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Sub-National Public-Private Partnerships (SN-PPP): A Prototype

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A *case study is a capsule of reality. The instant considers road financing in Uganda, and presents a prototype financing mechanism for local governments. It is a genre of Sub-National Public-Private Partnership (SN-PPP). The prototype appreciates the unique power of the individual in the country (in contrast to institutions), and seeks to leverage this uniqueness as institutions build. The prototype comprises three modules: Local Infrastructure Group (LIG), District Infrastructure Fund (DIF), and the traditional Special Purpose Vehicle (SPV). The paper also presents a verification framework for the prototype. The framework uses Contested Exchange (CE) encased in Institutional Rational Choice (IRC). The IRC lens is used in a trace of the country's history that inhibited the development of institutions of commerce.*

JEL: H1-7, G2 & R5

1. Introduction

1.1 Motivation

Can the state be the sole provider of [physical] infrastructure? Since independence (generally five decades ago), the government (agent of the state) has dominated the financing and management of infrastructure in Africa, and indeed most of the world. However, as technology tears the juridical state boundary, the African people demand better service inspired by the quality of service in other parts of the world. However, the strength of the state does not seem to grow at pace with technology, and hence globalisation. Therefore, the state must seek leverage in partnering with the private sector. That is the essence of public-private partnerships (PPP). Moreover, the most challenging facet of PPP is at the sub-national level – merely because of distance from the centre (even under devolution). Consequently, this paper seeks to illuminate the mechanics of local government in Uganda (as a case), and synthesize a model of sub-national PPP (SN-PPP).

1.2 Structure

Being a case study, by definition, the paper is an empirical investigation of a complex bounded phenomenon, carried out in a rigorous longitudinal way (Mabry 2008). The complex phenomenon is the mechanics of local government in Uganda, viewed on a background of SN-PPP. The paper exposes the phenomenon of local government, and uses the conceptual lens of PPP to synthesize a prototype SN-PPP. This prototype is then analysed using institutional rational choice (IRC), developed by Ostrom (1991).

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Why adopt the case study approach? Public space in SSA, not just Uganda, is an interwoven mesh of service desires. The competing demands of transport, health, education and other sectors create a vortex. This vortex is caused by a compression in development. The country is attempting to catch up with the frontier of economic progress (the West), but within a short time than it took the West. For example, the institutions of enterprise that paved the way for the Uganda Protectorate in 1894 (i.e. Imperial British East Africa Company) represented almost 300 years of institutional building. Enterprise in Uganda does not have that foundation. The 50 years post-independence has been marked by truncations in institutional building. Technology makes that sprint possible. However, the state cannot be the sole actor. It must bond with the private sector.

The case study approach has suffered in the age of generalization. Scholarship on social space is often yoked to emulating natural science. To be published, often a paper must follow the dictates of deterministic empiricism. It must gather numerical data and channel these through regression. So then, what happens when a situation is so complex that what is required is an ordering (framing) of the situation?

This paper belongs to the school that argues that the case study approach should be used to order the complex situations. Only as an addition, the case study could entail falsification of a hypothesis. Flyvbjerg (2006) succinctly argues for this function of the case study:

> *That knowledge cannot be formally generalized does not mean that it cannot enter into the collective process of knowledge accumulation in a given field or in a society. A purely descriptive, phenomenological case study without any attempt to generalize can certainly be of value in this process and has often helped cut a path toward scientific innovation. This is not to criticize attempts at formal generalization, for such attempts are essential and effective means of scientific development; rather, it is only to emphasize the limitations, which follow when formal generalization becomes the only legitimate method of scientific inquiry.* (Flyvbjerg 2006, p. 227)

Being a true case study, therefore, the paper does not follow the linear hypothetico-deductive pattern (Bryman 1998): problem – hypothesis – literature – data - methodology – analysis - conclusion. Instead, it identifies the strands of the phenomenon (data) and analyses the strands in situ while drawing in pertinent literature.

Otherwise, an institutional view of SN-PPP begs scholarship. Existing literature, originate mainly from the World Bank and the multi-donor trust Fund Public-Private Infrastructure Advisory Facility (PPIAF). The literature is often presented as case studies but tend to expose empirics, without the underlying institutional mechanics. For example, see PPIAF (2011). This paper moves the scholarly efforts from mere empirics to the institutional underpinnings, which reside in history.

Section 2 of the paper maps key literature that ping this case. It opens with infrastructure and growth, then the philosophy of PPP, specifics of local government in Uganda, corporatization and commercialization in the country, and finally the management of road space in the country. Unlike papers founded on the orthodox hypothetico-deductive model, the works are interwoven in the empirics of the case. That is, literature is identified along the archeological dig into the case (phenomenon). The lens of the exploration (institutional rational choice) is discussed in Section 3.

Section 4 presents the synthesized prototype. The conclusion is presented in Section 5.

2. Literature

2.1 Infrastructure and the Economy

The link between rural roads and social welfare (particularly rural economy) should be delineated within a broader framework of infrastructure and the economy. This approach is vital because rural roads do not exist in isolation. Not only do they form part of the wider transport network, they are part of national infrastructure – where infrastructure is defined as follows:

> *Those structural elements of an economy that facilitate the flow of goods and services between buyers and sellers. Examples of these structural elements are communications and transport (roads, railways, harbours, airports, telephones, etc), housing, sewerage, power systems etc* (Source: Macmillan Dictionary of Modern Economics)

Literature on the economics of infrastructure uses a dichotomy of social and economic infrastructure. The latter includes transport, energy and telecommunications networks. Social infrastructure includes educational facilities, hospitals and public buildings.

The science of infrastructure and the economy is nascent. The equity front (distributional effect of infrastructure investment) has progressed less than the growth front. However, of the leading works, Calderón and Servén (2004) use panel data from 100 countries and spanning 40 years (1960 – 2000) to estimate the impact of infrastructure investment on both growth and income distribution. The results (Table 1) show growth positively affected by infrastructure stock, and income inequality declining with higher infrastructure quantity and quality.

Table 1 also shows that infrastructure stocks have a negative and significant impact on the Gini coefficient. Intuition holds that well-developed public infrastructure across a country provides free input to production for the poor. It eliminates rent-seeking middlemen. Moreover, it has a production spillover effect. It diffuses innovation.

The most significant attempt at quantitative assessment of the economic impact of infrastructure investment in SSA was by Estache et al. (2005). The paper followed two decades (1980s and 1990s) when infrastructure investment in SSA was top of the agenda, but without a matching scientific foundation. It is obvious infrastructure enhances human capital. However, the inclusion of infrastructure in formal models has continued to be a challenge (highlighted by the emergence of endogenous models). A key reason is lack of quality data.

The authors use augmented Solow growth model to test the importance of investing in the different infrastructure sectors. The results (Table 2) show all infrastructure variables (and particularly roads) significantly affect GDP per capita, after controlling for education and total investment.

While the empirical analyses of this section show progress in the science of infrastructure investment, they use worldwide and regional (SSA) data. However, the empirical works do not capture the institutional nuances that would instruct the mechanics of infrastructure and growth in a district in Uganda, for instance. That means the analyses serve a methodological purpose more than they do policy instruction. For SSA to employ science in the formulation infrastructure policy, the region needs strong spatial data infrastructure (SDI), which would pave way for rigorous modelling. However, such SDI will require robust frames of the different facets of infrastructure. These frames will in turn require a rich collection of cases such as this SN-PPP paper.

If the literature held up (i.e. Estache 2005), these results would show (*ceteris paribus*) that doubling the length of paved roads is associated with approximately 30 percent increase in per capita income (η=0.34). This observation assumes the SSA results were considered applicable to the narrow context of Uganda, and assume constant efficiency of the roads sector. The same specification shows that doubling the proportion of secondary school completion would be associated with nearly 50 percent increase in per capita income (η=0.45).

Moreover, a trebling of per capita income is associated with a fourfold increase in passenger traffic (cf. ECMT, 2003: elasticity of traffic w.r.t GDP p459). Assuming growth in real GDP of 6 percent over the next 20 years, that would require that (or imply) Uganda doubles the length of paved roads. In that case, the country would need to upgrade an extra 10,000 km of the road network to paved standard.

Table 1: Impact of Infrastructure on Growth and Income Distribution
(Calderón and Servén, 2004)

	Variable			
	Infrastructure Stock[1]	Roads[2]	Roads + Rail[3]	Power[4]
Growth	0.0072 ** (0.00)	0.0070 ** (0.00)	0.0077 ** (0.00)	0.0120 * (0.01)
Income Distribution	-0.0327 ** (0.01)	-	-	-

[1] Normalized [for multicollinearity] aggregate of main telephone lines per 1000 workers, energy generating capacity (in GW per 1000 workers), and total roads (in km. per sq. km.)
[2] Total road km per sq. km
[3] Paved roads and rail (km per sq. km)
[4] GW per 1000 workers

Overarching Notes:

1. The estimation used pooled OLS
2. Standard errors are in parenthesis; * (**) implies that the variable is significant at the 10 (5) percent level.
3. The growth estimates accrue from the equation

$$y_{it} - y_{it-1} = \alpha\, y_{it-1} + \phi' K_{it} + \gamma' Z_{it} + \mu_t + \eta_i + \varepsilon_{it}$$

Where:

K is a set of standard growth or inequality determinants, and Z is a vector of infrastructure-related measures.

μ_t and η_i denote an unobserved common factor affecting all countries, and a country effect capturing unobserved country characteristics.

4. The estimation of distributional effect used Gini coefficient as dependent variable.

Table 2: Impact of Infrastructure on Growth in SSA

(Estache et al., 2005)

Variable	Roads		Electricity		Telecom		Water	
	BM[1]	Infra[2]	BM	Infra	BM	Infra	BM	Infra
Education	0.78 (10.56) η=0.54	0.45 (5.76) η=0.45	0.60 (6.78) η=0.60	0.47 (5.71) η=0.47	0.54 (11.30) η=0.47	0.32 (4.90) η=0.32	0.87 (11.04) η=0.76	0.73 (10.25) η=0.58
Total Investment	0.30 (2.71) η=0.23	0.08 (0.90) η=0.00	0.60 (6.78) η=0.60	0.14 (2.28) η=0.13	0.08 (1.26) η=0.00	0.32 (4.90) η=0.32	0.29 (2.33) η=0.22	0.25 (2.44) η=0.20
Infra		0.34 (6.69) η=0.34		0.50 (4.63) η=0.50		0.19 (4.78) η=0.19		0.57 (3.66) η=0.45

[1] Benchmark (BM) show estimates for human capital augmented Solow models

$$\ln(GDP) = b_0 + \delta_t + b_1[\ln(TotalInvest.) - \ln(popnGrowth - 0.05)]_{it} + b_2 \ln(Educ.) + \varepsilon_{it} \qquad (2\text{-}1)$$

Where:

i = 1,…N; t = 1,..T; N is number of years; T is the number of time periods; and δ_t is a set of time dummies. Note: The sum of the growth rate of technology and the rate of capital depreciation ($g + \delta$) is assumed to be 0.05.

[2] The estimation of infrastructure (Infra) impact considers each sector separately using the following specification:

$$\ln(GDP) = b_0 + \delta_t + b_1 \ln(Infr)_{it} + b_2[\ln(TotalInvest.) - \ln(popnGrowth - 0.05)]_{it} + b_3 \ln(Educ.) + \varepsilon_{it} \qquad (2\text{-}2)$$

Roads is in km of paved roads per capita, Water as percentage of population with access to an improved water source, and Electricity as apparent consumption in kilotons of oil equivalent per capita.

Overarching Notes:

1. Equations (2-1) and (2-2) draw from the standard Solow model:

$$y^* = \ln A(0) + gt + \frac{\alpha}{1-\alpha}[\ln(s_k) - \ln(n + g + \delta)] + \frac{\beta}{1-\alpha}\ln(h^*) \qquad (2\text{-}3)$$

Where:

$y^* = \frac{Y_{(t)}}{L_{(t)}}$

g = Technology growth rate [exogenous]

n = Labour growth rate [exogenous]

δ = Capital depreciation rate

s_k = Investment in capital [income share of capital under perfect competition]

$h^* = \left[\frac{s_k{}^{\alpha} Is_h{}^{1-\alpha}}{n+g+\delta}\right]^{1/(1-\alpha-\beta)}$

2. t–statistic is in parenthesis
3. Elasticity (η) is implied. The model uses GLS not standard OLS as a control for multicollinearity and endogeneity.

2.2 The Philosophy of Public-Private Partnerships (PPP)

Investment gap in the infrastructure sector of Sub-Saharan Africa (SSA) is approximately 10 percent of GDP. Further, tax revenue is only approximately 18 percent of GDP, and yet public spending represents 24 percent of GDP. Considering the urgency of other competing sectors, it is evident that the region cannot fund its infrastructure needs using public finance only. Working on the premise of diminishing donor support, the region must either increase its tax revenue or attract private finance – domestic and foreign. Tax revenue hinges on growth, which relies on infrastructure. That means it is almost a given that the region must turn to private finance.

Public-Private Partnership (PPP) is often reduced to private financing of infrastructure. This is misleading. First, PPP is not just private financing. Moreover, it is not just a device for infrastructure. So then, what is PPP?

Public-Private Partnership is a cooperative arrangement between the public and private sectors that aims to mutually manage project risks and share ensuing rewards. Consequently, PPP allocates risk to the party better positioned to manage the risk. Furthermore, risks that appeal to PPP are associated with long-term project – hence PPP is often long-term. It is not long-term by definition but by consequence.

Why is it important to make a clinical definition of PPP? The concept butts the complex web of the public sector with the private sector. A loose definition will leave out influential components, which will eventually undermine the application of PPP.

Why must PPP be a philosophy of government? Public-Private Partnership is a fusion of the private sector and the state, and the fusion is on risk. For this fusion to be effective and sustainable, it must draw the straws of the institution of the public sector - norms, values and practices of public space (North 1990). That means the two spheres (public and private) must have a good appreciation of each other. In particular, the public sector must adopt the business discipline of the private sector. The government must therefore nurture the institution of the public sector to blend in the discipline of the private sector. Therefore, PPP must be part of the bedrock of government. It must be a philosophy of government.

The UK offers a good example of bedding PPP. That does not mean the application of PPP in the UK is flawless. It is not. However, a trace of success points of PPP in the UK leads to the bedrock of government, and exposes a strenuous effort at institutional training.

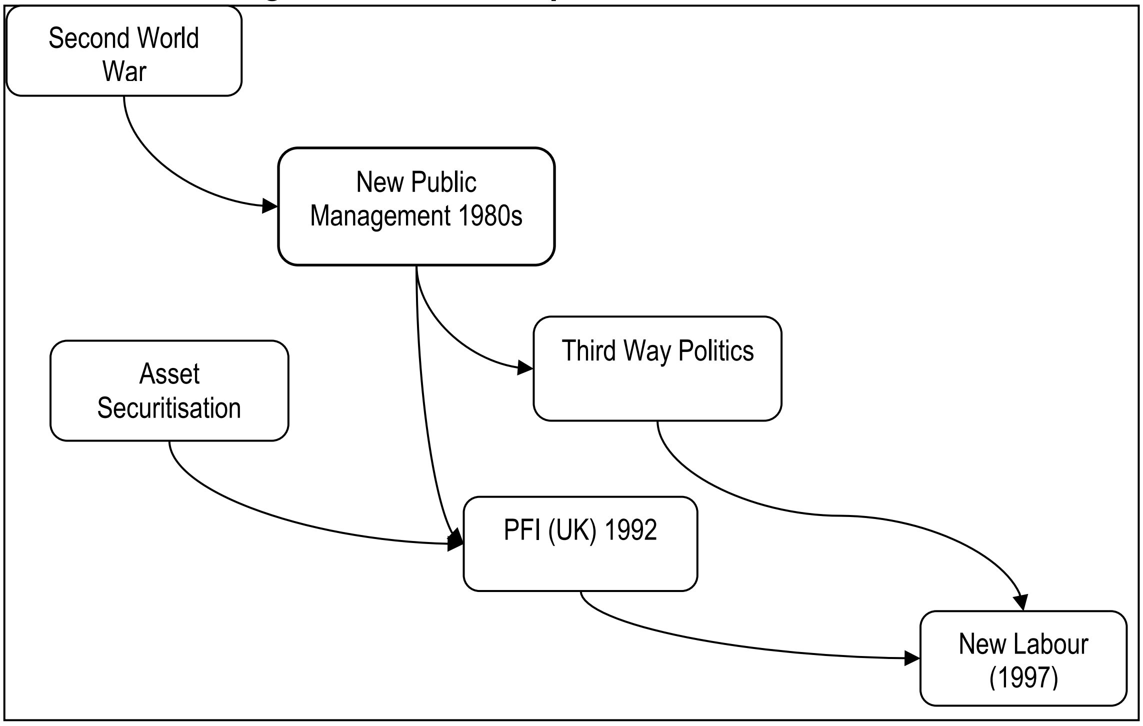
At the heart of institutional reforms in the UK is NPM (Figure 1). The government became leaner and more open. The discipline of the private sector was the relish of ministries, departments and agencies (Flynn 2001). These changes were a shift from the burgeoning of the state following the post-War reconstruction.

The NPM wave provided a foundation for Third Way Politics of the early 1990s. Third Way was a resolution of the rightwing small-state ideology and the leftwing socialist (and statist) thinking. Third Way was the reemergence of the anti-bureaucracy undercurrent of the early 20th century that was subsumed by the Second World War and the post-War reconstruction. This school, with leaders like Ludwig von Mises (1951), considered government a giant bureaucracy with no means of restraining itself, and hence imputing the need for a cord anchored in the private sector (the market). This argument was reinforced by the scholarship of Friedrich Hayek that painted central planning as a dictatorship of ignorance. These currents inspired Third Way.

As NPM was gaining momentum, alongside, asset securitization (the aggregation, repackaging and selling of assets) that started in the 1970s was also growing. Causality of this wave (w.r.t. Third Way) is beyond the scope of this paper. What is clear is that the two created an environment ripe for Private Finance Initiative of the early 1990s. New Labour rode this wave. The Labour Manifesto of 1997 was founded on PPP. Once in government, New Labour launched finer reforms of the construction industry, moving away from the adversarial client-contractor relationship (Latham 1994). The stage was set for a series of long-term contracts that entailed joint risk management between the public and private sector. That was the launch of PPP in the UK.

It must be emphasized that the genesis and propagation of PPP in the UK is not a perfect model to be adopted by developing countries. In any case, the socio-political context of the UK cannot be re-laid. However, it instructs on the need to define PPP appropriately and to harness the existing economic, political and sociological forces to ensure its success. That reduces to the agility of the private sector enhancing the prowess of the state, and improving the efficiency of public service.

Figure 1: The Development of PPP in the UK



2.3 Local Government in Uganda

Evolution of Local Government

The local government in Uganda is not an organisation of Walrasian *homo economicus*. It is an organization comprising and guiding individuals controlled by the institution – the norms, values and practices of society. Therefore, to understand the present condition of the local government, one must lay out the evolution of the institution. That requires a trace of the present local government. The challenge of such a trace is establishing the starting point. This paper picked independence (1962).

The independence constitution was quasi-federal. It identified four kingdoms of Buganda, Ankole, Bunyoro and Toro. Buganda was granted federal status. The others were semi-federal. Busoga was identified a territory – a rather ambiguous term. In addition, it identified ten districts: Acholi, Bugisu, Bukedi, Karamoja, Kigezi, Lango, Madi, Sebei, Teso and West Nile. The population was 7.3 million.

The independence constitution was always in a tension between the forces of nationalism and federalism. It was abrogated in 1966 and new republican constitution enacted in 1967. The Kingdom of Buganda was divided into East Mengo, Masaka, Mubende and West Mengo. The other kingdoms became districts under the same names. The Amin regime abolished the constitution, and dissolved districts and urban administrations. Military officers took charge as governors. Decentralised rule was halted. Decentralization would experience a slow rebirth following the overthrow of the Amin in 1979.

The rebirth of decentralization of the 1980s coincided with a global wave of decentralization (World Bank 2000). This wave premised on the argument that decentralization brings policy actors (and the supporting technocracy) closer to the centre of electoral pressure. This wave was also driven by the philosophy of NPM [New Public Management].

Present Constitutional Foundation of Local Government

Today, the devolution is much deeper than the 1980s. The country comprises 112 districts under a new constitution (the 1995 Constitution). The population is approximately 35 million according to the national bureau of statistics. That should mean the agents of the state are closer to a higher concentration of the electorate. On the other hand, it may imply a thinning out of technical capacity. The consequences of the present level of decentralization feed the analysis of the SN-PPP prototype in Section **Error! Reference source not found.** (a critique of the arrangement is beyond the scope of this paper). This section explores Local Government Act of 1997, an elaboration of the 1995 Constitution.

The present Constitution provides local governments the autonomy to initiate and execute policies on matters affecting people within their jurisdiction (Box 1). In itself, that implies local governments can initiate, develop and execute PPP policy. However, this constitutional provision interacts with the complete body of the constitution. Are there any restricting provisions, and what is the practicability of this policy autonomy?

Box 1: Constitutional Provision: Autonomy of Local Government

> *(d) there shall be established for each local government unit a sound financial base with reliable sources of revenue;*
>
> *(e) appropriate measures shall be taken to enable local government units to plan, initiate and execute policies in respect of all matters affecting the people within their jurisdictions* (Cap 11 Art 176 Constitution of Uganda, 1995)

The force of adult suffrage undergirds service delivery in local governments (Figure 2). However, the central government still provides a control mechanism for the action of local elected leaders. This control hinges on the presidency. The choices of adult suffrage culminate in the District Service Commission and District Administrative Officer. The two have the authority to moot and develop a district fund, which could inspire SN-PPP.

Provisions for PPP in the Interaction of Local and Central Governments

This section is not a review of the organisations and instruments of local and central governments. It is merely an exposition. The section sketches the platform of interaction for future SN-PPP. The [present] Constitution stipulates:

> *District councils shall prepare comprehensive and integrated development plans incorporating the plans of lower level local governments for submission to the National Planning Authority.* (Cap 11 Art 190 Constitution of Uganda, 1995)

Moreover, it provides for the NPA as follows:

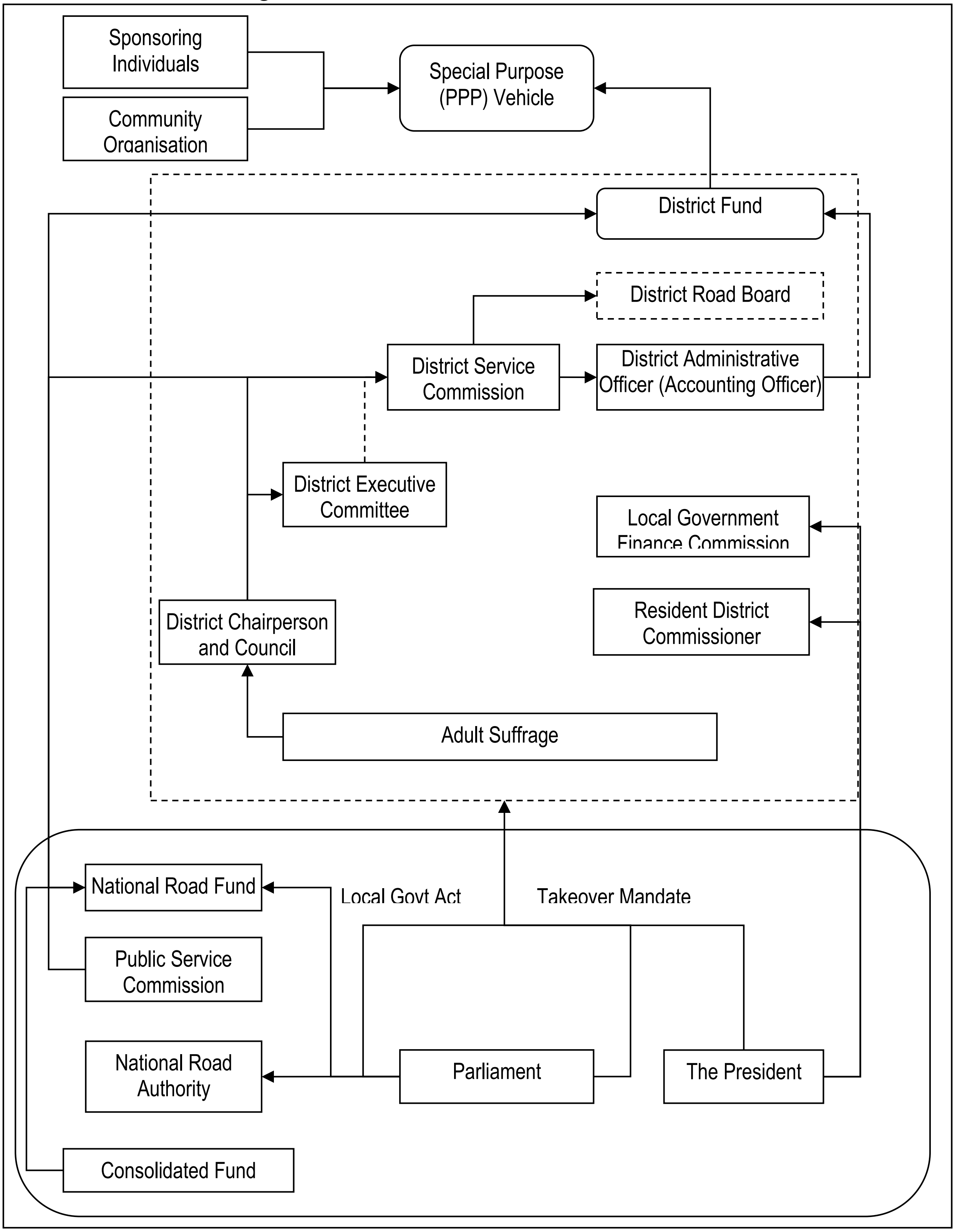
> *Design and implement programmes to develop planning capacity in local governments* (Art 7 National Planning Authority Act, 2002)

Subsequently, the NDP addresses the opportunities for PPP as follows:

> *International experience suggests that co-operation between the public and private sectors in form of public-private sector partnerships (PPP) can be a powerful incentive for improving the quality and efficiency of public services, and a means of public infrastructure financing. PPP describes a Government service or private business venture which is funded and operated through a partnership of Government and one or more private sector entities. It involves a contract between a Government authority and a private sector party. A policy framework to guide Public-Private Sector Partnerships will be formulated... In general, however, PPPs will be encouraged and promoted in the provision of infrastructure and energy, as well as huge undertakings which require substantial financial resource outlay.* (National Development Policy, p63)

What does the NDP offer districts w.r.t. development of PPP? Moreover, which entity is likely to initiate SN-PPP – Central Government (NPA) or local governments? The NDP is silent on the subject. The PPP framework policy that followed the NDP restricts PPP to major national projects. Given the low appreciation of SN-PPP at both the central and local government levels, it leaves individual leaders (the so-called elite) as the likely source of impetus for SN-PPP.

Figure 2: The Arena of Local Government



2.4 Corporatization and Commercialization in Uganda

The development of PPP hinges on a stable state and vibrant corporate sector - PPP is a fusion of the two. The paper will focus on the corporate sector. How developed is it? More precisely, what is the institution of corporatization in Uganda?

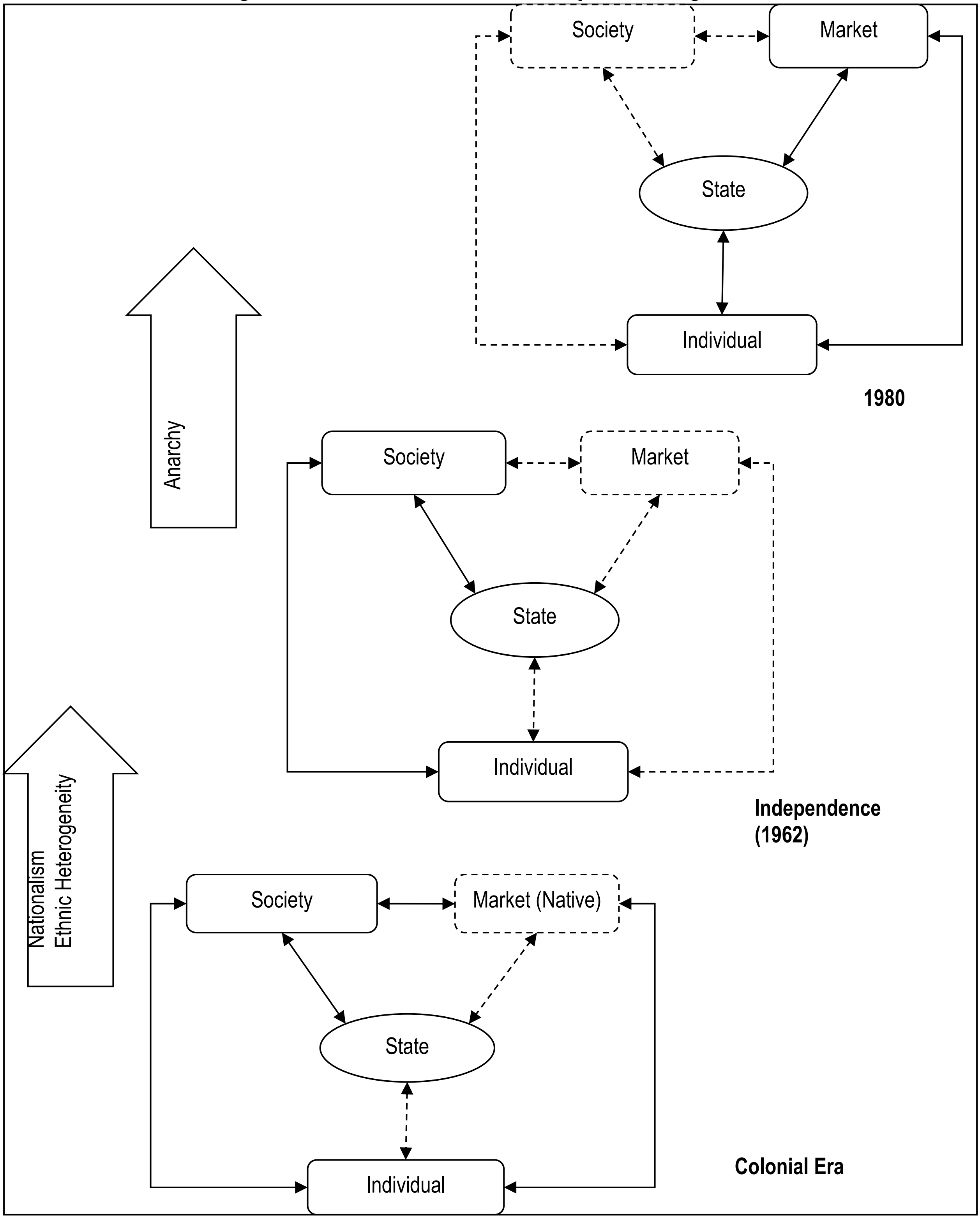
Up to independence in 1962, Uganda was largely a feudal state. The chiefs and royals of the south owned land and the rest were locked as labourers. The country was a supplier of raw materials, and natives were not significant actors in this trade (Figure 3). The north and east, which was mainly a kinship society, had one main feed to the central government – the military. The west was dominantly pastoralist.

Therefore, the main challenge of the nationalist actors of independence was opening commerce to natives. How could this be achieved? The few educated Ugandans (channeled through Makerere), were being upgraded from clerical to decision-making roles. The clerical sphere (as well as internal trade) had been a domain of the Asians. Therefore, at independence, the nationalization of industry was inevitable. Moreover, this drive to empower natives (‘Africanization’) took a dramatic turn after the 197l military coup. Trade and property was removed from Asians and placed in the hands of natives who were not trained for their management. The chaos of the 1970s halted any corporatization and commercialization of private space that could have followed the post-independence nationalization.

When the state tended to normalcy in the 1980s, it encountered SAP. The few businesses (parastatals) existent in the early 1990s would be snatched by the privileged under privatization. Was there another way given the strength of the SAP-driven privatization? A few of these businesses have survived and contributed the slow growth of corporate entities in Uganda today. Mamdani (1976) and Mutibwa (1992) offer good treatment of this history.

Consequently, most enterprises in Uganda today are mooted and pivoted on individuals. Therefore, in designing the prototype SN-PPP, the individual was chosen as the pivot. This is not ideal. Corporate entities should be the basis – bringing stability. However, reality must be respected.

Figure 3: Evolution of Public Space in Uganda

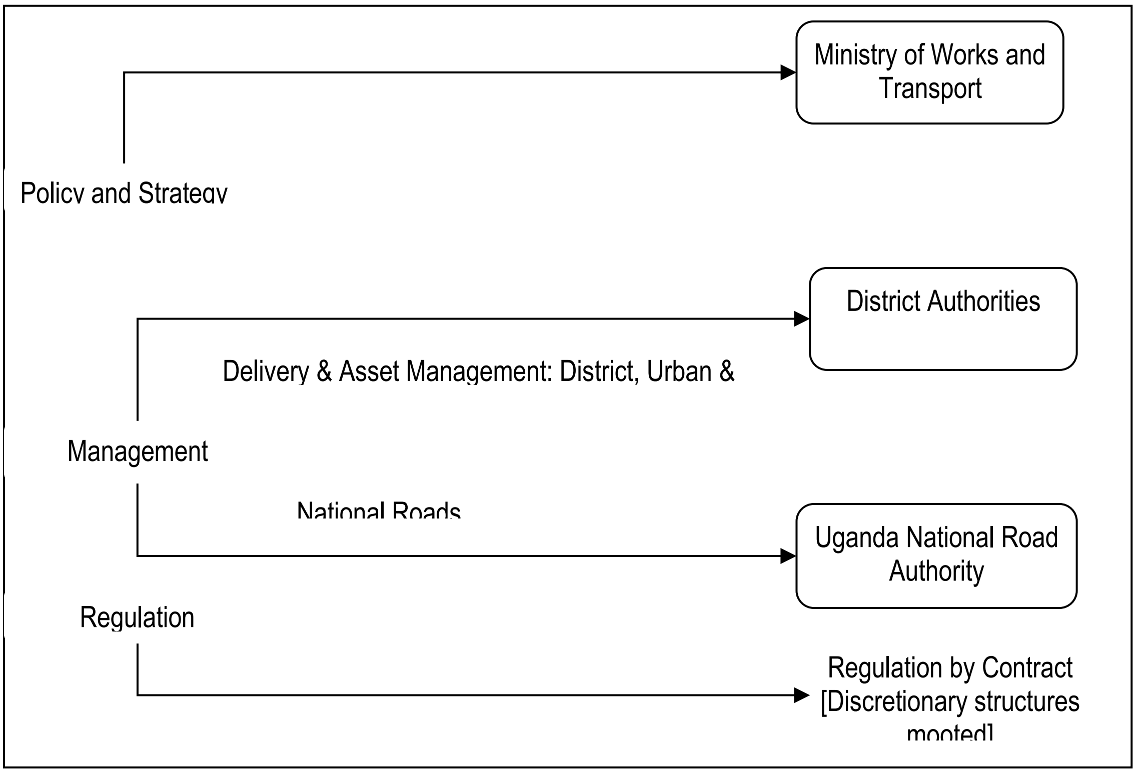


Note: Dashed lines show missing entities

2.5 The Present Framework for Road Management

Road management in Uganda is captured in Figure 4. The Ministry of Works and Transport focuses on policy and strategy. Uganda National Road Authority manages the trunk road network (national roads). The district authorities manage feeder, community and urban roads in their jurisdiction, in line with the 1997 Local Government Act.

Figure 4: Present Road Management Framework



From Independence until the 1980s, the Ministry of Works performed both the client and supplier roles. This was in common with the trend across developing countries (Amonya 2006). Under Road Management Initiative (RMI) – a part of the Structural Adjustment Programme (SAP) – the Ministry started shedding off the supplier function. By the financial year 2011/12, the use of force account was minimal. Both the districts and central government employed contractors and consultants to deliver road space. However, this approach has been under strain. The districts struggled to deliver efficient road space. This prompted the Government to purchase road construction equipment in a drift back to force account (i.e. the districts assuming both client and supplier roles).

Why did the districts struggle to deliver road service as client in a market system? Is a drift back to force account the remedy? How will this move affect private enterprise and skills required for SN-PPP? The forensic work that should answer these questions is beyond the scope of this paper. However, the move back to force account is a retardant to SN-PPP. In the long run, however, the agency of the state will not have the agility to efficiently deliver road space. It is therefore vital that scholarship brings SN-PPP to focus.

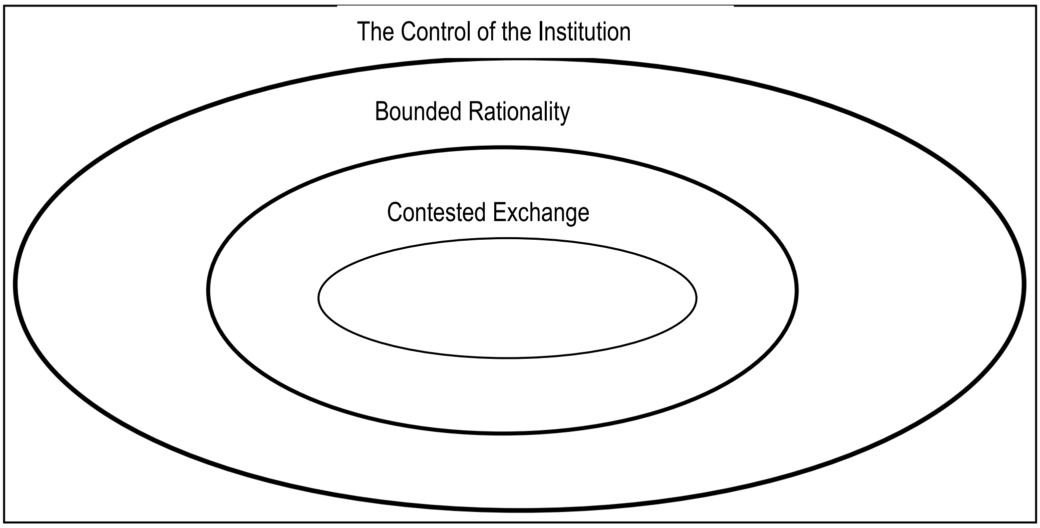
3. Nested Synthesizing Frame - Nested Institutional Rational Choice (IRC) Model

3.1 Institutional Rational Choice

Risk is the backbone of PPP. At the level of transactions, PPP reduces to a market for risk. What is the appropriate framework for forming SN-PPP?
Rational Choice (RC) has been the predominant framework for organising economic space. It supposes individuals will always want more of a good, and they have the capacity to work out the optimal means to their desires. Therefore, individuals make choices on the basis on rationality, and specifically instrumental rationality (i.e. a rationality that considers other actors and the environment in contrast to value rationality that is intrinsic).

The RC framework assumes individuals have complete information and the cognitive ability to fully examine available alternatives. However, schools of thought post-War (World War II) have questioned the limits of information, cognitive capacity and time available to individuals. Leading this school was Herbert Simon (1957). He coined Bounded Rationality. That forms the inner ring of our IRC framework (Figure 5).

Figure 5: Contested Exchange within the IRC Lenses



Moreover, the RC framework starts with the supposition individuals have alternatives, and ends premising they have, and will apply, the means to make choices that are optimal to them as individuals. Starting in the seventies, scholars have questioned the role of the institution (norms, values and practices of society) against the rationality framework. Elinor Ostrom (1977 and 1991) and Douglas North (1992) provided the intellectual impetus for this dialogue. There is now broad agreement that institutions matter. Institutions control economic space. This control is the outer ring of our IRC framework. We have added a new lens that focuses on transactions. It is Contested Exchange (Bowles and Gintis, 1993).

3.2 Contested Exchange: The Market for Risk

How do agents of economic transactions interact? What motivates them? What restricts them? Rational Choice paints an arena on which the only motivation is the benefit to the individual and the restriction is the price levied by the other agent. The IRC framework places institutional and cognitive bounds. Contested Exchange places closer restrictions.

First, it emphasizes the market, and not just society, as an institution. To this end, market players are simply exogenously determined agents. The character of the agents is modified by the market. Therefore, the market is not apolitical. It is a power contest.

Moreover, what happens when the good exchanged is not subject to determinate contractual specification (as indeed is the case with risk)? In such cases, discretionary regulation is employed. The terms of exchange are continually reviewed by the regulatory structures, hence determined ex post and piecemeal. How are the regulatory structures determined? The buyer [in this case the public authority] sets the initial structure – both the determinate component (by contract) and indeterminate (discretionary) component.

The initial regulatory structure will then be subject to [endogenous] negotiation. The final structure will reflect the power tilts of the buyer and seller along the different strands of negotiation. The main strands are the threat of nonrenewal and the next best alternative.

These strands of negotiation make a contested exchange. The buyer may make an offer better than the best next alternative, contingent on the behaviour of the seller (the "shorter side agent"). The difference constitutes enforcement rent. Conversely, the seller may offer the enforcement rent. This results in a competitive equilibrium where the power holder retains control over enforcement rent, and the market does not clear.

The inner lens of contested exchange that this paper employs will identify the short and long sides of the prototype SN-PPP for Uganda, and analyse the drivers of enforcement rent.

4. The Prototype

4.1 Structure

Societies reduce to individuals bound by institutions (structure). That is an axiom. A prototype of societal enterprise, such as SN-PPP, must use both elements (the individual and institution). The individual cannot exist entirely free from the institution. In this case, the institution is the set of norms, values and practices of the market.

The tool for building this prototype is the philosophy of PPP. In outline, it is the fusion of the state and private sector with a sole objective of managing complex risks of delivering public service.

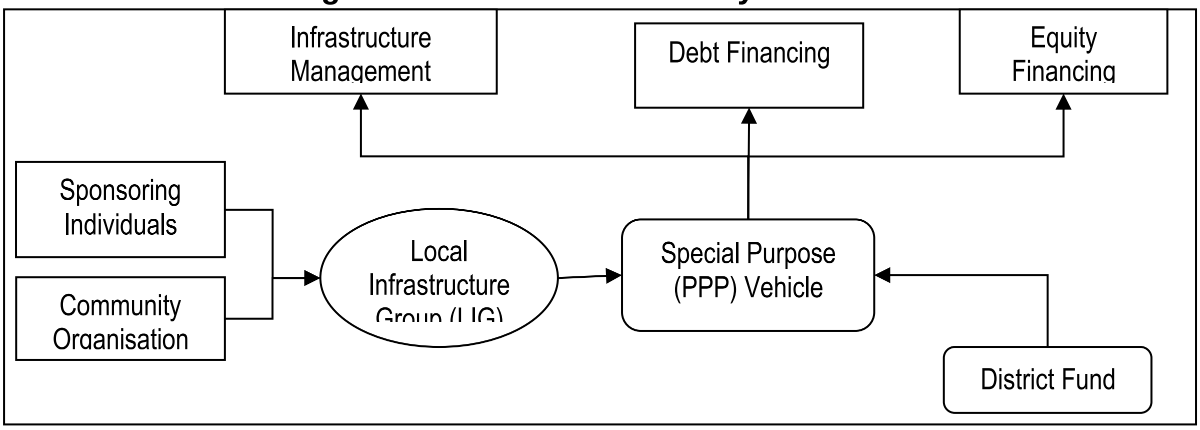
So then, what is the mechanics of the individual and the institution in Uganda? The empirics of history in the preceding sections show that, first, the situation is not homogenous. The [contemporary] local governments are built on different institutional platforms. In the south, for instance, the institution of the monarchy dominated the field of trade. That was the case a century ago, which is a short time in respect to institutional evolution. In the north and east, the centripetal force of the institution was much lighter. Societies existed in kinships. The west can be considered a median case.

Given this heterogeneity, how can a unified prototype SN-PPP for Uganda be constructed? In most considerations of PPP, institutions are ignored. The transactions will identify 'political and governance' risk but that is only the superstructure of government. It does not capture the complex values and norms that underpin government and society. Assuming away the institution makes it easy to import a model. This approach leaves PPP models susceptible to surprises of institutional influences, and that seems to explain the many distresses of PPP across the world.

The question lingers. What assumptions can be made to create a reasonably uniform institution for Uganda? The prototype assumes monarchical structures have no effect, but individuals remain inherently obligated to the welfare of the communes. This means elite individuals are disposed to forming cooperative groups for improving local welfare. However, the societal shocks of the last 100 years (pre and post-Independence) have not allowed these groups to develop. Therefore, the urge to form cooperative enterprises exists but individuals remain in isolation.

On the assumption above the prototype in Figure 6 rests. It pivots on the individual. Elite individuals organise their communities to form Local Infrastructure Groups (LIG). The LIG then inspires the districts to form a District Infrastructure Fund (DIF). The DIF and LIG then form the usual Special Purpose Vehicle (SPV), which is a joint risk management facility between the state and the private sector. The SPV then seeks debt and equity finance, and expertise in infrastructure asset management, in the usual way.

Figure 6: The SN-PPP Delivery Structure



4.2 The Verification Process

Prototyping a socio-economic phenomenon poses a challenge atypical to natural science. A socio-economic prototype will not have a controlled environment for testing the logic and functions of the prototype. Moreover, in the case of a socio-economic prototype like the present, the period of verification will be relatively long.

Therefore, this paper argues for a modular approach to verification across kindred economies of SSA. The modules are three (cf. Figure 6). The first is the LIG. The logic of individuals emerging, coalescing with other individuals, and inspiring the community to form the LIG needs to be tested. The functions are the motivation of the individuals, the reception of the community, and the performance of the LIG.

The second module is the DIF. The motivation is tri-stream: elite individuals from the infrastructure locale, the district (local government) actors, and the central government representatives. Which is the strongest stream? When and why? How does the motivation of the stream influence the formation of the fund?

The third module is the SPV. How does the formative process of the LIG and DIF influence the performance of the SPV? Particularly, how does it affect the infrastructure management and financing (debt and equity) functions?

Many tools (lenses) of verification should emerge. However, the effective tool will be a genre of the IRC frame. Otherwise, the tool will miss the defining effect of the institution. The paper proposes Contested Exchange (CE) as the inner lens. For CE to be effective, it should be simple. It should be reduced to the identification of the long and short side actors, and the motivation of either side.
The test sites will be community roads and the trans-district feeder roads. For community roads, youth groups and association of women should be suitable partners for the often non-resident elite individuals. Trans-district projects will require a coalition of youth and women groups, and ethnic development groups. Moreover, it will require a coalition of the elite from the different districts.

5. Conclusion

Like the rest of SSA, Uganda faces a challenge of financing infrastructure. This challenge is coupled with a low capacity of the agency of state. In the long-run, therefore, PPP seems inevitable. This paper is a case study yielding a prototype SN-PPP. The prototype comprises three modules: Local Infrastructure Group (LIG), District Infrastructure Fund (DIF), and the Special Purpose Vehicle (SPV). The paper also presents a verification framework for the prototype. The framework uses Contested Exchange encased in Institutional Rational Choice (IRC). Each of the three modules appeals for a deeper investigation of institutional dynamics. That is, how do the constructs interact with the strictures of values and norms of the societies? Such illumination requires practical projects. These will emerge as the nascent wave of PPP matures. Scholarship should pay attention.

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