkey, there has been no evidence of application of such model in Sub-saharan Africa, where the access to health care remains a challenge (World Bank, 2016). Earlier studies by Gartung (2006) indicate that models such as BLT, enables to public sector to derive higher levels of efficiency in construction and facilities management, enabling the government to transfer the construction and design risk to the private sector. While a review of the BOT model has been popular, from a review of studies other models can be derived such as Turnkey and then Install, Own and Operate.

## 6.2 Turnkey PPP

Cruz *et al.* (2013) opines that some PPPs look at turnkey with mortgage arrangement. Such model was first implemented in UK among the 1<sup>st</sup> wave of PPPs. It is opined that in Australia, such model was adopted but was extended with clinical services. While construction and mortgage related payments was successful in terms of budget and time scope, clinical services element was not as successful as

construction services under clinical services. Port Macquarie Hospital in Australia is cited as a success under such models in Australia as part of the first wave of private sector led hospital construction PPPs. For instance, the Port Macquarie Base Hospital located in Northern New South Wales was the first Australian experience with a health PPP project. A concession contract was signed in 1992 between the government and the consortium for building the hospital and providing clinical services. The partnership provided good value in the construction process because the project was delivered in a record time within the budget (Cruz *et al.*, 2013).

### 6.3 Install, Own and Operate

Based on review of the BOT model, it can be deduced that while hospital physical structure can be built, at times the private operator provides or installs equipment such as laboratory equipment, cancer radiology machines and CT scans. Due to high capital expenditure (CAPEX) and operating (OPEX) expenditure, private investors may be invited to provide such equipment and maintain them with Maintenance Repairs Operations (MROs), with pre agreed and regulated or capped user fees by contracting authority.

Other categories of PPP models in the healthcare industry can be categorized as brown field PPPs. Leigland (2018) opines that the brownfield mode of PPPs was the initial PPP type recommended by development partners like World Bank and IMF. The term brown field has been adopted in PPPs to refer to PPP project where there has never existed some construction of facilities (Leigland, 2011; Lia *et al.*, 2016; Leigland, 2018; Han *et al.*, 2019; Yang *et al.*, 2019). Brownfields can involve reshaping, remodeling or reuse of existing facilities such as equipment and building for the same purpose or alternative purpose. The focus of brownfield may be to improve delivery using same facilities such as a hospital with some modifications or extensions or functionalities (Leigland, 2018).

According to Leigland (2011), it is revealed that brownfields were adopted in the early 1990s to revive badly dilapidated infrastructure service systems, such as water delivery facilities and roads that could not be shut down or sold off. Leigland (2011) opines that private companies would take over badly maintained government owned infrastructure service systems, improve efficiency, make needed investments, and recover all their costs – plus make

reasonable profits – over the long term (20-30 years) of the contracts. Applied to healthcare, brownfield projects take the several forms. Brownfield projects were popular due to benefits they provided (Leigland, 2011). Such benefits are largely efficiency gains, access to private capital to make investments and remove the healthcare facilities from central budgets that are usually constrained by other national priorities. While brownfields were popular, it is argued that they ceased to remain popular. Arguably, low profitability and hurting cashflows coupled with resentment in public policy by opposition parties could have made brownfield unpopular. In a study of Latin American countries, it was discovered the brown field projects delivered profit at 10 years (Leigland, 2008).

### 6.4 Rehabilitate, Lease or Rent and Transfer

According to Jomo *et al.* (2017), this model is part of a brownfield project. The model is referred in studies focused on PPPs in Africa but is arguably one of the most important PPP models that have been implemented in Australia and Portugal. Faced with financial constraints, governments have adopted the rehabilitate, lease or rent PPP model with terms requiring the private investor to rehabilitate hospital buildings, be leased to or allow the private party to hire such facilities to offer clinical services to citizens at agreed affordable fees. The private party is incentivized through approvals to charge fees to patients that consume the let-out facility or through availability payments by the government of public administration (Jomo *et al.*, 2017).

### 6.5 Leasing

Leasing as concept can be rooted in financial management and economics theory (Ang & Peterson, 1984). Leasing is popularly known as a source of finance and acts as a substitute to debt (Ang *et al.*, 1984). Recent studies have viewed leasing as an option to reduce cash out flows which is a means of risk transfer as costs of facility maintenance are serviced by the leaser. Applied in health care PPPs, leasing involves two dimensions; the lease of medical equipment or facility leasing to a private investor. Governments have adopted leasing PPPs in varying proportions in the healthcare sector. According to Mutua and Walmwa (2020), Kenya that is now considered No.4 in GDP size in Africa has adopted medical equipment leasing. The objective of leasing medical equipment has been aimed to improve

and scale up health infrastructure for provision of specialized medical care. Under a project named as Equipment Management Service (EMS) and valued at Ksh 38 billion, it is argued that six different private firms were contracted by the national government to equip two hospitals per county and four national referral hospitals with different sets of medical equipment, ranging from theatre and Intensive Care Unit (ICU) machines to machines for offering renal dialysis and imaging services. However, according to (Mutua *et al.*, 2020), a midterm review of the project indicated that the project was marred by lack of transparency, cost overruns, suboptimal utilisation of equipment capacity, due to lack of trained personnel and supporting infrastructure and opaque documentation process and dissatisfied patient clientele. Leasing however, is argued to have evidenced positive results in South Africa. It is argued that excess bed space has been leased out to the private sector, for which some revenue has been derived for public hospitals (Mutua *et al.*, 2020).

The other option for leasing has been leasing out facilities. This approach has been adopted in South Africa and Kenya (Mutua *et al.*, 2020). The justification for leasing has been associated with either underutilization of equipment or facility in public hospitals or inability to cope up with the costs associated with maintenance of both facility and equipment. Mutua (2020) argues that countries like South Africa have leased out excess bed space to private operators while Guinea is argued to have leased out part of laboratory equipment such as CD4 counter and operations to private operators in hospitals. In Lesotho, leasing of a public hospital in general business terms, has got the leaser undertake the obligation of maintenance. In PPP leasing arrangements, the lessee undertakes to service maintenance costs and ensure availability of equipment or facility alongside with its associated maintenance repairs and operations (MROs) if applicable. With leasing PPP, the public or the private sector can be either leaser or lessee. It is argued that leasing increases access to care, provides access to private capital and can increase availability of equipment and services for citizens in need of healthcare services (Mutua *et al.*, 2020).

Other forms of brownfield PPPs in healthcare have included divestiture and franchising. According to Rahman (2020), under a divestiture, it is argued that a public hospital is sold to a private investor and the state remains with a slot on the management

board to ensure that interests of the divestment are achieved in the running of the hospital. Rahman (2020) refers to divestiture as privatization of public hospitals. While the practice has not been popular in Sub-Saharan Africa, evidence of management of divestiture PPP in healthcare is provided by the works of Mutua (2020). It is argued that countries like Benin, Burkina Faso, Madagascar, and Cameroon, have sold off their central medical stores to nonprofit organizations. To ensure that national interests are preserved, the state has retained representation in management boards of stores (Mutua, 2020).

Franchising has been cited as a PPP type in healthcare industry (Acerete *et al.*, 2012). In practice, the state allows the private investor or organisation to deliver healthcare services to the populace operating under the health facility's brand. The driver for adoption of franchise PPP has been the need for the state to transfer focus on expanding infrastructure and hard elements of the health services while relieving own self the day to day operations. Wong *et al.* (2015) indicate that another form of PPPs is service contracting. In such cases the public hospital outsources part of the healthcare services offered to the private sector investor using certain ratios. The choice of ratio is dependent on capacity that the public and private sector investor can handle. In such cases the private investor is incentivized by user fees paid by patients that utilize services of the private investor (Wong *et al.*, 2015). The patients usually pay the same fees as paid to the public hospital. Such PPP type is rated popular in countries like Hong Kong in the delivery of health services such as creative care (cataract surgery, hemodialysis), preventative care and health maintenance (vaccination-influenza, swine flu), implementing shared care programmes and others such as screening services. Khan *et al.* (2015) further indicate that service contracting has been executed in the testing and treatment of tuberculosis, while other studies assert that the private investors, especially the non-for-profit organizations, have been involved in healthcare services in such a context to deliver data driven healthcare services (Witjas *et al.*, 2018).

## 7. Conclusion and Recommendations

The present study investigates the concept of PPPs, rationale and reasons for adoption and PPP application in healthcare service delivery. While there has been a wide critique that PPPs never deliver their intended outcomes, this study exhibits a firm notion

of the traditional few. The study acknowledges that PPPs in healthcare can exhibit collaborative inertia but can enable government improve their health care systems. PPPs are hence considered as collaborative arrangements that involve hard and soft elements of engagement in the healthcare sector aimed at improving health delivery systems. The motives and rationale for PPPs adoption in the healthcare services sector has been largely the deficiencies in terms of infrastructural and soft aspects such as diagnosis, care and treatment. Various models have been adopted and continue to be adopted across the world to deliver improved health outcomes ranging from brownfield to green field designs. Green field projects have included construction of hospital facilities, provision and management of hospital equipment such as diagnostic equipment, diagnosis, prescription and treatment. Bedside care has also been cited as a popular service that PPPs can consider. Other options have included soft elements like the private sector doctors by government, placed and remunerated by the government majorly private not for profit hospital, a practice cited by the works of Lukamba *et al.* (2020) in most countries in East Africa.

We further argue that PPPs as in other sectors like Telecom, roads, energy, water and sanitation may fail if necessary controls are not put in place. Based on this, we offer implications for practice and future research. Given the current COVID pandemic that has thrown government hospital and health care systems in capacity stress, the study joins studies of Baxter *et al.* (2020) in calling for urgent use of unsolicited engagement of the private sector in providing relief to the constrained public health facilities. The success of this approach requires urgent promotion of unsolicited proposals (USPs) in the local and international market through government agencies such as private sector federations, chambers of commerce, foreign affairs missions and embassies. In promoting USPs, it is important that capacity of the private sector be urgently built through equipping both staff in contracting authorities with necessary knowledge and information on the working of USPs (Baxter *et al.*, 2020). While USPs are promoted, this study recognizes that most countries have the necessary legal and regulatory framework to implement PPPs. Good and sustainable governance will require urgent release of guidelines to support the working and adoption of USPs to resuscitate. The World Bank (2017) has provided an elaborate process that PPP

Units across countries can adopt or adopt with local environment customization. Quite importantly is that there is need to incentivize the USP bid with some pre earned marks at evaluation in order to create an environment that enable USP to sprout from the market.

The outcome of the study indicates that universal healthcare remains a right for every citizen no matter their global geography. Universality has and will continue to require that healthcare services are accessible, affordable, of quality and available at times. Existing constraints of the public purse can no longer guarantee universality. Opportunity lies in the management of PPPs in healthcare service delivery. While health PPPs are argued to have delivered elements of universality, in some instances they have failed. While they have failed the cause of their failure is increasing leading to the known (The World Bank, 2017).

Existing studies have revealed that while PPPs in some cases have not delivered, they to some extent supported government in delivery of quality, accessible and affordable healthcare. PPPs therefore can enable governments to increase healthcare cases to areas where government may not reach. Franchising PPPs especially with NGOs should be considered since NGOs reside usually at the grassroots with citizens that governments seek to serve (The World Bank, 2017). By engaging PPPs in healthcare, governments can enable citizens access medical equipment services since PPPs can usually invest in necessary hard and soft healthcare infrastructure. This can in turn enable countries to reduce foreign exchange outflows. The preserved foreign exchange can be reserved for repayment of public debt reducing the losses that result in buying forex to meet debt commitments in foreign currency. Since PPPs can deliver improved healthcare services, it is important that a performance management framework is designed to incentivize private sector performance. The performance framework should include bonuses for exceeding clients served and penalties such as deterrence or extending period for increasing user fees.

Existing studies have further revealed that private wings in public hospitals have attracted investment for PPP investors. Governments may consider handing over the management of such wings to private investors for better management as governments concentrate on health care research and diagnosing,

treatment of disease and investment in developing healthcare human capital to meet doctor patient ratios prescribed by UN WHO.

Leasing of hospital facilities may also be considered in times when it's impractical for government to expand existing health infrastructure for instance during times of epidemics. To implement such practice, governments needs to undertake assessments of existing state of private hospitals including hard and soft infrastructure including staffing. Based on this, government will need to define terms of reference that highlight aspects such as modifications and instalments and define basic requirements of existing private hospital.

A competitive tendering process is important. This requires that procurement plans are advertised, a transparent process for logging inquiries before bid closure, feedback is provided to bidders on how they performed with reasons backing up such performance. While NGOs as PPPs investors are partners to engage in PPPs environment, findings reveal that most NGOs have been attracted more to brown-field projects while private for profit (PFP) tend to prefer green field projects as they are deemed to provide better return on investment. Therefore, when choosing who to engage and choice of project type, it is important to note that while PPPs can enable government reduce its journey in creating universal access to health, a range of factors will influence the success of this engagement. At the onset, government that seek to benefit from the engagement of PPPs in healthcare; must have clear defined intentions of engagement of PPPs and must have transparent bidding processes with tenders publicly advertised and transparent evaluation process undertaken. In times like COVID-19, delays may be encountered in submission of bids. It is important that the regulator develops and outsources third party services to support the engagement of PPPs in healthcare. In the era of epidemics like COVID-19, governments may explore serve contracting and franchising and utilise green field PPP arrangements in the long-term. Underestimation of costs for both brownfield and green field PPPs can frustrate PPP. To manage this challenge we advocate for a third party ex ante due diligence services on costs. This can be done by hiring services of a transaction adviser coupled with market surveys. Performance measurement systems should be put in place to deter private operators from defaulting while encouraging them to not only deliver targets

but also to consistently improve their targets. This can be designed in form of penalties for under-performance and rewards in form of rebates or bonuses for meeting and exceeding targets.

In the practice of PPPs, Nduhura *et al.* (2020) in their theory Citizen-Principal-Agency theory and New public governance advocates have generally advocated for citizen participation in stages of PPPs or policy actions that affect them. It is important that citizens are engaged with factual evidence rather than politically oriented speech. By engaging on facts, citizens can be supported to make well informed decisions on matters that affect their lives.

## 8. Limitations and Future Research

While this study aimed at providing PPP experiences in sub-Saharan Africa, studies relating to this geographical context were limited to countries like Tanzania, Kenya, South Africa Botswana and Lesotho. Based on the definitions of PPPs and author observatory reflections on PPPs that exist in practice literally in all sub-Saharan Africa (SSA), they are not documented. Failure to document the status of PPPs denies opportunity for deriving lessons adequate to inform either reasonable uptake of PPPs exposing them to a potential for either failure or fear for engagement despite the value they would provide in delivering universal healthcare in SSA. The paper also acknowledges that monitoring and incentivisation frameworks for healthcare PPP have received limited research yet they form part of the core for the success of health care PPPs. Future studies should therefore focus on monitoring and incentivisation frameworks for health care PPPs. Good health has also been associated with sanitation (Deloitte, 2017). It is worth noting that PPPs in healthcare are not prone to failures as in other sectors such as construction such as time and cost escalation and delivery of substandard services. Notwithstanding, with adequate risk management tools and safeguards, PPPs in healthcare can deliver services much earlier, improve quality of health service delivery and longer life for citizens. In the current COVID era, by engaging PPPs in the COVID era and amidst the myriad of diseases like cancer, kidney failure, governments can save lives that would otherwise be lost prematurely due to lack of access of not only healthcare service but equipment since citizens will no longer lie helplessly at home or travel long journeys and could have lives saved in their home country as PPPs attract FDIs too.

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