

**Article Type:** Research Paper

Social Networks-Budgetary Discipline Linkages in Sub-National Entities

Paul Onyango-Delewa^{1*}

Abstract: This research intervenes with the seemingly endless empirical debate that seeks explanation to the notorious budgetary discipline problem in the local government. Some scholars attribute it to social networks, but others emphasize entity internal control systems. Supported by budgetary theory-structural equation modeling (SEM) triangulation, the researchers examined data from 33 districts, seven municipalities, and 345 sub-counties in Uganda (East Africa)'s north-western and eastern regions. The SEM results revealed that socio-economic structures and partisan politics are key social network constructs to predict budgetary discipline. However, another attribute, ethnicity, is not. Additionally, the internal control system mediates the social networks-budgetary discipline relationship as initially anticipated. Implications for theory and practice are discussed.

Keywords: Local Government; Budgetary Discipline; Internal Control Systems; Social Networks

JEL Classification: H7, H6

**AFFILIATION:**

¹ Department of Accounting and Finance, Faculty of Business and Development Studies, Gulu University, Gulu, Uganda

***CORRESPONDENCE:**

ponydel2005@gmail.com

THIS ARTICLE IS AVAILABILE IN:

<http://journal.umy.ac.id/index.php/esp>

DOI: 10.18196/jesp.v22i1.10576

CITATION:

Onyango-Delewa, P. (2021). Social Networks-Budgetary Discipline Linkages in Sub-National Entities. *Jurnal Ekonomi & Studi Pembangunan*, 22(1), 110-127.

ARTICLE HISTORY**Received:**

11 Dec 2020

Revised:

21 Jan 2021

17 Mar 2021

Accepted:

05 Apr 2021

Introduction

Contemporary fiscal federalism policy in numerous economies of both the developed and developing world claims that achieving budgetary discipline in sub-national entities is quite feasible (Özer & Yilmaz, 2011; Mergel, Rethemeyer & Kimberley, 2016). Contrarily, the collective theory-research-practice view suggests that sub-national entity budgetary discipline is mainly illusionary and cannot be attained easily. It is evident mainly in resource-constrained, ethnically driven, and partisan politics-focused local governments in various countries of the developing world (Egbide & Agbude, 2014; Willoughby, 2014; Davis, Dempster & Wildavsky, 1966).

The preceding seemingly endless empirical debate renders what persuasively explain budgetary discipline in sub-national entities a non-directional issue. Accordingly, some scholars (e.g., Lavertu, 2015; Porumbescu, 2016; Skoric et al., Goh, 2016) assert that budgetary discipline can easily be propelled by changes in entity social networks. Other researchers (Giosi et al., 2014; Petterson-Lidbom, 2010; Stedry, 1960) argue that; consistent with the budgetary theory and fiscal federalism policy, and social networks can only promote budgetary

discipline if supported by an efficient internal control system.

In intervention, this research examined social networks-internal control systems-budgetary discipline connectivity in sub-national entities of Sub-Saharan Africa. Specifically, the investigation was centered on operations of 33 districts, seven municipalities, and 345 sub-counties scattered in the north-western and eastern regions of Uganda, an East African country. In recent decades, the country has received surmountable acclaim for its fiscal federalism approach and has been a research focal point (Egbide & Agbude, 2014; Ministry of Local Government, 2019).

The study makes many contributions to literature. First, drawing on the fiscal federalism perspective, its findings contribute to the local government budgetary literature by examining whether budgetary discipline can be achieved from a social network context. Given that prior Sub-Saharan Africa localities-focused research (e.g., Egbide & Agbude, 2014; Nicolae, 2013) often overlooked budgetary discipline-social network linkages, this undertaking is considered empirically novel and innovative.

Second, the study goes deeper by also exploring the apparent mediating influence of internal control systems on the region's local entity budgetary discipline-social network triangulation. Consistent with existing literature (Oliveira & Welch, 2013; Porumbescu, 2016), Sub-Saharan African-based fiscal federalism has long been driven by generally weak internal control systems considerations.

Third, the research employed the budgetary theory underpinnings to explore the possible social network-internal control systems-budgetary discipline relationships in the local government. This theory was formulated and has been primarily employed in the western world (Davis et al., 1966; Rubin, 1990; Stedry, 1960). Its application in African localities research thus amounts to yet another tremendous empirical contribution to the literature.

Budgetary discipline in sub-national and specifically local government entities constitutes a legal instrument (Willoughby, 2014). Fundamentally, it is meant to be complied with to enhance locality fiscal planning, implementation, and accountability (Nicolae, 2013). As noted recently by Mergel et al. (2016), in practice, however, budgetary discipline structure is often compromised and violated by individual persons and groups through rent-seeking practices. Consequently, related regulations are frequently violated to exploit public funds for personal and group interests (Mergel et al., 2016; Willoughby, 2014).

Both budgetary theory and literature have traditionally associated local entity budgetary discipline with three basic constructs: common pool set-up, fiscal bailouts, and grants policy (Davis et al., 1966; Stedry, 1960; Egbide & Agbude, 2014; Nicolae, 2013; Özer & Yilmaz, 2011; Willoughby, 2014). A budgetary theory that underscores fiscal incrementalism as a prerequisite for societal demand dynamics posits that local entity efficiency can only be attained through budgetary discipline (Davis et al., 1966; Stedry, 1960). Later on, supported by input from Rubin (1990), this theory seems practical and

realistic in scarce-resource and yet economically demanding domains of the developing world. It explains why recent empirical works (e.g., Nicolae, 2013; Willoughby, 2014) underscore common pool set-up, fiscal bailouts, and grants policy as pivotal factors for realizing the entity budgetary discipline dream.

Budgetary discipline in majority sub-national governments in the developed and developing world is essentially a function of their common-pool structure. In line with the budgetary theory (Stedry, 1960; Davis et al., 1966; Rubin, 1990) position and exemplified by recent research (Nicolae, 2013; Willoughby, 2014), the financing of specific community expenditure is often shared among different entity interest groups. It implies that each interest group holds a motive of free-riding on the groups' contributions. Accordingly, overspending bias, a budgetary indiscipline signal, arises, often very complicated to manage (Nicolae, 2013; Stedry, 1960).

To date, theory, research, and practice are not conclusive on what can fully address the common-pool challenge in the local government. However, some scholars (e.g., Özer & Yilmaz, 2011) suggest that entities should always emphasize budgetary institutions' compliance and proper social network management. The institutions are basically the formal and informal rules governing budgetary decisions of the executive and legislative branches of government (Özer & Yilmaz, 2011; Willoughby, 2014).

Some research, notably, Egbide and Agbude (2014), posit that political fragmentation and decision-making weaknesses, typical of Sub-Saharan African localities, should be maturely addressed. The two are explicit models of social network machination (Egbide & Agbude, 2014). Several local governments, especially in the developing world, tend to over-spend and accumulate debt either deliberately or in ignorance of ultimate consequences. This fiscal misconduct, typical of budgetary indiscipline, often affects the future provision of sensitive public services such as health, education, water and sanitation, and road maintenance (Besfamille & Lockwood, 2008).

To sustain expected service delivery to the innocent citizens, the central government is compelled to step in and rescue the situation; the action is technically referred to as fiscal bailout (Besfamille & Lockwood, 2008; Özer & Yilmaz, 2011). In compliance with the budget theory (Stedry, 1960; Rubin, 1990) view that bailouts weaken entity budgetary discipline tremendously, recent studies (e.g., Giosi et al., 2014; Cao et al., 2013; Lavertu, 2015; Porumbescu, 2016) advice that central authorities should avoid the bailout practice.

In Sub-Saharan Africa, several countries; notably, Uganda, Ethiopia, Ghana, Kenya, Nigeria, and South Africa, run fiscal regulations that slab local governments from accessing loans. Thus, no entity is mandated to borrow from either local or international financial institutions. This action has significantly helped mitigate the entity debt problem and minimized bailouts (Egbide & Agbude, 2014; Mergel et al., 2016). In Uganda, for instance, central authorities have also espoused strict measures to counter entity overspending tendencies regardless of inter-entity revenue generation variances (Egbide & Agbude, 2014).

The manner grants or intergovernmental fiscal transfers (IGFTs) policy is constituted and later implemented, which has profound implications not only for local entity fiscal sustainability but also for their budgetary discipline (Skoric, Zhu & Goh, 2016). Essentially, the primary purpose of IGFTs is to help fund sub-national public infrastructure and service delivery as a contribution from the central government. The grants are also meant to enhance local revenue capacity. It implies that for effective implementation, the IGFTs governing policy must be systematically designed. Consistent with budgetary theory (Davis et al., 1966; Rubin, 1990) and empirical evidence (Besfamille & Lockwood, 2008; Skoric et al., 2016), IGFTs policy enhances local entity budgetary discipline when the fiscal pool is adequate, the pool is transparently distributed, and the operational conditionalities surrounding it are realistic.

As Besfamille and Lockwood (2008) noted, such an IGFTs policy structure will not only promote pool utility flexibility and simplify related socio-economic adjustments but, most essentially, will significantly curtail rent-seeking inclinations. Like majority fiscal federalism states in Sub-Saharan Africa, Uganda's grants policy faces surmountable challenges in attaining the previous operational standards. Consequently, most local governments undergo persistent budgetary discipline setbacks (Egbide & Agbude, 2014). Sub-national arrangements, particularly local governments, encompass many stakeholders who frequently interact to achieve fiscal federalism objectives and essentially deliver required public services (Lavertu, 2015; Porumbescu, 2016). Key parties include entity administrators, finance officers, planning and procurement officers, community representatives, the local community, and central government. In the developing world, the donor community is another critical partner.

Both budgetary theory and fiscal federalism policy consider these inter-stakeholder linkages social networks (Lavertu, 2015; Oliveira & Welch, 2013; Porumbescu, 2016). Given that the stakeholders conceive, approve, implement, and manage entity budgets, social network analysis research (e.g., Mergel et al., 2016; Warren, Sulaiman, & Jaafar, 2014) contends that anticipated budgetary discipline must be a direct function of social networking. Accordingly, social network analysis, or SNA, constitutes a social science methodology that explains social phenomena. The SNA technique employs structural and party relational identities to indicate how information is exchanged amongst themselves. In the local government fiscal context, recent SNA empirical evidence identifies social networks with three constructs: socio-economic structure, partisan politics, and ethnicity (Warren et al., 2014; Skoric et al., 2016).

Globally, there is no federal system that holds sub-national entities with equal and similar resource-endowment. Thus, each entity has its peculiar capacity to generate local revenue dictated by its unique socio-economic framework. Divergences in fiscal capabilities; horizontal fiscal imbalances significantly affect individual budgetary priorities (Lavertu, 2015). In developing countries, notably those of Sub-Saharan Africa and Uganda, inclusive-central authorities are often compelled to extend equalization grants to bridge inter-entity fiscal imbalances. Moreover, the donor community often steps in to support central government or aid affected entities directly (Lavertu, 2015; Warren et al., 2014).

As observed by Oliveira & Welch (2013) and recently studied by Cao et al. (2013), the most vulnerable victim of fiscal federalism is individual entity budgetary discipline. The majority of local governments in Uganda, for instance, have, over the years, failed to ably manage the local tax-grants-donor aid triangulation resulting in budgetary indiscipline (Porumbescu, 2016).

From the foregoing socio-economic structure/budgetary discipline analysis, the researchers predict that:

H₁: Socio-economic structure holds a positive relationship with budgetary discipline.

Budgetary theory (Stedry, 1960; Davis et al., 1966; Rubin, 1990) posits that fiscal federalism is a component of public finance, the connectivity between the state's politics and economics. However, for political economy to operate effectively, politics must be practiced maturely and transparently. That approach not only generates local entity budgetary efficiency but also significantly enhances budgetary discipline (Davis et al., 1966; Rubin, 1990).

In developing nations, partisan politics are often driven by tribal and ethnic bias and with the ultimate goal of perpetuating political leaders' stay in power indefinitely (Cao et al., 2013; Lavertu, 2015). Related literature is drawn from various Sub-Saharan Africa countries; Uganda inclusive, (Mergel et al., 2016; Porumbescu, 2016; Skoric et al., 2016) asserts that pre-mature partisan politics often compromises local government budgetary decisions in favor of the ruling party stakeholders. Ultimately budgetary discipline efforts are not easily realized. Therefore, in line with previous partisan politics-budgetary discipline research, the researchers propose the following:

H₂: Partisan politics is positively related to budgetary discipline.

Various local governments and other sub-national entities in developing countries are often created based on tribe and ethnic size. As Lavertu (2015) and Porumbescu (2016) pointed out, the nature of public services rendered to communities and related infrastructure, including health units, schools, roads, and water and sanitation facilities, are therefore dictated by tribalism and ethnicity.

Besides, the majority entity finance and budgetary workforce is commonly drawn from the local communities and mainly on tribal-ethnic considerations. In Uganda, for instance, the District Service Commission (DSC) is the body of local government exclusively responsible for identifying and recruiting entity employees. Numerous studies (e.g., Giosi et al., 2014; Mergel et al., 2016) report evidence that the DSC machination in the country often deploys workforce regardless of their technical capabilities.

Given that the foregoing tribalism-ethnicity-workforce intricacy may not only undermine local revenue but tremendously sabotage grants-donor aid budgetary funding

configuration, it is apparent that budgetary discipline remains vulnerable. In this respect, the researchers propose the following:

H₃: The broader the entity's ethnicity base, the lesser budgetary discipline is attainable.

Governments at the central, state, or local level always endeavor to run efficient and effective financial management systems. As Davis et al. (1966) and Rubin (1990) observe in the renowned public budgetary theory, properly organized financial management mechanisms breed fiscal transparency and, eventually, budgetary discipline. Moreover, the empirical work of Giosi et al. (2014) and Pettersson-Lidbom (2010) revealed that embedded within majority entity financial management mechanisms are internal control systems (ICSs). Ideally, ICSs are basically set-ups meant to ensure that at all times, proper workforce recruitment and deployment, transaction and document authorization, complete book-keeping and accountability, and accurate financial reporting are thoroughly executed (Giosi et al., 2014; Özer & Yilmaz, 2011; Pettersson-Lidbom, 2010). The challenge, however, is that attaining these standards in respect to budgetary activity, whether at the central or local government level, constitutes budgetary discipline, and quite often, it is not easy to attain (Özer & Yilmaz, 2011).

Along these lines of empirical evidence, several scholars, Giosi et al. (2014) and Pettersson-Lidbom (2010) inclusive, assert that budgetary discipline in resource-constrained environments, in principle, is budgetary as that of Sub-Saharan Africa is not merely a function of social networks. Instead, the most critical factor is the status and efficiency of internal entity controls and social networks being subordinate (Giosi et al., 2014). The foregoing deliberations seem especially evocative, taking the Ugandan-based local entities' internal controls-budgetary discipline linkages as a typical example. Recent research (Egbide & Agbude, 2014; Mergel, 2016; Skoric, 2016) pointed out that internal control systems operated by majority local governments in the country are simply too weak.

Rampant rent-seeking and corruption practices, ethnicity, and politics have teamed up and generally compromised the ICSs efforts. Consequently, the entities, whether urban or rural, never realize required budgetary discipline standards and often request fiscal bailouts (Mergel, 2016; Skoric, 2016). Based on the preceding seemingly inconclusive social networks-internal control systems-budgetary discipline perspectives, the researchers predict that in local government:

H₄: Internal control systems mediate social networks-budgetary discipline relationship.

Research Method

From a geopolitical and administration perspective, Uganda comprises seven regions: Western, South-Western, Central, North-Western, Northern, North-Eastern, and Eastern regions (Ministry of Local Government, 2019). This research explored budgetary activities of 33 districts, seven municipalities, and 345 sub-counties residents in North-Western and Eastern regions of the country. The local entities identified on both random and purposive sampling criteria (Gennetian, Magnuson & Morris, 2008), have over the years, been empirically underscored for budgetary discipline and fiscal policy irregularities (Egbide & Agbude, 2014; Ministry of Local Government, 2019).

The study population of 946 people basically incorporated: Resident District Commissioners, Chief Administrative Officers, Local Council 5 Chairpersons, Town Clerks, Heads of Department, Sub-County Chiefs, Finance-related Employees, and Community Representatives (Ministry of Local Government, 2019). The Yamane (1973) sampling approach, underlined in Gennetian et al. (2008) and Von Oertzen, Brandmaier, and Tsang (2015) research, was adopted to generate a sample size of 435 from the 946 population. Given that similar cross-sectional research design and simulation studies (e.g., Iacobucci, Saldanha & Deng, 2007; Salibián-Barrera & Zamar, 2002) recommend a 70% response rate as quite reasonable, the 420 received-back questionnaires' 97% response rate was found very satisfactory.

This study's variable constructs were operationalized based on properly grounded measurements, systematically extracted from existing literature. Methodological research, notably Salibián-Barrera and Zamar (2002), posits that strong construct measures do not only enhance effective control of the common methods bias threat but significantly strengthen statistical results reliability.

As stated earlier, common pool set-up, fiscal bailouts, and grants policy constitute the budgetary discipline constructs. Accordingly, to effectively measure common pool set-up, a 14-item one-dimensional scale developed and validated by Willoughby (2014) was employed. The scale with a relatively high and commendable Cronbach's Alpha Coefficient (α) [0.87] contained items such as: "This entity does not manage its common-pool concerns properly."

The fiscal bailout concept was measured by a 12-item scale; (α) [0.92], modified from the scholarly work of Besfamille and Lockwood (2008). Sample items from the scale included: "Bailout is a prevalent practice in this locality" and "It is because of rare fiscal bailouts that budget discipline in this entity has been inconsistent." Based on adjusted scales in Egbide and Agbude (2014) and Nicolae (2013) studies, another 12-item scale (α) [0.79] was used in measuring the construct grants policy. One of its items ran as follows: "Grants is a critical form of funding for this local government."

The probable local entity budgetary discipline predictor, social networks, was represented by socio-economic structure, partisan politics, and ethnicity as its key constructs. In order to effectively analyze its influence, the trio-constructs were measured along the following

lines: Modified scales; (α) [0.94], from the works of Oliveira and Welch (2013) and Porumbescu (2016) were adopted to verify the socio-economic factor structure. "Budgetary activities in this locality are driven by what obtains in its socio-economic environment" is a sample item from the 15-item comprehensive scale.

The construct of partisan politics was measured by 13 items embedded in a scale developed along the lines of those used by two scholars, Cao et al. (2013) and Mergel et al. (2016). A typical item in that scale (α) [0.83] stated that: "Partisan politics is relevant for realistic budgetary discipline." Moreover, the item: "Ethnicity defines local budgetary discipline realistically" was one of the 13 items comprising the scale employed to measure the ethnicity concept. That scale, with an (α) [0.83] set-up, was a derivative of the combined empirical works of researchers Lavertu (2015) and Skoric et al. (2016).

Borrowing ideas from scales in the Giosi et al. (2014) and Pettersson-Lidbom (2010) research, a 14-item scale; (α) [0.95], was developed and engaged in measuring the anticipated mediator variable internal control systems. One of the scale items ran as follows: "This entity's document authorization system is very efficient and often breeds desirable budgetary discipline outcomes."

Empirical experience (e.g., Gennetian et al., 2008; Özer & Yilmaz, 2011; Shaver, 2005; Warren et al., 2014) indicates that unless research participant biographical elements are controlled for, they tremendously compromise inter-variable statistical analysis results. Accordingly, participants' gender, age, marital status, educational level, position held, and period served were controlled for in this study (Özer & Yilmaz, 2011).

Furthermore, latent variables systematically adopted to boost research instrument validity verification were also controlled (Von Oertzen et al., 2015). Given that such variables usually are initially subjected to confirmatory factor analysis, they tend to impair hypothesis test results unless controlled. Thus, all the study latent variables were controlled for (Salibián-Barrera & Zamar, 2002).

In this research, statistical analysis was performed using Statistical Package for Social Sciences (SPSS) and Analysis of Moments Structures (AMOS) software packages. As recommended by previous studies (Gennetian et al., 2008; Mergel et al., 2016), SPSS was engaged in handling participant biographical data, inter-variable correlation, and instrument reliability-validity assessments.

The AMOS software facilitated hypothesis (direct-indirect effects) testing by basically employing its structural equation modeling (SEM) module (Von Oertzen et al., 2015; Iacobucci et al., 2007; Salibián-Barrera & Zamar, 2002). Several simulation scholars, notably Von Oertzen et al. (2015), trust SEM for its exceptionally reliable hypothesis test results. The results were emanating from rational hypothesized model-original data comparisons. Dependable results are tenable as long as two models, a control variable free-measurement model and a structural model, are run concurrently (Von Oertzen et al., 2015; Iacobucci et al., 2007).

Furthermore, the measurement model facilitated verification of common methods variance (CMV) or bias often linked to hypothesis test flaws. Ideally, it may lead to spurious inter-variable relationship conclusions by either inflating or deflating results (Von Oertzen et al., 2015). Thus, to effectively corroborate CMV presence, the researchers subjected data to Harman’s one-factor test. Harman’s test results must compare badly to those in the measurement model confirmatory factor (CFA) analysis to confirm that there is no CMV threat (Salibián-Barrera & Zamar, 2002).

Result and Discussion

Biographical Data and Inter-Variable Correlations

Much as the six participant biographical features indicated earlier had been statistically-controlled for, related analysis results ran as follows: Gender: (F 43%, M 57%); Age Bracket: [(18-25) 14%; (26-33) 27%; (34-41) 42%; (42+) 17%]; Marital Status: (Single 29%; Married 58%; Others 13%); Education: (Certificate 18%; Diploma 24%; Degree+ 58%); Period Served: (1-5) 33%; (6-10) 59%; (11+) 8%; [Position held: (Administrators and CFO, 16%; Heads of Department, 28%; Finance Activity-Related Employees, 37%; Community Representatives, 19%)]; n=420.

Table 1 Variable Means, Standard Deviations, Reliability Coefficients, and Correlations

No	Variable Item	M	SD	1	2	3	4	5	6	7	8	9
1	Social Economic Structures	3.41	1.664	.84								
2	Partisan Politics	3.27	1.667	.43*	.83							
3	Ethnicity	3.57	1.440	.71	.35*	.87						
4	Social Networks	4.32	3.171	.57**	.42	.23	.79					
5	Internal Control System	3.27	1.679	.38	.29	.17	.34**	.81				
6	Common Pool Set-up	3.88	1.882	-	.31	.26*	.18	-.47*	.88			
7	Fiscal Bail-outs	3.18	1.729	.22	.28*	.41*	.36	.15**	.27	.74		
8	Grants Policy	2.99	1.770	.31*	.43	.23	.51**	.21	.33*	.47	.85	
9	Budgetary Discipline	4.69	2.437	.18	-	.28	.46**	.27*	.29	.34*	.42	.86

Notes: **Correlation is significant at the 0.01 level (2-tailed); *Correlation is significant at the 0.05 level, (2-tailed); Reliability coefficients in parenthesis; n=420.

Source: Data processed.

As recommended by previous studies (Nicolae, 2013; Porumbescu, 2016), the above-mentioned biographical profiles suggested that the surveyed entities’ operations were

fairly gender-balanced. Besides, the fiscal activities were managed by a relatively mature and well-educated workforce with family responsibilities.

Statistical analysis results for variable means (M), standard deviations (SD), and correlation coefficients are presented in Table 1. The displayed (M) [2.99:4.69] and (SD) [1.664:3.171] range results broadly depict relatively moderate and relevant values for the investigated variables and their constructs (Porumbescu, 2016).

Additionally, it can also be observed that majority variable-construct reliability coefficients scope; [$\alpha = 0.74$ – ($\alpha = 0.88$)], has met the regular methodology literature (Gennetian et al., 2008; Von Oertzen et al., 2015) acceptability endorsement.

As regards the numerous inter-variable and construct correlations also highlighted in Table 1, most of their [2-tail] coefficients were statistically significant at both (0.01) and (0.05) levels. The majority of these coefficients happened to fall in the $[(-0.47) - (0.57)]$ range.

Specifically, budgetary discipline related with social networks and internal control systems to the extent of ($r = 0.46$, $p < 0.01$) and ($r = 0.27$, $p < 0.05$), respectively. As indicated in past studies (e.g., Gennetian et al., 2008; Shaver, 2005), such correlations technically suggest that as local entities capably manage their social networks and internal control systems to the magnitudes of 46% and 27%, targeted budgetary discipline standards are also attained to a similar level.

Comparatively, the budgetary discipline constructs, common pool set-up, social networks, and social-economic structures were associated with the extent of ($r = -0.44$, $p < 0.01$). Likewise, the variable budgetary discipline held a negative; albeit, significant ($r = -0.37$, $p < 0.05$) relationship with the social network concept of partisan politics. Respectively, the two results suggested that should locality social-economic structures improve by 44%; their common pool set-up performance declined by the same degree. Moreover, as local partisan politics escalated to 37%, budgetary discipline standards tumbled by the same level (Iacobucci et al., 2007).

Hypothesis Testing

In order to effectively unveil reliable hypothesis direct-indirect affect test results, research measurement models must be subjected to confirmatory factor analysis (CFA) (Salibián-Barrera & Zamar, 2002).

Moreover, other simulation empirical indications, notably (Von Oertzen et al., 2015), also emphasized that model CFA results should comprise quite moderately significant-item loadings and reasonable goodness-of-fit indices.

Analysis of the measurement model for this particular study revealed the following CFA output: ($\chi^2 = 2.743$, $df = 11$, $\chi^2/df = 0.249$; IFI = 0.961; TLI = 0.981; CFI = 0.973; NNFI =

0.985; RMSEA= 0.025; SRMR = 0.06; L.000, H.214). Accordingly, these results somehow concur with the Von Oertzen et al. (2015) and Salibián-Barrera and Zamar (2002) insights.

Table 2 Hypothesis Test Results

Dependent Variable: Budgetary Discipline					
Particulars	β	SE	t	TV	VIF
Direct Effects					
Socio-Economic Structure → Budgetary Discipline	.524*	.326	.461	.792	1.208
Partisan Politics → Budgetary Discipline	.357**	.193	.896	.523	1.383
Ethnicity → Budgetary Discipline	-.375*	.171	.917	.834	1.671
Indirect (Mediation) Effect: Regular SEM Results					
Social Networks → Internal Control Systems → Budgetary Discipline	.473*	.247	.111	.687	1.413
Indirect (Mediation) Effect: Bootstrap Results					
95% CI [-0.124] ↔ [-0.317]; Adjusted R ² [0.683]					

Notes: β = Beta; SE = Standard Error; TV = Tolerance Value; VIF =Variable Inflation Factor; Standardized Beta Coefficients Reported; *p <.05; **p <.01; Bootstrap Sample Size = 2500; CI = Confidence Interval; Hypotheses Status: Hypothesis 1[Supported]; Hypothesis 2[Supported]; Hypothesis 3[Not Supported]; Hypothesis 4[Supported]; n = 420.

Source: Data processed.

As indicated in previous sections, the measurement model CFA results were also matched with those in Harman’s single factor analysis to establish the common methods variance (CMV) position. Given that the Harman’s analytical set-up; ($\chi^2 =4.951$; df = 13; $\chi^2/df = 0.381$; IFI = 0.602; TLI = 0.821; CFI = 0.834; RMSEA = 0.115; L.106, H.124), compared badly with those of CFA, it implies that data employed in this research data were not under the CMV threat.

Furthermore, these results also reflected quite strong study instrument’s both construct and discriminate validity status (Von Oertzen et al., 2015; Iacobucci et al., 2007). The proposed four; direct-indirect hypotheses, were tested based on the structural model running alongside the measurement model. Fortunately, model’s goodness-of-fit indices: ($\chi^2 = 3.597$; df = 15; ($\chi^2/df = 0.240$; GFI = 0.963; NFI = 0.951; RFI = 0.902; IFI = 0.991; TLI = 0.972; CFI = 0.985; RMSEA=.017; L.000; H.135) strength meets existing research (Egbide & Agbude, 2014; Von Oertzen et al., 2015; Skoric et al., 2016) approval.

The scholars, notably Von Oertzen et al. (2015) and Skoric et al. (2016), caution simulation research that much as structural models’ goodness-of-fit indices may appear statistically appealing, they often conceal multi-collinearity setbacks. Habitually, multi-collinearity, the abnormally robust inter-variable correlations, tremendously impair hypothesis testing (Egbide & Agbude, 2014; Von Oertzen et al., 2015).

Presented in Table 2 are, among other things, tolerance values (TVs) and variance inflation factors (VIFs) indicating the level of multi-collinearity threat in the data set. Previous studies (e.g. Besfamille & Lockwood, 2008; Oliveira & Welch, 2013; Salibián-Barrera & Zamar, 2002) posit that the threat is considered non-existing if [TV-VIF] values happen to meet the following benchmarks: [(TV < 1.00) and (VIF < 10.0)]. Accordingly, it can be observed that the study data were not affected by the multi-collinearity problem (Oliveira & Welch, 2013). Besides, the study’s regression model [Adjusted R² =.683] position and

the various statistical results of hypotheses direct and mediation effects were also provided in that tabulation. The two analytical frameworks are handled in the subsequent direct and indirect effects sections.

Direct Effects

Based on input from the existing theory-research-practice set-up, it had been proposed as Hypothesis 1 of this investigation that socio-economic structures surrounding local governments hold a positive relationship with their budgetary discipline endeavors. This prediction was advanced relative to the developing world's localities, especially those of Sub-Saharan Africa and, in particular, those surveyed in Uganda. Related structural equation modeling (SEM) analysis results; Table 2, ($\beta = .524$, $p < .05$, t -value .461), suggest that data supported that hypothesis.

Moreover, in Hypothesis 2, it had been predicted that partisan politics governing entity administrative machinery have a positive association with budgetary discipline. Likewise, the SEM statistical test results; ($\beta = .357$, $p < .01$, t -value .896), also indicated data support to that proposition. Hypothesis 3, the last predictor proposal in this research, stated that ethnicity relates positively to changes in the local government's budgetary discipline. Incidentally, the SEM-regression statistical test results ($\beta = -.375$, $p < .05$, t -value .917) indicate that available data could not support that hypothesis.

Indirect (Mediation) Effect

The theory-research-practice triangulation further prompted the proposition Hypothesis 4. In this hypothesis, it had been projected that a local entity's internal control system is an apparent mediator of its social networks-budgetary discipline linkages.

Accordingly, Table 2 conventional SEM-related indirect effect results ($\beta = .473$, $p < .05$, t -value .111) proclaim that existing data rendered support to that hypothesis. Much as some simulation literature (e.g., Gennettian et al., 2008; Shaver, 2005) emphasized SEM analysis as ideal for inter-variable moderating and mediating effects analysis, others; Iacobucci et al. (2007) and Salibián-Barrera and Zamar (2002), claimed that associated results are rarely accurate and reliable.

Salibián-Barrera and Zamar (2002), in particular, emphasized that SEM approach analysis cannot generate any consistent inter-variable mediation results simply because solitary samples often drive it. Besides, the SEM methodology also embraces all data-based latent factors, which often undermines output authenticity. Thus, to validate the previous regular SEM-based mediation results, bootstrapping technique was employed. Mergel et al. (2016) and Salibián-Barrera and Zamar (2002) consider bootstrapping an extremely effective manifold sub-sample and non-latent variable mediation assessment procedure whose results are exceptionally reliable.

As also highlighted in Table 2, the bootstrap results, rooted in some 2,500 sub-samples, regarding the social networks-internal control systems-budgetary discipline mediation

set-up were as follows: 95% bias-corrected interval (CI) [-0.124] ↔ [-0.317]. Given that the (CI) held a no-zero value within it, that bootstrap interval or range reflected statistical significance regarding its variable contents.

However, most saliently, Salibián-Barrera and Zamar (2002) and other bootstrap scholars posit that the (CI) connotes a full mediation manifestation. As a reminder, Table 2 regular SEM-based mediation effect results ($\beta = .473$, $p < .05$, t -value .111) suggested that internal control systems was a mediator factor. This position was therefore confirmed by the bootstrap analysis.

In a nutshell, the preceding conventional SEM-bootstrapping mediation mutual outlook conveys the following local entity budgetary practical message: much as social network activities may be vital for attaining required budgetary discipline, internal control systems also matter.

Discussion

In general terms, this study's results supported the overall proposal that social networks are critical for attaining required budgetary discipline standards in the local government. Likewise, if appropriately managed, entity internal control systems play an essential role in the social networks-budgetary disciplined outfit. The following sections are a discussion of hypothesis-by-hypothesis statistical analysis findings concerning data reaction.

In Hypothesis 1, it had been projected that local entity budgetary discipline has a positive relationship with surrounding socio-economic structure. Available data supported this proposal. It implies that, as remarked in previous literature (Besfamille & Lockwood, 2008; Oliveira & Welch, 2013; Warren et al., 2014), society's economic well-being at both national and sub-national levels has serious implications in the way local budgetary activities are executed.

For instance, Warren et al. (2014) indicated that the way local tax collections and grants are managed determines the level of entity budgetary discipline. In most Ugandan-based local governments, the Warren et al. (2014) empirical view is quite logical. As Egbide and Agbude (2014) observed, most entities could not collect enough local taxes due to community poverty levels, and even the little collections are seriously vulnerable to the rent-seeking malaise.

Moreover, the central government rarely remits grants in sufficient amounts due to unreliable national tax collections. Grants are often never managed effectively at the entity level due to lack of appropriate technical capacity and rampant corruption practices in most localities (Egbide & Agbude, 2014; Skoric et al., 2016).

Data also supported the study proposition in Hypothesis 2 that partisan politics relate positively with budgetary discipline in local government settings. In developing countries, especially those of Sub-Saharan Africa, Uganda inclusive, party-based politics divide

families, communities, and local administrative systems (Besfamille & Lockwood, 2008; Cao et al., 2013; Nicolae, 2013).

In Uganda, for instance, local entity administrators and employees are identified and recruited by the District Service Commission (DSC). Empirical evidence (e.g., Oliveira & Welch, 2013; Özer & Yilmaz, 2011; Porumbescu, 2016) affirmed that the DSC is primarily a partisan-politics machination and commonly appoints workforce on political allegiance basis. It is often in total disregard of their technical competence. Such fiscal direction has serious implications for attaining the budgetary discipline dream (Özer & Yilmaz, 2011; Porumbescu, 2016).

Furthermore, the current findings suggested that ethnicity, another social network attribute, played no positive role in attaining budgetary discipline in the local government. In contradiction to Hypothesis 3 and prior research (Lavertu, 2015; Porumbescu, 2016) standpoint, much as various entities notably in Sub-Saharan Africa host multiple tribes and ethnicities, budgetary allocation and implementation are independent of that influence. Some scholars, such as Oliveira and Welch (2013), argued that from the Ugandan context, such a position is only tenable in entity environments whose DSC structure is highly transparent and budgetary regulations are strictly adhered to. Those types of DSCs are rare to find even in the country's quite developed urban local governments (Oliveira & Welch, 2013; Özer & Yilmaz, 2011).

Prior empirical research, particularly Giosi et al. (2014) and Pettersson-Lidbom (2010), asserted that budgetary discipline could not be meaningfully attained unless a robust internal control system supported it at the local entity level. Besides, Giosi et al. (2014) indicate that much as other factors such as social networks and entity location are believed strong predictors of budgetary discipline, while internal controls are the inevitable in-house guide.

A similar view embedded in the budgetary theory (Davis et al., 1966; Rubin, 1990; Stedry, 1960) prompted the formulation of Hypothesis 4: entity internal control system mediates the social networks-budgetary discipline association. With full backing from data, it could therefore be concluded that local entities need to operate reliable internal control systems to attain sustainable budgetary discipline standards.

Conclusion

Essentially, results generated in this research are interpreted from the budgetary theory model context, especially regarding local government fiscal operations. Formulated by Stedry (1960) and later advanced by both Davis et al. (1966) and Rubin (1990), the theory states that to realize entity fiscal efficiency, budgetary discipline must be always be attained.

It is simply because ultimate budget beneficiaries, the community or society, evaluates fiscal efficiency based on fiscal incrementalism (Davis et al., 1966). Later, the empirical

work of Rubin (1990) revealed that fiscal incrementalism significantly contributed to Stedry's (1960) formulation of the budgetary theory.

Much as this study could not test fiscal incrementalism, budgetary theory's principal component, its findings are consistent with major theoretical underpinnings. In particular, in accordance with related research (Nicolae, 2013; Özer & Yilmaz, 2011; Willoughby, 2014), the current researchers found that overall social network dynamics predicted changes in budgetary discipline. Davis et al. (1966) indicated that the societal-economic-political environment often dictates entity efficiency ratings. Thus, if the budget is implemented incompetently, budgetary discipline can be compromised and eventually impair societal fiscal incrementalism (Davis et al., 1966; Willoughby, 2014).

This research's findings also impact existing fiscal federalism literature and particularly local entity budgetary discipline knowledge body. Notably, its findings are quite novel relative to past empirical set-up. The findings highlighted entity internal control systems mediation was born in the social networks-budgetary discipline triangulation along the following lines: despite previous studies' (e.g., Besfamille & Lockwood, 2008; Egbide & Agbude, 2014; Oliveira & Welch, 2013; Mergel et al., 2016) in-depth exploration of budgetary discipline, they largely overlooked the potential influence of internal control systems. Likewise, the few scholarships which examined local government internal control systems-budgetary discipline linkages, notably Giosi et al. (2014) and Pettersson-Lidbom (2010), had no comprehensive analysis of the social network's influence.

Furthermore, this research held acute practical inferences to local entity budgetary endeavors. First, the study substantiated the value of socio-economic structure in enhancing budgetary discipline in local government. Accordingly, primarily Sub-Saharan African-based entities and specifically Uganda should endeavor to understand and comply with the socio-economic environment surrounding their budgetary expectations. Consistent with Nicolae (2013) and Willoughby (2014) views, such regard to community economic needs will not only enhance entity fiscal incrementalism but also will significantly overhaul its federalism reputation.

Second, entity administrative machinery must also appreciate that fiscal federalism is a direct offshoot of political formation and decentralization. It is practically expected that entity authorities simply need to appreciate the governing partisan politics make-up and technically manage their budgets accordingly. Budgetary theory (Davis et al., 1966; Rubin, 1990; Stedry, 1960) emphasizes that institutional budgeting lies in the center of and will never avoid politics.

Third, clan hood, tribalism, and ethnicity are typical community ingredients in developing countries. Much as this research reported no ethnic influence in Ugandan-based surveyed local entities, previous studies have found it a practical norm. Nevertheless, the researchers adopted (Egbide & Agbude, 2014; Özer & Yilmaz, 2011) the standpoint that entities should always guard against ethnicity if they have to realize sustainable budgetary discipline.

Besides, ethnicity compromises workforce identification and deployment. In sensitive activities such as budgeting, weak personnel capacity weakens internal control structures and significantly undermines budget implementation (Skoric et al., 2016).

Although this study contributes much to contemporary fiscal federalism and particularly local government budgeting research, it was also a host to some limitations. These include the following: Data employed were large of a cross-sectional nature. Such data are commonly susceptible to causal inference malaise characterized by reversed causality and/or confounding variable influences (Gennetian et al., 2008).

Therefore, related common methods variance was first tested for and addressed based on confirmatory factor analysis-Harman's single-factor approach (Von Oertzen et al., 2015; Salibián-Barrera & Zamar, 2002).

The research was an investigation of budgetary discipline as it was obtained in local governments located in only the north-western and eastern regions of Uganda. Today, the country's seven regions consist of around nine cities, multiple municipalities and towns, and 250 districts. It implies that much as data were collected from multiple entities, its findings might not be all-inclusive given the country's recent federalism ambitions.

Against the foregoing study limitations background, it is suggested that future research may adopt longitudinal and/or experimental methodology to curtail further the constraints embedded in a cross-sectional design. As noted in past studies (e.g., Cao et al., 2013; Iacobucci et al., 2007), a broader research design is the most appropriate when investigations embrace newly-created entities. It is also proposed that future studies specifically carry out an exhaustive investigation of the ethnicity's effect on local entity budgetary discipline undertakings. Much as this research reported ethnicity-budgetary discipline non-connectivity in Uganda's investigated entities, Sub-Saharan Africa fiscal federalism has long been reported a common victim of tribalism and ethnicity (Giosi et al., 2014; Mergel et al., 2016).

References

- Besfamille, M., & Lockwood, B. (2008). Bailouts in federations: Is a hard budget constraint always best? *International Economic Review*, 49(2), 577–593.
<https://doi.org/10.1111/j.1468-2354.2008.00490.x>
- Cao, X., Guo, X., Liu, H., & Gu, J. (2013). The role of social media in supporting knowledge integration: A social capital analysis. *Information Systems Frontiers*, 17(2), 351–362.
<https://doi.org/10.1007/s10796-013-9473-2>
- Davis, O. A., Dempster, M. A. H., & Wildavsky, A. (1966). A Theory of the Budgetary Process. *American Political Science Review*, 60(3), 529–547.
<https://doi.org/10.2307/1952969>
- Egbide, B. C. & Agbude, G. (2014). Good Budgeting and Good Governance: A Comparative Discourse. *The Public Administration and Social Policies Review*, 9, 49-59.
<https://doi.org/10.2139/ssrn.2478725>

- Gennetian, L. A., Magnuson, K., & Morris, P. A. (2008). From statistical associations to causation: What developmentalists can learn from instrumental variables techniques coupled with experimental data. *Developmental Psychology*, 44(2), 381–394. <https://doi.org/10.1037/0012-1649.44.2.381>
- Giosi, A., Testarmata, S., Brunelli, S., & Staglianò, B. (2014). The dimensions of fiscal governance as the cornerstone of public finance sustainability: A general framework. *Journal of Public Budgeting, Accounting & Financial Management*, 26(1), 94–139. <https://doi.org/10.1108/jpbafm-26-01-2014-b005>
- Iacobucci, D., Saldanha, N., & Deng, X. (2007). A meditation on mediation: Evidence that structural equations models perform better than regressions. *Journal of Consumer Psychology*, 17(2), 139–153. [https://doi.org/10.1016/s1057-7408\(07\)70020-7](https://doi.org/10.1016/s1057-7408(07)70020-7)
- Lavertu, S. (2015). We all need help: “big data” and the mismeasure of public administration. *Public Administration Review*, 76(6), 864–872. <https://doi.org/10.1111/puar.12436>
- Mergel, I., Rethemeyer, R.K. & Kimberley, R. I. (2016). Big data in public affairs. *Public Administration Review*, 76(6): 928-937. doi: <https://doi.org/10.1111/puar.12625>
- Ministry of Local Government, Uganda. (2013). Local Government Sector Investment Plan. Retrieved from <http://www.undp.org/content/dam/uganda/docs/UNDPUG2014%20-LOCAL%20GOVERNMENT%20HANDBOOK%202014.pdf>.
- Nicolae, P. V. (2013). The financial and budgetary discipline in Romania - The arrears of the local public authorities. *Annals-Economy Series*, 2, 221-226. Retrieved from <https://ideas.repec.org/a/cbu/jrnlec/y2013v2p221-226.html>
- Oliveira, G. H. M., & Welch, E. W. (2013). Social media use in local government: Linkage of technology, task, and organizational context. *Government Information Quarterly*, 30(4), 397–405. <https://doi.org/10.1016/j.giq.2013.05.019>
- Özer, G., & Yilmaz, E. (2011). Effects of procedural justice perception, budgetary control and ethical work climate on propensity to create budgetary slack. *Business and Economics Research Journal*, 2(4): 1-18. Retrieved from <https://ideas.repec.org/a/ris/buecrj/0061.html>
- Petterson-Lidbom, P. (2010). Dynamic commitment and the soft budget constraint: An empirical test. *American Economic Journal: Economic Policy*, 2(3), 154–179. <https://doi.org/10.1257/pol.2.3.154>
- Porumbescu, G. A. (2016). Linking public sector social media and e-government website use to trust in government. *Government Information Quarterly*, 33(2), 291–304. <https://doi.org/10.1016/j.giq.2016.04.006>
- Rubin, I. S. (1990). Budget theory and budget practice: How good the fit? *Public Administration Review*, 50(2), 179-189. <https://doi.org/10.2307/976865>
- Salibián-Barrera, M., & Zamar, R. H. (2002). Bootstrapping robust estimates of regression. *The Annals of Statistics*, 30(2), 556-582. <https://doi.org/10.1214/aos/1021379865>
- Shaver, J. M. (2005). Testing for mediating variables in management research: Concerns, implications, and alternative strategies. *Journal of Management*, 31(3), 330–353. <https://doi.org/10.1177/0149206304272149>
- Skoric, M. M., Zhu, Q., Goh, D., & Pang, N. (2016). Social media and citizen engagement: A meta-analytic review. *New Media & Society*, 18(9), 1817–1839. <https://doi.org/10.1177/1461444815616221>
- Stedry, A. C. (1960). *Budget control and cost behavior*. Englewood Cliffs, NJ: Prentice Hall.
- Von Oertzen, T., Brandmaier, A. M., & Tsang, S. (2014). Structural equation modeling with Ω nyx. *Structural Equation Modeling: A Multidisciplinary Journal*, 22(1), 148–161. <https://doi.org/10.1080/10705511.2014.935842>

Onyango-Delewa

Social Networks-Budgetary Discipline Linkages in Sub-National Entities

- Warren, A. M., Sulaiman, A., & Jaafar, N. I. (2014). Social media effects on fostering online civic engagement and building citizen trust and trust in institutions. *Government Information Quarterly*, 31(2), 291–301. <https://doi.org/10.1016/j.giq.2013.11.007>
- Willoughby, K. G. (2014). *Public budgeting in context: Structure, law, reform and results*. John Wiley & Sons.