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Full Length Research Paper

Understanding internal control environment in view of curbing fraud in public healthcare unit

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This study extends on the phenomena of control environment of Intensive Care Unit (ICU) in Brazil through narratives of physicians, nurses and auditors and also analyzes the results with interpretative discourse analysis. The structuration theory based on Giddens and discourse analysis toeing Laclau and Laclau and Mouffe were also used to reflexively discuss the data constructed. Based on one-on-one discussion held with the interviewee we infer that unawareness of control consciousness of the public servants in the healthcare units reflects on the behaviour that emanates unintended consequences of flaws in internal control procedures. The identity in the social structures makes them believe in what they do, which keeps them abreast of the awareness of the societal responsibility and this seems to drive the control environment. Finally, it is understandable that effective control environment cultivates certain dynamics in order to curb fraud. They are transparency on outreach and employee welfare, non-dogmatic management style upon succession, non-idolatry of corporate governance, and sense of continuous control awareness. Others are consistent process of active AIS, clear perception of risk of non-compliance, reward for dedication, holding to strategic alliances and positing sustainability.

Key words: Internal control, control environment, fraud, structuration theory, interpretative discourse analysis, ICU, healthcare, Brazil.

INTRODUCTION

Nowadays, in the realms of healthcare, barely the time of control consciousness on public resources and the importance of having an eye on the control environment of the healthcare units become very imperative. In as much as public management reforms required that clinicians become managers and control the costs of their processes (Hood, 1995); but are the physicians really up

to the tasks?

The control environment is the mainstay of the operational support to control activities of any organisation, and the healthcare unit is not an exception. A conducive control environment considers the integrity, ethical values, and competence of the entire staff. Also, it includes management's philosophy and operating style.

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The way management assigns authority and responsibility, and organises and develops its employee management also count much. The attention and direction provided by those charged with governance and management dictates the tone. Also, the effectiveness of the internal controls stems from the efficient control environment that is tied to the better handling of the control activities.

Studies published concerning control environment of Intensive Care Units (ICU) naturally should attract professionals and those in academia firstly, because of the human lives being involved. The hospitals attached to the federal universities in Brazil have long ceased to focus on the training of new healthcare professionals. Social and economic constraints have diverted the focus of these institutions from training to welfare practices (Longaray et al., 2015). Second is because of the examples that could set pace for a more harmonious control environment worldwide which could be emulated. Last is the projecting of the ups and downs of control flaws that have to do with public resources allocated into these units.

One of the most important features of ICU internal control planning is uncertainty. A key issue of ICU management is how to model and predict these uncertainties. The modelling approaches differentiate between stochastic method; queueing methods and deterministic methods should be analysed, and lastly the applied solution method (heuristic and simulation) is a further aspect (Bai et al., 2018). Yet, similar studies presented by Imoniana and Nohara (2005) conclude for the correlation of the three main dimensions of COSO namely, Control Environment, Monitoring Procedures and Information Systems and Communication for a workable internal control system. Also, Gal et al. (2016) working on internal control effectiveness using a clustering approach concluded that the components of the internal control structure are associated with each one. However, especially, in healthcare, this type of study is yet to be explored, thus paving a room for the filling of such gap. Therefore, in order to guide this study, our research question lies on how is the dynamics of the control environment of typical public healthcare unit in view of curbing corporate frauds?

LITERATURE REVIEW

Comprehending the control environment

In order to comprehend the control environment, we draw on the dimensions of COSO (2016) that spans every harmonious business environment covering, among others: a) Risk Assessment: entailing the identification and analysis of relevant risks to achieve the objectives which form the basis to determine how risks and appetite should be managed. b) Control Activities: structured procedures which are enhanced by the policies that help

ensure that management directives are carried out. They occur throughout the organisation at all levels in all functions. c) Information and Communication: addressing the need in the organisation to identify, capture, and communicate information to the right people to enable them to carry out their responsibilities. Information systems within the organisation are key element of internal control. d) Monitoring: The internal control system must be monitored by management and others in the organisation. These are the elements of framework that are associated with the internal audit function in the organisations.

In effect, control environment is the cornerstone of control activities. These said activities normally range from tasks such as transaction initialisation, internal checks, authorizations, verifications, reconciliations, correlations, review of operating performance, approvals, segregation of duties and safeguard of assets. As observed by MTU (2019), internal control activities can be found in the workplace. All employees fit into the organizational picture of internal control, whether or not their job responsibilities are directly related to these example activities. They are segregation of duties, authorisation and approval, reconciliation crosschecking and review, and physical count security.

Thus, if we go by the premise that “corporate defence umbrella” in other words *going concern* is unnegotiable, it is also true that the governance, risk, compliance, intelligence, security, resilience, controls, and assurance should be part and parcel of control environment. What should prevail therefore is the sustenance of the business through a viable control culture. By this, one would concord for the cultivation of the three lines of defence suggested by IIA (2018). For the sake of governance, the lines of defence are first – functions that own and manage risk; the second line of defence – functions that oversee risk and compliance; and the last but not the least the third line of defence – functions that provide independent assurance notably internal audit.

Comprehending the ICU of a public healthcare unit

In normal circumstances, the patient arrives and he or she is conducted to and admitted into the emergency ward having gone through the bureaucratic aspects, at least for identification purposes whether he or she is conscious or not. Then he is examined to be considered for elective or truly emergency patient and later allocated for treatment.

As shown by Litvak et al. (2008) in Figure 1 as a typical structure of ICU, there is a greater similarity in the Brazilian health unit.

Structuration theory as alternative for institutional theory

Traditionally, while revenue allocation and management

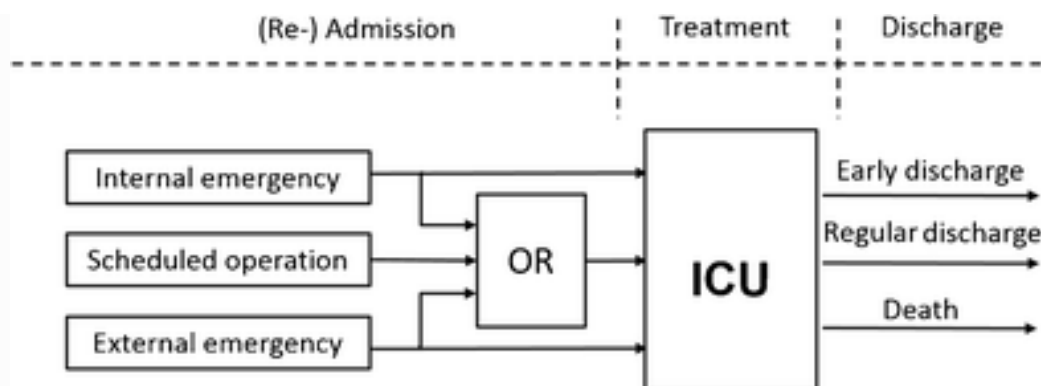


Figure 1. Typical structure of ICU.
Source Litvak et al. (2008)

of public ICU has been tied to resource dependence, in other words, borrowing on the institutional theory, the control environment lies on the structuration theory. Public accountability in emerging economies addresses the gap within resource dependence and non-resource dependence drawing on institutional theory (Gambari et al., 2018). Giddens (1991) observed that structure-agent divide is a false dichotomy; you cannot have one without the other social structures and agency are recursively and reflexively produced. Thus structuration theory is seen by Coad et al. (2016) “as a springboard for new social theory emerging from close observation of how accounting shapes societal relationships”; “we look at the status and adequacy of knowledge on which people act”. “Rather than systems, we ask how people – the agents-in-focus-perspective and understand the constraints and possibilities that surround them.”

Reflexively, institutional theory selects a predetermined practice as a means of legitimation. So to derive from norms and standards as they are evaluated in terms of the level of compliance. Thus, emerging the positioning for the alternative made for the discourse of this study. Structuration theory is attached to the concept of virtue (morally proper behaviour), social and political roles, rethinking our accountability to society (Brown and Dillard, 2013).

In the same vein, as the institutional theory thinks isomorphism and intends to understand and explain the phenomena in the organisation through the principles of corporate governance, its counterpart of structuration draws on the duality of the systems structure that empowers individual in a group. In effect, being recursive in nature, agents reproduce social practice across time and space, so that it would hamper on the development of identity; it emphasizes the interrelationships by compromising internal and external structures. This may hamper the control environment since it is periodically tuned in order to suit the styles of management. Noteworthy, the structures change with time which are influenced by human actions.

Fraud monitoring in control environment

There is a great concern about the efficiency in allocating and applying public funds in the public health units particularly today that scarce resources are monitored by government officials and also by the society at large through ICT.

Situational awareness is a basic function of the human visual system, which is attracting a lot of research attention in research related communities (Popoola and Ma, 2012). This is in line with one of the dimensions of COSO (2016) aimed at tracking any anomaly in the internal control procedures of any organisation. Also it coincides with the thought of Imoniana (2019) observing that fraud monitoring becomes a task in which the auditor is beginning to be more active inasmuch as it is expected to abridge the auditing expectation gap.

Fraud drains the purses of the government units earmarked with essential functions such as provision for healthcare.

METHODOLOGY

Following the approach in Imoniana et al. (2018), we emphasize that this study takes a relativist standpoint which epistemologically is backed up with a constructivist perspective. Van der Weijden et al. (2013) conducted a qualitative key-informant study with group discussions and semi-structured interviews to explore how clinical decision processes can be constructed to facilitate shared decision making. Thus, the approach of this study is centred on discourse analysis toying structuration theory. This fits well inasmuch as it allows one to dialogue the essentials in the social, economic and political perspectives aiming at drawing on what exactly is going wrong in the relationships of the individuals and the entire stakeholders.

This case which extends on the phenomena of control environment of Intensive Care Unit (ICU) in Brazil through narratives of physicians, nurses and auditors consists of 7 interview respondents, 2 physicians from different hospitals, 4 nurses each from different hospitals and internal auditor from one of the public hospitals in the region of São Paulo. The two physicians are psychiatrists with responsibilities for general clinic. They are in their

mid-50s with practically more than 20 years of experience each. The nurses are aged between 35 and 55 years with average experience between 10 and 15. The ICU chosen for the study were the psychiatric units where the criticality of the emergency depends on the mental disturbance of the patient which is determined upon admission.

These respondents were consulted independently and their interviews ranged between 50 to 90 min recording. This was later transcribed in order to assist extraction of significances that nurtured the discourse analysis. Noteworthy, the analysis was enhanced by the use of NVivo software for qualitative analysis.

The case study research approach is useful where the researcher is investigating: complex and dynamic phenomena where many variables including variables that are not quantifiable are involved (Cooper and Morgan, 2008). According to Yin (1989), the case studies are suited to answer "how" and "why" questions. This is such as the one posed in the question statement.

In effect, we draw on the propositions based on Laclau (1999) and Laclau and Mouffe (2001) in order to expatiate on the data constructed. This also borrows on the sociological thinking of Giddens (1991) of structuration theory.

In the same vein, following a protocol required by case study according to Yin (2001), the development of this case study follows: (i) planning, producing and sending email on invitation to the selected respondent, development of case study design, structure of interview; (ii) data collection (environmental observation of the control environment (organisation), documentary evidence, semi-structured with interview; (iii) data analysis, cross-reference (triangulation), discourse analysis; (iv) analysis and conclusions.

RESULTS AND DISCUSSION

The categorical analysis through Table 1 enables one to match the attributes suggested by COSO (2016) with the semantic categories in order to present the reflexivity in association with the control environment. In effect, data gathered from the responding specialists generated some food for thought described as follows. Worthy of observation that saturation is maintained while analysing the narratives particularly when there has been repetition of data from the interviewee.

Transparency on outreach and employees' welfare

The clear communication among collaborators with the aim of eliminating information asymmetry enables employees to perceive transparency. Also, this could transmit a sense of belonging to the employees thereby enabling them to elevate their level of welfare.

As put forth by (Physician 1),

Welfare of those that are in-charge of control environment is important. I do recognise welfare when we assess the control environment. The idea of the control objectives should be performed by people on a win-win basis in the environment. Recognised and rewarded. What do I give in return for the work as a collaborator? For example, fraud occurs because people in-charge of a control do not feel adequately rewarded; this could stimulate fraud. If they do not feel compatibly compensated there could be a rationale for fraud.

In other words, the management ought to be transparent about their communicating concerns to the collaborators. This gives the employees more confidence and motivation to carry on the tasks given them. However, if this appears to be contrary, this will give a doubtful picture for the tone at the top.

The management of the hospital is a political post; after 4 years the management is normally replaced. The employee is seen as a factor for generation of value and not cost. However, the management is less worried about the welfare of the employees. For instance, because of social and financial crisis, a lot of homes lost their private healthcare services and had to run to the public services. Thus, the unpreparedness of the public services gives an excessive job load to many staffs. So, to better give the services that the populace deserves, we need more nurses duly trained to match the demands (Nurse 1).

The migration of the masses to the public free healthcare services seems to be a trend and this is being publicised, particularly as a political instrument. The B class citizens being driven to the C classes as a result of unemployment cannot foot their healthcare bills. The problem that surfaces is the units are not prepared to receive a higher number of people.

Non dogmatic management style upon succession

In the line of succession of management, it should not necessarily pressurise for a rigid managerial style blindly but rather rely on going-concern.

Notwithstanding, in general at the management level, they are political positions. Soldier goes, soldier comes with his troops. In other words, the mayor puts his cronies in the strategic positions. Noteworthy, that the current management does not have a control culture as compared with the former one and the hospital is being run based on its normal tasks which are already known to the staff (Nurse 2).

For Auditor 1:

"There is a perturbation about nominations to the majority of executive posts by the government which are done by convenience without single competence for the function".

"For instance, I as an internal auditor, I am asked to withdraw review points inasmuch as it batters the image of one of the executives. In this regard, I am suffering so much from identity crisis as a result of ethical conduct which I built from my former Big-four firm".

Non idolatry of corporate governance

In the words of Auditor 1,

Table 1. Attributes of Control environment and semantic categories.

Attributes as per COSO	Semantic categories
Communication	Transparency on outreach and Employee Welfare
Integrity	Non dogmatic management style
Ethics	Non idolatry of corporate governance
Management presence	Sense of Continuous awareness
Competence	Non sacrifice of employees
Governance presence	Consistent Process of active AIS
Management philosophy	Clear choice for noncompliance
Organisational structure	Reward for dedication
Segregation of duties	Accountability, Strategic alliances and networking
Employee policies	Positing sustainability

We kind of have a very strong belief in Latin environment; we tend to have personal styles but as historically we have the culture of our colonial masters. So, there could be this issue of trying to associate our act in an existing control environment with baseline culture. In effect, I would think that we “avoid the idea of saying that someone will lead us to the promise land”; one can be well intentioned is being worthwhile sceptically.

So, if we cannot work as a team and depend less on people, then we have problems. Probably, rather than heroes it is good to have long term plans to be proactive in our decision-making.

The question to the management does go; do you have the employee to hold the banners upright? “Each organisation is required to focus on bringing the dollar in through the front door (offense) while also focusing on preventing the dollar from leaving through the back door (defense)” (Lyons, 2016).

In fact, in a bureaucratic control environment the medical profession calls for a lot of idolatry of the corporate governance in order to gain nomination from the politicians.

The employees at the bottom level follow non idolatry of the corporate governance. However, the middle and top management idolatrised all over in their functions. Particularly, the physicians who have been nominated by their cronies to their special posts bow to the corporate governance self-interest rules (Nurse 3).

Sense of continuous control awareness:

The act of compliance with control culture practically does not exist among the management staff. This enables the management to perform a series of overriding control activities (Auditor 1).

However, there is a healthy sense of control consciousness by succession. What one management

starts the other tends to continue with it.

The management is aware of what should be done but implements what suits their aim. *Continuous education and awareness is very faulty. A lot is said and placed in the training programs but not much is done (Nurse 4).*

There seems to be a clever way to hide control flaws. When management perceives control problems in regard to a top management normally, this management is transferred to another section (Auditor 1).

Non sacrifice of the employees

In some circumstances employees do not have the psychological brought up to withstand the pressure which the sacrifice brings.

There is no welfare in the employees' finances. The employees are generally sacrificed.

To the point that the employees become sick and some obtain sick leave for mental problems. “Be careful not to compare our rhythm to the ones you see in the films, if not, we will all get crazy if we work at that pace”. “I do not like to work in the ICU, nor psychiatric and emergency unit” (Nurse 2).

Consistent process of active AIS

As a health providing institution we take a very good care of the relocation of the patient right from the point of entry, provision of treatments and the discharging point. So, for information flow so as to eliminate operational deadlocks we register the patient's data immediately he or she enters the building and this record is consulted every time transfer is needed (Nurse1).

Notwithstanding all the problems narrated, there seems to be some certain compensating controls that bring peace into the control environment. At least, not to

compromise all the accounting information systems as a whole, the monitoring procedures match the styles of the management.

Clear choice for noncompliance

Our control procedures are not as good. We have tentatively tried to obtain the ISO standard certification but we later dropped the idea because we could not comply with all the requirements (Nurse1).

As a public unit, this does not look strange in terms of control of weaknesses that impedes the obtaining of certification.

Adair and Nolan (2019) observed that Irish Data Protection Commission (DPC) has published a statement regarding its investigation into certain aspects of the Public Services Card (PSC) scheme run by the Department of Employment Affairs and Social Protection (Department). The statement levies heavy criticism at the Department and the PSC scheme regarding how it dealt with the personal data of millions of citizens in Ireland.

Reward for dedication of employees:

Dedication is total and shows the love the employees have on what they are doing. The environment being caretaking draws for a more humanistic attitude of the employees.

Among the employees, there is a clear dedication even though the compensation is not commensurate; to the fact that we bring family members to our place of work so that they would be treated (Nurse1)

There does not seem to be any methods for the acknowledgement of the dedication or employees' efforts.

I did a walkthrough of a certain control procedure that identified significant control flaws; however, my boss did not see any relevance in it (Auditor 1).

Accountability, strategic alliances and networking:

There are good number of agreements with partners with whom the healthcare units have established some operational networking and alliances. The trading floor exists where the suppliers launch their delivery schemes. However, the most beneficial scheme and the payment terms are chosen haphazardly.

In addition, some suppliers bring their supplies as consignment for surgical operations and we are invoiced based on usage (Nurse 3).

Obviously, the cronies are favoured when the suppliers bring in some consignment without being requested for and would later be invoiced upon usage. Thus, to maintain the rule of control, activities should be segregated and also assure accountability.

Positing sustainability

The contribution to maintaining conducive infrastructure and adherence to the sustainability rules is beginning to be part of the culture of the employees.

"Some 10 years ago we used to have the cases of reuse of disposable medical appliances in another public hospital that I worked. Today, staffs seem to adhere to the concept of sustainability and nothing like that exists in our midst any more thank God (Nurse4).

Description of control environment and activities in the investigated health care unit

One of the Health Care Units (HCU) is a major public hospital in Brazil and its exemplary health care facilities have named it as one of the benchmarking for others. Ranking institutions also put its statistics at the top of the ladder as aspirations for others in Latin America countries.

Normally, HCUs in the federal levels are budgetary units for the appropriation of costs and also allocation of resources from the federal and state governments. Their importance to the nation earns them this prerogative to be considered as a Budgetary Unit with the Law of Budgetary Directives bidding their operations, taking into account the Responsibility Act that allows distribution of resources from the federal government and accountability also done in the same manner.

A control activity in the Psychiatric Unit of this HCU is considered in this narrative. This is made possible, thanks to unstructured interview given by a psychiatrist that reports to the Head of the Psychiatric Units who we hereinafter referred to as Physician1 and Physician 2. As Physician 1 puts it:

"Model of our unit is just like any other medical treatment unit that follows standards".

The first place of call of the patient is the emergency room. And this is the ward that also has contact with the physicians outside who are always in contact with the nurses in the unit.

Upon admission, the nurse obtains the blood pressure and certifies the ailment undermining whether it is or not apparent severely affected person. After this, the registration is done and will be identified if he or she will go through a free care treatment or a paid for privately

Table 2. Material request control objective and control activity.

Nº	Accounting process and control objective	Control activity
MR-1	Employee verifies the stock level and solicits the replenishment periodically.	<i>Assurance</i> for segregation of incompatible duties as one permits undue Material Requisition. <i>Confirms</i> accesses to Material Requisition records, Requisition Volumes, Lists, Account <i>reconciliation</i>
MR-2	The automatic material requisition issues the material requisition as the stock level attains certain level.	Reconcile Material Requisition, eRequisition, Stock Levels and remits explanation to Accounts Manager. Manager approves corrective measures
MR-3	As the HU has no autonomy to replenish stock the Stock employee verifies that the Supplier Receives the alert for replenishment of the stock.	Monthly, the Controller reviews the Stock <i>reconciliation</i> statement matching it with receiving. The pending issues or items in suspense are explained
MR-4	Daily, the system generates the list of replenishment pending supply and employee enters in contact with the supplier to seek for negotiation in view of supply.	Finance manager <i>Monitors</i> monthly summary of Material Requisitions <i>approved</i> sent to accounts department for revision of provisions
MR-5	Accounts employee issues Material Requisition reports and matches it with supplies.	Monthly, the controller of the Unit reviews the Material Requisition report and <i>validates</i> the Receiving, in Suspense, Pending Supplies, Balances, Supplies and signs

through health insurance. Thereafter, the clinical doctor then obtains the clinical history and if identified as a psychiatric patient he or she will be directed to the psychiatrist for psychiatric treatment.

Coming to the psychiatrist, the pathology is analysed to know whether he presents some benignant or malignant symptoms. If the doctor sees that it does not pose any sheer threat or danger to the public as well as to the pairs in the place of work, depending on the diagnosis the doctor administers drugs accordingly to the treatment in order to minimise the impact on the patient and also avert catastrophes in the vicinity and retains the patient for a reasonable time. Generally, according to the Brazilian Law, this patient can stay up to 15 days in the Unit before being discharged with the cost covered by the government.

As put forth by Physician 2:

Notwithstanding the mode of payment, the State Government sustains the hospitalization at the cost of approximately \$67 per day to the public or private clinics, being the average cost of expenditure.

Accounting wise, the critical control activity in the HU could be shown as follows in Tables 2 and 3. Specifically, it assures the adequate processing of contract accounts, thus enabling the control of accounting transactions for the units.

Controls relating to admission - receiving the patient, authorisation of the patients' record. These are documented as follows:

(A) Recording Code – Ensure Free/Pay care records. Certifying the entitlement for the treatment as to citizen

when identifies that it is a psychiatric patient, additional treatment of psycho-diagnostic analysis is requested for by the psychiatrist for detailed analysis.

B) Checking, Allocation of Supply of the drugs, Administration of the drugs to the patient as deemed to be recorded is accurate. Accounting for the treatment follow up daily summed up.

C) Collection from the patients, as Authorising the Discharge of the patient is in accordance with the rules and policies of the HU.

D) Monitoring procedures of the management are in place on the procedures of hospitalisation of the patient. Administration of the drugs and reports submission. The Hospital Council monitors the periodic reports about the psychiatric patients.

These could be further expanded on in the following matrixes of material requisition control objectives and control activities and material receiving control objective and control activity respectively.

According to *Physician 1:*

Normally according to the policies, after the 15 days we refer to the patient for a psychosocial treatment.

Also, after the 15 days the government continues to finance the patient; however, the costs continue in the same to the hospital. The fund replenished is reduced from the Ministry of Health.

Physician 2:

This is why we have fought for 30yrs that the government

Table 3. Material Receiving control objective and control activity.

Nº	Accounting process and control objective	Control activity
RV-1	Material Receiving employee realise a daily routine of system integration of orders and payable	<i>Assurance</i> for segregation of incompatible duties as one permits order entry establishes limit in conformity with the suppliers and adjusts them. <i>Confirms</i> accesses to supplier's records, product lists, record returns, receipts and <i>reconciliation</i>
RV-2	Accounts staff prepares provision Material Receiving, history of damages, incomplete, generate Debit Notes and verifies manual access and eRequisition receiving confirmation	Reconcile Material Receiving to Orders and plan for reception, Reconciles the Debit Notes and remits explanation to Finance Manager. Finance Manager approves corrective measures
RV-3	As the HU has no autonomy over the volume to be supplied, the reception of drugs are not controllable and delivery note is unable to match with Invoices	Monthly, the Controller reviews the receiving notes <i>reconciliation</i> statement matching it with supplies. The pending issues or items in suspense are explained
RV-4	Daily, the system generates the list of supplies planned and the Material Receiving employee enters in contact with the supplier to seek for negotiation in view of supplies	Accounts manager <i>Monitors</i> monthly summary of supplies <i>approved</i> sent to accounts department for revision of provisions for future supplies
RV-5	Accounts employee issues accounts receivable reports and matches it with general ledger	Monthly, the controller reviews the accounts payable report and <i>validates</i> the general ledger accounts analysis and signs

needs to support the hospitals if it wants a healthy society. Inasmuch as \$ 67 is given for the treatment of a psychiatrist patient compared to other treatments such as cancer which is approximately \$2,000, orthopaedic, urology, to mention just a few. This is very inferior to the world standard.

For instance:

Cardiopathy, kidney may reach almost \$ 2000 for drugs per day and that of psychiatry patient is just \$67. In this regard, psychiatry patients are being used as political instrument.

As a result of the aforementioned, the controls to avoid fraud and also avoid corruption are very weak.

Since the government utilises it as a political instrument, this unit reports to the Ministry of health in terms of power and the possible control flaws are not monitored in a timely basis by the management.

Physician 1

“If you want a mentally healthy society you have to invest in the psychiatrist treatment”.

Even though there is a struggle for humanisation of mental health, the government has decided to include the private sector clinics/hospitals in a bid to humanising the mental treatment and eradicate the asylum type of hospitals from mentally disturbed.

So, with a new model, this enables the hospitalization of the mental patients in the general hospitals and this raises their costs. However, this puts the humanisation standards to a test as the financial support from the federal government does not follow-up.

In the case of controls activities being used to mitigate the risk of frauds, *Physician 2* observes:

I will tell you categorically that there are no controls in place. In HU one measure of control when implemented is made to lead to another way of corruption as a result of bureaucratic processes. This enables the fraud perpetrators to use this avenue to pave way to satisfy their interests.

Physician 1 continues,

We have free supply of medicine and the distributions of these drugs are not well controlled. There are cases in which certain volumes are delivered with duplicated invoices without commensurate quantities; r invoices being signed and accounted for with the volumes already redirected to units not having connection to the HU.

In psychiatry hospitals, we have four main types of drugs, which are very costly and are distributed by the government: Anxiolytics 3rd generation drugs; Anti-depression; Antipsychotics drugs and Hypnotic drugs. These drugs are supplied and distributed without adequate controls.

In fact, there is no transparency, because all these drugs

are purchased by the government according to their plans and not on need basis.

In addition to this, the control environment is not harmoniously equipped, in as much as the administrative part of the structures that include: the administrator, finance, operations, nurses, auxiliary nurse, cleaners, security, etc. are less valued.

All structures have to be involved in the treatment process so that it would be effective. So, as the salaries are low, the care given to the patient is likely to be affected by these problems. Policy to ask some of the psychic problematic patients to stay at home even though they need psychiatric problems may be unwarranted.

De facto, there is none as of know the mechanism to reduce fraud and corruption. Notwithstanding, compared to the recent past, we can say that the government has improved in terms of control procedure in today's environment.

As put forth by *Physician 2*:

Somebody that should stay one week is asked forcibly to stay 2 weeks. This is the only way the ICU used to make additional revenue and think of break even .

The weak control environment invariably stimulates the perpetration of frauds.

There is shortage of medicines caused by the management. This artificial scarcity is caused so that they would substitute the medicines and in the verge of substitution fraudulent acts could be negotiated with the suppliers. For instance, a medical knob that costs \$30 could be inflated to around \$150; this is real. In other cases, one would sign for undelivered goods (Nurse1)

Thus, periodic reports to the government reflect all the activities of the unit. Normally this includes statistics of a) Entry of patients and discharge, b) Quantity of patients effectively attended to, c) Drugs, volumes administered; and d) Checks and balances on the procedures.

In the normal circumstances all malpractices should be tracked with periodic reports to the top management and committees. In fact, there is a ruling council that supervises all the procedures in the HU and at large. Through them all malpractices are questioned and are investigated.

However, the question does go for how many cases are investigated. The regulating council (*Conselho Gestor*) supervises the activities of the units. For instance, if there is a whistleblowing that drugs have been diverted, they investigate the unit and implement a punitive measure on the directorate of a unit.

DISCUSSION

If one would call a spade a spade, the dispassionate

decision-making process joining the heads of the physicians and the financial controllers is probably needed in the control environments of the healthcare units in order that the controls would be effective. This will seem to work well with the advent of interaction in order to foment control govern mentality. In integrative approach, as put forth by Campanale and Cinquini (2016), controllers allied with clinicians to create a network of actors toward govern mentality.

It is possible to derive that the duo identity forces the physicians to mould his or her behaviour based on the control environment. Just as chameleon, probably the physician would change his colour, in order words attitudes, as he or she changes the environment toward internal control.

On this note, at the final analysis, stressing on the control environment makes us to comprehend three basic factors that sustain environment in which control reigns: integrity, ethical values and competence. A close look shows that all the three factors tie their operationalisation to employees in so doing making a control environment (tied to people) sine qua non for effectiveness of control in organisations.

The snapshot of the control environments that show barely inexistence of control culture that emphasises control consciousness in individuals in these units depicts the realities in the Brazilian healthcare units. Socially, the dispensation of individual control strategy for the healthcare units needs to be put to place. Max Weber states that individuals are seeking to maximise their profit (or minimize their loss) in any situation; this in turn enriches the general populace.

Thus, if one sees that the problem is control awareness, emphasis on it by the management of these healthcare units will surely bring the tone that is needed to keep these units to the expectation of the users. Imoniana et al. (2018) observed that the house keeping force is already a gain to the society as it creates internal control awareness.

As observed by Nurse 2,

"The unwary attitude of the physicians makes me sick. They seem not to be worried about the situation as the rank and file have other jobs".

This shows that some of the collaborators at the lower cadre of the operations are somehow concerned about the efficiency of control environment, as it might mostly affect them if it worsens. So, the economically disenfranchised in order to foster healthier working environment is a necessity. In effect, naturally the problems firstly surge at the weak edge of the control environment in the organisations causing diminution of manpower because of the volume of persons before it reaches the higher echelon.

So, the turnaround measures of internal overhaul to address the unintended consequences of the havoc of

the flaws in internal controls become inevitable. Training of the rank and files of the organisations about internal controls is therefore recommended as societal impact of lack of control consciousness in ICU is least felt in the proper unit but spans a great number of families and the society at large.

The nurses do have grudges of the physicians who are at the higher echelon of the HC inasmuch as their nonchalant attitudes towards internal controls frustrate other collaborators. As they are political nominees normally, they work in their favour. Thus, for succession sake, this lays an ugly precedence in the control environment.

This is noteworthy about the succession in the control environment. Really, the physicians toeing the same control strategy look healthy notwithstanding the look worm attitude towards overriding controls. The societal implication is it saves resources and maintains the course of actions planned by the predecessors. Socially, organisations barely gain with this act. What is common most particularly among the politicians is to dump other people's control efforts and implements theirs, be it good or bad.

In a nutshell, there is going to have a quantum change as the enforcers of control such as the internal audits and the compliance of these government parastatals take off their masks and come to the side of the populace in their responsibility to monitor the operations. This means that they are awakening from slumber as they come to the shoes of the populace.

Or there is a greater fight to face by these public officers in order to be efficient. Public officers in Brazil generally wrestle with low morale. This has to be elevated. This takes a recommendation of a long term work on the control environment to gradually plant a long lasting awareness of societal belongings and accountability.

Conclusion

This study expands on the phenomena of control environment of Intensive Care Unit (ICU) in Brazil through narratives of physicians, nurses and auditors; and also expatiates on the results with interpretative discourse analysis.

Based on one-on-one discussion held with the interviewee one would infer that unawareness of control consciousness of the public servants in the healthcare units reflects on the behaviour that emanates unintended consequences of flaws in internal controls procedures.

Physicians see their objectives as the idea of the control objectives which should be performed by persons on a win-win basis in the environment. This undermines the rules of segregations of duties which have been catered for with control functions duly separated. This is exactly what baffles the nurses when they associate the attitudes of the physicians as cronies who assist the

politicians to only meet up their political objectives as they are elected by them.

Therefore, it is understandable that effective control environment cultivates the following dynamics in other to curb fraud: Transparency on outreach and employees' welfare, Non dogmatic management style upon succession, Non idolatry of corporate governance, and Sense of continuous awareness. Others are consistent process of active AIS, clear choice of non-compliance, reward for dedication, sorting duties, strategic alliance and networking and positing sustainability.

Also, observable is COSO framework do provide the internal control dimensions with broader guidance; however, it leaves details to the implementer. Therefore, this research clarifies the semantic components that underlie the workability of internal control structure.

Overall, the identity in the social structures makes the employees believe in what they do. This keeps them abreast of the awareness of the societal responsibility and this seems to drive the control environment.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

The role of market learning in the market integration of African smallholders

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The integration of smallholders with the market is essential to provide enough food for the growing populations in most African countries. The existing literature emphasizes in that respect the role of transaction costs. This paper offers a complementary view, namely individual-level market learning, which is conceptually integrated in the existing market integration framework. The paper demonstrates that market learning will play a mediating role between the traditional factors studied in the export market integration debate, like the state of the infrastructure, the possession of assets and access to (micro) credit. A higher level of market learning will strengthen market integration, and subsequently increase food availability on the market and improve smallholders' livelihoods. The implication is that in addition to strengthening factors that reduce transaction costs, policy-makers should design and implement interventions that help smallholders to develop more insights in their market as a basis for individual-level decision-making.

Key words: Markets, market integration, smallholders, market learning.

INTRODUCTION

In most African countries, agriculture is an economic sector of substantial importance. In Sub-Saharan Africa, it accounts for about 30% of the Gross Domestic Product (GDP), 75% of total employment, and 40% of total export earnings in the region (Reij and Smaling, 2008; Hazell, 2013). Agriculture is in this part of the world dominated by smallholder farmers (Ochieng, 2007). However, smallholders face difficulties in accessing markets to sell their produce, causing a decrease in their living standards and a lower market availability of food ((Van der Heijden and Vink, 2013; Lyttimäki et al., 2011). Improving access to markets is therefore an important way to ultimately reduce poverty (Piamongsant and

Ingco, 2003; Kitinoja et al., 2011; Kader, 2012).

Smallholders typically produce for subsistence while the surplus is sold at the market (Fafchamps, 1992; Kherallah et al., 2002; Poulton et al., 2010). Well-functioning marketing systems may help to bring these products from primary producers to consumers. Smallholders usually sell their products to traders who aggregate the products. These, in turn, resell to other traders for further aggregation, or to formal-sector companies that may process, trade or export the products (Gabre-Madhin, 1997; Fafchamps and Minten, 1999; Arnould, 2001).

For smallholders, marketing is, however, expensive in

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terms of costs and potential risks (Meissner, 1989; Tollens, 2010). Economists have therefore investigated factors that will affect the marketing costs and risks. These factors include in particular the quality of infrastructure, the accessibility to credit, the assets owned by the household, the availability of market information, and the relationships with traders (Reardon et al., 2009). Although these factors often have a significant impact on market integration (Kabbiri et al., 2016), studying these concrete supply-side factors also has a limitation, in that they are taken from the institutional environment in which smallholders operate. This approach follows the logic that smallholders' market integration depends significantly and directly on the institutional conditions. For example, market information is mostly seen as an institutional factor and as such approached in terms of whether or not smallholders have access to it. However, according to business researchers market information is also an individual-level factor since it should be actively acquired and interpreted before it becomes instrumental (Day, 1994; Kohli and Jaworski, 1990; Sinkula, 1994). Market information can therefore be available in the smallholders' environment, but may not necessarily contribute to the production and marketing of agricultural products that are accepted by customers. A complementary perspective is therefore necessary that emphasizes the role of market information at the individual level of the smallholder.

The academic discipline mostly concerned with that perspective is marketing. According to this discipline, a business (such as a smallholder's "business") basic reason for existence is to satisfy customers (Drucker, 1954). Satisfying customers entails decisions on which customers to focus on and then to specialize the business so that it can produce output that meets or exceeds customers' expectations (Vargo and Lusch, 2004). Businesses that produce outputs that meet or exceed customers' preferences and customers' expectations are oriented towards their markets (Kohli and Jaworski, 1990; Narver and Slater, 1990), thereby inferring that they learn from their markets in that they generate information, make sense of it and respond to it (Sinkula, 1994; Slater and Narver, 1995).

In the same order of ideas, smallholders can generate new insights from their markets and make use of these insights in their decisions. Such a process is referred to in the following as *smallholder market learning*. Because market learning generates insights that smallholders make use of in their marketing decisions, incorporating the concept of market learning in the conceptual framework of market integration is a key first step in developing a more complete perspective on the market integration of smallholders.

This article offers such integration by providing a conceptual framework that is explained in the next section. The following sections subsequently explain the different components of that framework (the institutional

environment, the drivers of market integration, the role of market learning, and the consequences). The paper will finish with conclusions, directions for future research and concrete implications.

CONCEPTUAL FRAMEWORK

The general conceptual framework is portrayed in Figure 1. Four groups of variables are distinguished: market integration, market learning, the value chain and institutional environment, and the market integration drivers from the development literature. Market integration is referred to as the share of production sold by smallholders to markets (Bernard et al., 2008; World-Bank, 2008; Maertens et al., 2011). Drivers of market integration have been extensively studied (Alene et al., 2008; Chamberlin and Jayne, 2013; Kabbiri et al., 2016), following a transaction cost logic (Williamson, 1975). Asset holdings, quality of infrastructure, access to credit, community support, and relationships with traders have been found to have direct and significant effects on market integration. The next sections will explain the relationships in the framework and integrate the concept of market learning into the previously studied relationships.

Smallholders' institutional environment

Smallholder market learning is explained from the institutional environment in which smallholders operate. We referred to the institutional environment as the socially constructed "rules of the game" that define and control production and exchange within a society (North, 1990). Smallholders operate in a different institutional environment than traders do (local and urban traders and food companies) (Adekambi et al., 2015). Smallholders live in a rural environment that is often highly dominated by informal institutions, such as values, norms, and beliefs, while food companies belong to an environment that is much more led by formal institutions, such as regulatory rules and laws (Rivera-Santos and Rufin, 2010; Rufin and Rivera-Santos, 2013). Actors in the informal environment engage by definition in unreported activities. Although they are easy to enter for resource-poor actors (Dayaratna-Band, 2007; Fafchamps, 2001) because no fees are required for registration, it is often difficult to leave informal economies, since producers are socially embedded in a network of other actors they count on for crucial resource inputs like labour and capital (Babah et al., 2019).

In the informal environment, smallholders are usually connected to food companies –through collectors (small-scale traders who collect products from smallholders) and then larger traders (Gabre-Madhin, 1997). Collectors visit villages that are sometimes remote and often buy small

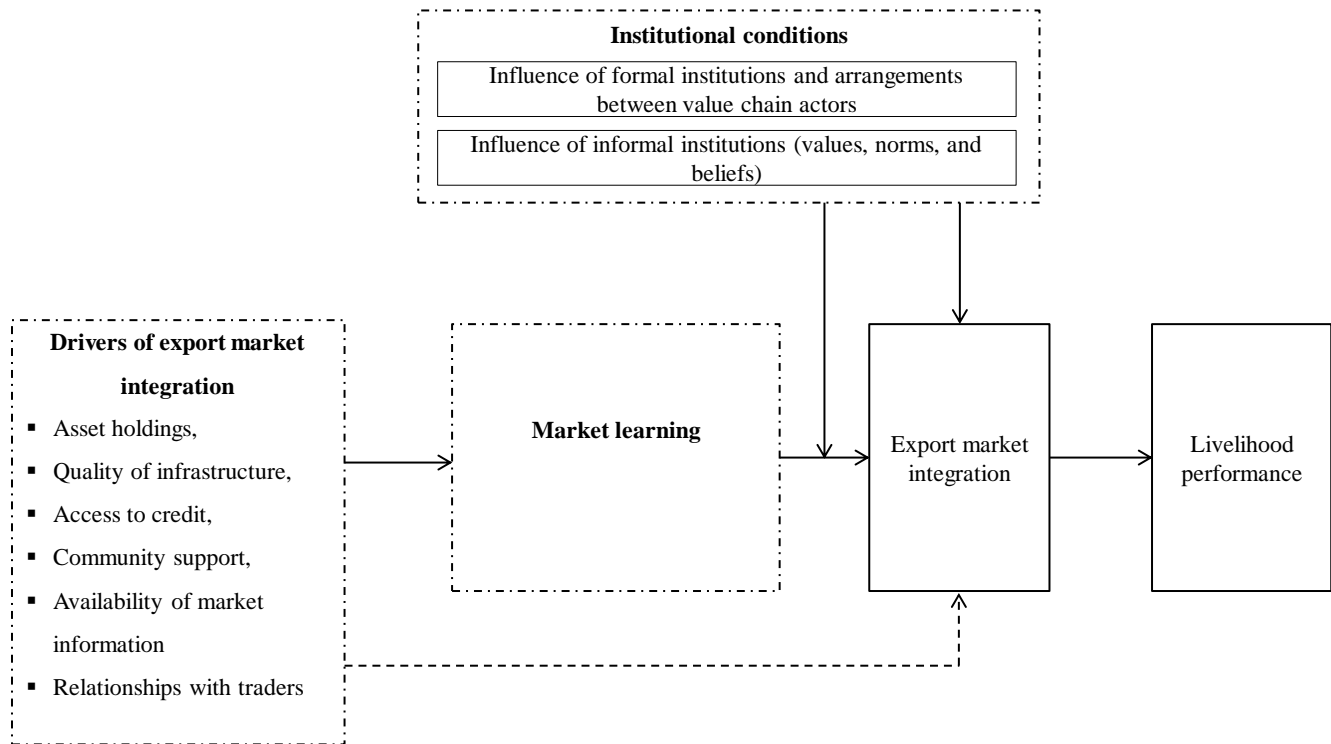


Figure 1. Conceptual framework.

quantities of products that they sell to traders. Traders sell the products at informal markets and/or sell to food companies through their procurement agents. Smallholders that sell to customers in informal markets are almost by definition constrained to markets with low purchasing power that are more sensitive to price than to quality. Differentiation generally takes place more on the basis of relationship-building, like doing favours and offering credit, than on product quality (Viswanathan et al., 2010).

Products that are not sold to consumers in informal markets are collected from different villages and municipalities and delivered to companies. Distances between smallholders and food companies can therefore be large, both in terms of geographic distance and in terms of the number of intermediaries in the system before the products reach the company (Marter, 2005). Market feedback from the company may therefore get distorted or not arrive at all at the level of smallholders, unless the company makes an extra effort to organize the system.

Standards represent one of the mechanisms used to bring this level of organization. They usually pertain to quality aspects of the products, also including food safety and hygiene and sometimes environmental and social aspects, like how biodiversity and farm workers are treated. Standards are referred to as codes of conduct that consist of a description of specific aspects of a product “which are accepted for current use through

authority, custom, or general consent” (Utterback, 1996: 29). They are formulated by the companies or third parties and communicated to smallholders. Standards serve as a “license to deliver” by the companies in their procurement processes (Reardon and Berdegue, 2002; Swinnen, 2007). They are particularly important for products that are sensitive for safety or quality violations in the informal environment where governmental regulative institutions are often inadequate to protect the interests of companies (Swinnen, 2007; Tran et al., 2013). Because standards can be seen as a formalization of customer preferences, they stand as an efficient means to reinforce the customer focus of a chain.

Smallholders’ compliance with standards cannot be taken for granted. Actors in informal economies generally possess small holdings (e.g., small pieces of land) and have limited access to critical production factors, such as capital, information, and (basic) infrastructure such as storage facilities, market and road infrastructures (World Bank, 2008; Banerjee and Duflo, 2007; Viswanathan et al., 2010a). As such, they generally face difficulties producing quality at a consistent level. Moreover, smallholders often produce small quantities, making their produce difficult to trace back. The high level of inconsistency in quantity and quality of supplies therefore forces companies to buy from many suppliers to meet the desired volumes. Lack of storage facilities may lead to the loss of products, in particular for perishable products. This results in a decline in product quality, and therefore

a decline in shelf life. Low coverage and poor quality of road infrastructure may prevent smallholders from producing quality products, since it isolates them in more remote areas (Ruben et al., 2007).

Smallholders may also lack information about the precise standards, particularly when they reside in more remote places that are rarely visited by extension agents (information providers that are usually employed by governmental or non-governmental organizations to improve agricultural practices) and only by one or few traders. In addition, the length of the value chain may also distort information (Marter, 2005). Consequently, smallholders are not always aware of the product standards and the higher rewards associated with producing in accordance with these standards. Non-governmental organizations (NGOs) sometimes assist smallholders, creating a more enabling environment. NGOs can provide training and coaching supports in (micro-) credit and technical assistance (Hens, 2012). Companies may also establish their own "buying force" of intermediary traders that are training to communicate standards and control their purchases.

Formal institutions and the arrangements between companies and smallholders will also affect the extent and type of market information that is present in the channel and whether and how such information is disseminated to smallholders (Adekambi et al., 2015, 2018). They provide the conditions for the information to flow from one actor to another within the value chain, including both the mechanisms through which information is transmitted and the incentives to actually use these mechanisms. The establishment of digital networks that provides information to smallholders (Kamani, 2016; Haworth et al., 2018) is an example of such mechanisms. A higher price paid for products that meet the quality standards usually provides an incentive to indeed transmit information to traders and smallholders at the base of the value chain. As such, the institutional conditions will not only influence market integration directly, but they will also moderate the effect of smallholders' market learning on the outcome variables.

Drivers of market integration

The question how smallholders' market integration can be improved is examined primarily in development economics (Piampongsant and Ingco, 2003; Fafchamps et al., 2005; Swinnen and Maertens, 2007). The main reason is that market integration is considered as an antecedent of economic growth and poverty reduction (IMF, 2001; World Bank, 2008). These studies typically adopt a transaction cost approach (Williamson, 1975), following the logic that the decisions whether and how much smallholders sell to markets depend on the costs related to the transaction. Such costs appear to be affected fundamentally by behavioural, volume, and technological uncertainties (Williamson, 1975).

Behavioural uncertainty is related to buyers' opportunistic behaviours that arise relatively frequently in informal economies (Viswanathan et al., 2010a), due to weaker influence of formal regulative institutions (Burgess and Steenkamp, 2006). Volume uncertainties occur when the required volume of buyers cannot be accurately adapted to the (potential) supplied volume of suppliers (Walker and Weber, 1984). Technological uncertainty occurs when it is difficult to anticipate, predict or understand production systems (Downey et al., 1975; Milliken, 1987). When examining the drivers of market integration, development economists generally contextualize these three fundamental antecedent factors into six concrete factors that are likely to influence transaction costs in informal parts of the system. These factors are asset holdings, community support, access to credit, quality of infrastructure, relationships with traders, and availability of market information.

Asset holdings refer to smallholders' belongings such as agricultural land and production equipment (Boughton et al., 2007; Barrett, 2008). They serve as important sources of financial support that enable smallholders to make the more risky specific investments in quantity and quality necessary to sell to the markets (Minten et al., 2009; Reardon et al., 2009). Credit and micro-credit in particular, minimizes smallholders' financial constraints, and as such provides them with another basis for making the required investment in equipment and skills to respond to their customers' expectations (Khavul, 2010; Bruton et al., 2011). Communities and families also appear to play a part in smallholders' market integration (Fafchamps, 2004; Holloway et al., 2007). They are sources of extra labour, and serve as financial buffers that give resource injections in smallholders' businesses (Fafchamps, 2004; Viswanathan et al., 2010b; Tadesse and Shively, 2013). The poor quality of road infrastructure contributes to increase transaction time and thereby may augment transaction costs and it may hamper traders that visit the producers to transport the produce. Traders may therefore experience quality losses and delays due to a lack of storage facilities (Swallow, 2005; Mu and Van de Walle, 2011; Rao and Qaim, 2011).

For traders as well as companies, the behaviour can also be uncertain. For instance, the trader may not go back to smallholders after buying from them on credit (Fafchamps and Minten, 1999; Ali and Peerlings, 2011). To protect themselves against behavioural uncertainty, smallholders often engage in social relationships (Fafchamps, 2004). Through support to each other and reciprocity among themselves, they for example, share knowledge and other resources with each other. Another factor that is likely to affect transaction costs is market information. As mentioned earlier, market information can be treated as an institutional factor (as something that is available in a sector or not), as well as withheld from some market participants or distorted or manipulated in buyer-seller relationships (Marter, 2005).

The present article sees market information also as an

individual-level factor, because like any other business, smallholders may differ in obtaining and processing of information (Slater and Narver, 1995). The role that market information plays in the value chain can therefore also be approached from a market-learning viewpoint. The basic assumption of transaction costs theory is that smallholders are rational, have full access to market information, and face no difficulty in processing the information when comparing the costs and benefits associated with different market segments. Less attention has therefore focussed on the *process* of market integration from the perspective of smallholders themselves. This is important because smallholders' actions and attitudes towards markets may develop over time when they acquire more understanding of the market that they produce for. In doing so, they may vary in the opportunities that they see in the market, even though the information that they can reach is identical. In that respect, the rationality of the producers, like that of any decision-maker, is bounded (March, 1991; Williamson, 1979). Therefore, there is a room for complementary theoretical perspectives that acknowledge the bounded rationality of smallholders more explicitly.

Market learning as a complementary approach to understand market integration

Market learning theories have to do with the question how businesses learn about their markets. They belong to organizational learning theories (Levinthal and March, 1993; March, 1991), that in turn evolved from the behavioural theory of the firm in which bounded rationality of decision-makers is fundamental (Cyert and March, 1963). Because empirical studies in the marketing literature highlight the importance of the firm's ability to learn from markets on its survival and success (Moorman, 1995; Petersen et al., 2008; Song and Shin, 2008), market learning is a logical concept to study smallholders' market integration.

Market learning is a capability that enables businesses to acquire the ability to process and deploy market knowledge that is required to create superior customer value (Grant, 1996). However, market information is often ambiguous, making learning tasks difficult for smallholders to accomplish. Its ambiguity is due to the fact that the precise meaning of market information is open to different interpretations. For instance, consumers find it often difficult to reveal their preferences, the boundaries of market segments are fuzzy, and competitors may involve companies from different areas that use different technologies (for example, imported tinned pineapple competes with fresh mango's for consumers' expenditures). Drawing on Huber (1991), the literature on market learning in formal-sector businesses, often conceptualizes market learning as four interrelated

processes. These include information generation, dissemination, interpretation, and utilization (Sinkula, 1994; Slater and Narver, 1995; Moorman and Miner, 1997; Diamantopoulos and Souchon, 1999).

Information generation is conceptualized as the acquisition of market knowledge via different mechanisms such as market research (for example, customer surveys, analysis of exogenous market factors such as competition, technology, and government regulations), along with formal and informal discussions between customers and trade partners (for example, collectors, companies). Information dissemination refers to the formal (for example, formal meeting) and informal (for example, stories, informal conversations) diffusion of market knowledge to relevant actors who participate in the value creation process. Information interpretation concerns the process through which information is given some commonly understood significance. Finally, information utilization is referred to as the actions undertaken to effectively use information for decision making purposes (Slater and Narver, 1995; Souchon and Diamantopoulos, 1999; Diamantopoulos and Souchon, 1999; Theodosiou and Katsikea, 2013). Empirical studies on market learning reveal that businesses may differ in the acquisition and processing of information (Day, 1994; Sinkula, 1994; Slater and Narver, 1995).

The context of smallholders clearly differs from that of companies operating in formal sectors of the economy, but also smallholders may generate information from their market connections. They may acquire information from traders that come to visit them and they can ask explicit questions that traders may answer at their next visit. Smallholders may also share information with their community members, discuss that information to give meaning to it, and inventorise the possible consequences of the decisions that they should take (for instance, -what are the risks of growing a new variety for a new customer?).

Because smallholders may still face multiple market opportunities within their environment from which they can choose (growing different crops that can be sold at local informal markets, formal markets that require compliance with standards, or self-consumption), the decisions of whether and how much to sell to a marketing channel may not only be dependent on the corresponding transaction costs, but also logically on what the seller has learned, and on how (s)he learns. Thus, the integration of producers with markets is a complex process that requires attention in addition to the process outcome (the degree of market integration). To integrate with markets, smallholders need to build up competencies that help them to learn from their market environments which traders are reliable and/or to respond to the requirements of their on-going trade-relations. Market learning helps the sellers to understand which opportunities are available in their environment, and it also addresses how they can select and seize such opportunities (March,

1991; Kyriakopoulos and Moorman, 2004; Atuahene-Gima, 2005).

The smallholder market learning concept suggests that market information acquisition, sharing, and interpretation are crucial factors in understanding one's markets, customers, and competitive position (Kohli and Jaworski, 1990; Day, 1994; Sinkula, 1994; Moorman, 1995). Because market learning provides smallholders with competencies respectively to sort out and seize the market opportunities, learning leads to export market integration. Market learning processes themselves require input in terms of information to become aware of opportunities, or more precisely market relationships with traders that bring such information (Adekambi et al., 2015), social relationships with community members to debate and interpret information with others (Fafchamps, 2004). Assets like land and input materials as well as financial capital to make investments, are necessary to seize opportunities. Because the awareness, interpretation and ability to seize opportunities can be seen as sources of transaction costs (Reardon et al., 2009), market learning in fact reduces transaction costs. As such, market learning can be seen as a consequence of the drivers of export market integration that are discussed in the development literature. Hence, the conceptual framework therefore includes market learning as a mediator of the relationships between the drivers and export market integration.

Consequences of market integration

Market integration in which smallholders learn from their markets is likely to lead to the similar outcomes as those indicated in the market integration literature. First, past studies have shown that successful market integration profits food companies, which can expect more consistent deliveries in terms of quantity and quality and fewer losses (Ruben et al., 2007; London et al., 2010).

The effects are however not only beneficial to companies in the formal part of the chain, they will also benefit the smallholders. Extant studies in the development literature see the integration with markets as a key driver of livelihood performance, as export marketing channels offer higher prices than local markets, and with these higher prices, smallholders can better cover their basic needs like medical expenses, costs for schooling their children and buying consumer goods (Arnould et al., 2009; Minten et al., 2009; Maertens et al., 2011). Considering that more than 43 per cent of the population in this part of the world live with less than US\$ 2 a day, the connection with markets may offer them a direct opportunity to move out of poverty (Karnani, 2007). At the macro level, market integration is therefore positively related to the national income and growth of developing countries (Dollar and Kraay, 2004; Achchuthan, 2013; Billmeier and Nannicini, 2013).

CONCLUSION AND IMPLICATIONS

This article has integrated the concept of market learning in the market integration framework as it is suggested in development economics. The inclusion of the market learning concept also implies that there are new relationships in the framework. A deeper understanding of these relationships may be a basis for new development interventions that strengthen market learning and can further strengthen the integration level of smallholders with markets, better livelihoods for their families, better procurement conditions for companies, and in the long run a higher economic growth.

Market learning enables smallholders to select the customers/marketing channels that are most suitable for their situation and seize the opportunities provided by these customers. Companies and policy makers can influence that situation by starting new channels, thus creating new opportunities for smallholders. They can also design and implement interventions in the institutional environment of the system. Such interventions should be developed from a learning perspective, meaning that not only the content of the standards matters, but also how they are introduced and disseminated. Think for example of developing tools that help extension workers to explain standards to smallholders and developing incentives for traders to transfer information on standards or other customer preferences so that they "pull" the desired varieties and qualities from the supply, encourage smallholders to produce more of such varieties and qualities, and share information on the market expectations and risks pertaining to this channel. Such interventions help smallholders to learn about new opportunities, trade-off the risks and benefits, and integrate these in their own decisions. Depending on the farm resources and the personality of the farmer (e.g. risk aversion), decision outcomes may differ between smallholders, but the learning process enables them to choose and seize the opportunities that fit them best, and learn on how they can further benefit from the market in the future.

Directions for future research

Empirical research from a market learning perspective will be necessary to better understand the barriers for learning, the forms of learning and its relative impact. Such a research program should probably start with qualitative studies that refine the framework proposed in this article. These qualitative studies may examine how information flows from downstream food companies to upstream suppliers and smallholders. It may also obtain a deeper understanding of the barriers in the information flow, like the decisions that chain members may take about which information they move forward and what they withhold.

To understand the relative impact of market learning as a driver of market integration, quantitative studies will also be important. Future research may in that respect also draw on the learning literature to study different forms of learning from markets. One particularly interesting view is whether smallholders explore their market in order to discover new opportunities or whether they try to refine their knowledge thus developing the capabilities that help them to seize one opportunity more effectively. In the literature these two forms of learning are respectively known as exploratory and exploitative learning (Kyriakopoulos and Moorman, 2004; Atuahene-Gima, 2005).

Finally, research may study the effectiveness of interventions that aim to strengthen market learning at the smallholder level. Interventions developed from this perspective may reduce food losses and improve smallholder livelihoods. A rigorous examination of the intended effects may help the design and implementation of future interventions in that respect.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

Gender as a moderator between entrepreneurship intention and its predictors among university graduates in Nigeria and India

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The main emphasis of this study is to examine the role of gender as a moderator between entrepreneurship intention and its predictors among university graduates in Nigeria and India. The data were gathered from 130 postgraduate students from two universities in Abuja and a southern region of India. A structured questionnaire was administered on-line via Google document. Confirmatory Factor Analysis of Structural Equation Modelling (SEM) was used to determine the relationship between the independent and dependent variables. The study shows that gender has a moderating effect on entrepreneurship intentions due to subjective norms, perceived behavioural control and attitude towards the behaviour. The study recommends total annihilation of gender differences in building entrepreneurship process and to nurture both genders in the same way to build strong personalities.

Key words: Attitude towards behaviour, entrepreneurial intention, gender, perceived behavioural control, and subjective norms.

INTRODUCTION

Entrepreneurship is a key driving force behind any country's economic growth and social development. It also acts as a catalyst in creating and achieving job opportunities among the people in the developing society (Audretsch, 2012). Entrepreneurship is seen as a panacea to lack of economic improvement and unemployment. Many graduates are unemployed in many countries due to lack of job opportunities (Karimi et al., 2010). Entrepreneurial intentions are a deliberate awareness of an individual to create something different from other businesses (Bird and Thompson, 2009). In a situation where the intention is positive towards

entrepreneurship, the tendency usually leads to innovation and creativity. However, some factors like attitudes towards entrepreneurship, subjective norms and perceived behavioural control most times do not lead to the expected entrepreneurial intention due to gender issues.

The main objective of the study was to determine the role of gender as a moderator between entrepreneurship intention and its predictors among university graduates in Nigeria and India. The specific objectives are to assess the relationship between the determinants of entrepreneurship and entrepreneurial intention and

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highlight the moderating effect of gender on Entrepreneurial Intention. In line with the objective research questions were raised, thus; to what extent has the determinants of entrepreneurship affected entrepreneurial intention? And what is the moderating effect of gender on entrepreneurial intentions of graduates in Nigeria and India?

This paper has policy implications, especially for those providing assistance to entrepreneurs and small business owners in both countries.

LITERATURE REVIEW

Global entrepreneurial index, (2018) score for India is 26% and ranked 69th out of 137 while Nigeria is 19.7% and ranked 101 out of 137 countries globally. The report disclosed 14 pillar performance of entrepreneurship which Nigeria and India need to explore further: especially in the areas of innovation, creativity, Information Technology, Big data analysis, family support, affirmative action, training and skill acquisition. However, the governments of both countries are putting enough efforts to promote entrepreneurship at early stages by offering financial assistance, training and skill acquisition programmes. Empowerment programmes and workshops are also some of the recent initiatives taken by the government of both countries to enhance entrepreneurship intentions of graduates. These movements have got wide appreciation from the educational communities of all streams.

Opportunities over threats could be stressed through the entrepreneurial process (Ali et al., 2011). Entrepreneurship could be seen as introducing a new business idea by an individual (Bruyat and Julien, 2001). Barringer and Ireland (2010) cite Gelderen et al. (2008) who say that recent career concepts such as the boundary less career, post-corporate career, and employability are certainly relevant to entrepreneurship (Figure 1).

Entrepreneurial intention

An individual's effort to build and act upon a conscious plan is an intention (Conner and Armitage, 1998). The individual intention could be seen as the willingness of one to behave in one's desired way (Ajzen, 1991). One's way of thinking towards innovation and creativity is seen as an entrepreneurial intention (Bird, 1988).

This study supports the studies carried out by Bird (1988) and Ajzen (1991). There is an urgent need for graduates to see entrepreneurship as a rewarding career that could help them to be self-reliance. They could be encouraged to express their intentions to pursue their career path by the guidance and counselling department even before they graduate from the universities. Attitude towards behaviour model could be used to dictate those

students who are innovative and creative.

Attitude toward behaviour (ATB)

The rate at which one has either favourable or unfavourable views to one's way of behaviour could be seen as an attitude (Ajzen, 1991). Attitudes are assessed by the total set of accessible behavioural beliefs that results in various outcomes. In general, attitude depends on expectations and beliefs about the outcomes resulting from the behaviour (Krueger et al., 2000; Fishbein, 1967). Armitage and Conner (2001) are of the view that attitude towards the behaviour mirrors the person's holistic evaluations of performing a particular task. There is a nexus between attitude towards behaviour and intention. The greater attitude one has towards behaviour the more one's intention to perform the set task and vice versa. Nigerian and Indian government have developed programmes to attract graduates to be self-reliance. These have been inspiring the youth's attitude towards innovation and creativity; however, there is still room for a stronger attitude toward entrepreneurship among the students. Professional's attitudes towards ethical issues usually influence intentions (Howard, 2005). Those students that did entrepreneur courses in the University tend to have entrepreneurship intention than those who did not. The study supports the findings of Howard (2005).

In the study of Howard (2005), he used an extension of the theory of planned behaviour (Ajzen, 1991, Action Control-From Cognition to Behaviour), the model used in his research highlights the effect of personal, social and organizational factors on ethical intentions. Professionals from five accounting firms completed a survey that measured responses to ethical dilemmas related to the public accounting domain

The survey instrument was administered in two phases to avoid ethical bias. The study revealed strong support for a direct relationship between attitudes and ethical intentions. The proposed direct effect of subjective norms was not supported. However, a significant relationship between norms and attitudes was found. There is a difference in the finding of the study and this study because subjective norms have a significant effect on entrepreneurial intentions.

Subjective norms (SNS)

Individual's view of general social pressure to act, or not to act in a certain way is known as the subjective norm (Armitage and Conner, 2001). It has two elements known as the normative beliefs and motivation (Ajzen and Fishbein, 1980). Normative beliefs are slanted by the strength of the motivation (Krueger et al., 2000). They further stress that the subjective norms include graduates' family acceptance of his/her interest in being

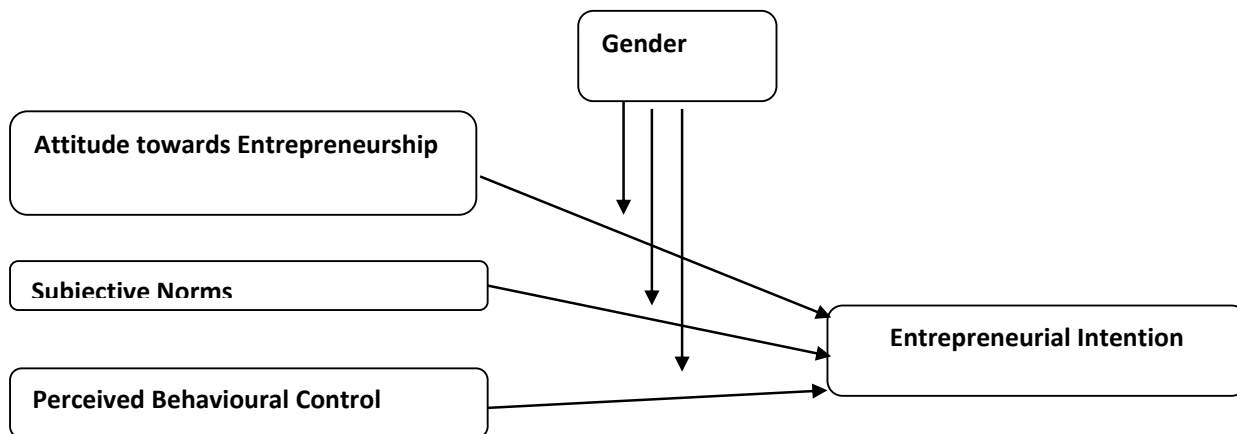


Figure 1. Conceptual Framework
Source: Authors' Design (2019).

an entrepreneur. Parents, partners, and peers views may influence a graduate career path. This is because the student may be confused in choosing a career path suitable for him/her (Gelderen et al., 2008). Therefore, in this research, the model of attitude towards the behaviour of the subjective norms may include role model and family background.

It is assumed that for an individual to have the desire to be an entrepreneur, either one of the parents or one among friends, might positively affect the formation of his/her intention (Ebrahim and Schøtt, 2014). An individual's role model is a person he wants to act or behave like (Gibson and Barron, 2003). People pay attention to role models because such observation can help them perform new tasks, learn new skills, acquire norms and make sense in the environment (Bandura, 1986). Wood and Bandura (1989) observe role models as the self-beliefs of abilities; therefore finding out the impact of a role model in the entrepreneurial intention is essential.

Many at times people learn and act by example, especially young adults who try to emulate their parents. Wang and Wong ((2004) assert that persons with self-employed parents are more likely to start their own business following the footstep of their parents. Minniti and Nardone (2007) say that entrepreneurial role models provide information which can minimize the confusion associated with starting a business.

Perceived Behavioural Control (PBC)

Ajzen (1991) sees the desired ability to perform a set goal as perceived behavioural control. As mentioned earlier; the construct of perceived behavioural control is added based on the extension of the theory of reasoned action. Perceived Behavioural Control should help in the

implementation of behavioural intentions into action, and directly predict behaviour (Armitage and Conner, 2001; Kirkwood, 2007). In line with their study, entrepreneurial alertness and self-efficacy have been added to the measure of PBC. Entrepreneurial self-efficacy talks about the strength of a person's belief that he or she can successfully perform the various roles and tasks of entrepreneurship (Ali et al., 2011). Bandura (1986) says that; "Self-efficacy is linked to initiating and persisting at behaviour under uncertainty, to setting higher goals, and reducing threat-rigidity and learned helplessness". Thus, entrepreneurial self-efficacy is included in the measure of perceived behavioural control.

Discovering business opportunities is a pre-condition for entrepreneurship and this might be overlooked by the students. This is said to be lack of entrepreneurial alertness (Kirzner, 1973). In the context of self-employment, the entrepreneurial alertness indicates that having an idea for setting up a business has motivating properties (Gelderen et al., 2008). The extent of students' awareness of business opportunities available to them can be measured through entrepreneurial alertness. Hence, this variable has been added to the measure of perceived behavioural control.

Gender

The way Nigerian and Indians see male and female have a strong effect on entrepreneurial intention of graduates in both countries (Karimi et al., 2014; Thomas and Mueller, 2000) say that, "gender is a fundamental dimension of the socio-cultural environment and can, therefore, be a possible determinant of Entrepreneurial intention". Some schools of thought like Grilo and Irigoyen (2006), Blanchflower et al. (2001), Crant (1996), Minniti and Nardone (2007), and Grant (1991) are of the

view that males are generally more interested in an entrepreneurial career than females. And those males also have a higher desire and intention to start their businesses than females. Their arguments of these researchers support this study which investigates the moderating role of gender on the relationship of attitude towards behaviour, subjective norms, and perceived behavioural control on entrepreneurial intention.

Entrepreneurial Intention (EI)

Entrepreneurial intention decisions are determined by certain factors that are planned. Krueger et al. (2000) and Thompson, (2009) are of the view that entrepreneurial activity is intentionally a planned behaviour. Even though that entrepreneurship has been seen as an important tool for economic and social growth, little attention has been given by the past studies in finding the influential factors of entrepreneurial intention among graduate students. Therefore, stressing entrepreneurial intention is very crucial. There are many intentional models available in the literature to study entrepreneurial intention. However, Ajzen's Theory of planned behaviour is the widely studied model to measure the intentional aspects of the subjects.

Theoretical background

Theory of Planned Behaviour (TPB) model supports the Theory of Reasoned Action by Fishbein and Ajzen (1975). The components of the theory of reasoned action include attitude toward behaviour and subjective norms. Ajzen (1991) extended the theory by including the measures of control belief and perceived behavioural control. The intention was found to be the direct antecedent of behaviour, guiding the behaviour in a controlled manner (Ajzen, 1991). The components of the Theory of planned behaviour are Attitude towards behaviour, subjective norms and perceived behavioural control on intentions.

The more favourable the attitude towards entrepreneurial intention is the less influence of subjective norms and stronger the perceived behavioural control towards entrepreneurship intention (Karimi et al., 2014). The TPB has been used to predict the EI of students and confirmed the critical roles of attitudes towards entrepreneurship, Subjective Norms and Perceived Behavioural Control in the prediction of these intentions (Karimi et al., 2013; Krueger et al., 2000; Carsrud and Johnson 1989).

The TPB assumes that intention is the basic determinant of behaviour which is affected by attitudes towards behaviour, subjective norms (SNs) and perceived behavioural control (PBC) (Karimi et al., 2014). The theory offers a coherent and generally applicable theoretical framework, which enables us to understand and predict entrepreneurial intention by taking into cognizance not only personal but also social factors

(Krueger et al., 2000). Therefore, the current study considers all the core dimensions of the TPB model and tests the entrepreneurial intention.

The study supports the Ajzen Theory of ATB and others and it seeks to investigate the entrepreneurial intention by the use of theory of planned behaviour, originally given by Ajzen (1991). Hence, this research studies the relationship of attitude toward the behaviour, subjective norm, and perceived behavioural control on entrepreneurial intention among graduating students. It also investigates the moderating effect gender has on entrepreneurial intention of graduate students in both countries.

METHODOLOGY

This paper used the primary source in data collection; structured questionnaires were administered to 365 postgraduate students in Nigeria and India online through Google document. Only 130 students responded from both countries. The proxies were; Attitude towards behaviour, Entrepreneurial intention, Gender, perceived behavioural control, and Subjective norms.

According to Krejcie and Morgan (1970), the sample size for the study which is 130 respondents is sufficient.

Cronbach's Alpha Test of Reliability was used to prove the reliability of the model used. Applying this test specified whether the items about each dimension are internally consistent and whether they can be used to measure the same construct or dimension of entrepreneurial traits that lead to entrepreneurial intention among the graduate students in both counties. According to Nunnally (1978), Cronbach's alpha should be 0.7 or above. However, for preliminary research, coefficient alpha in the range from 0.5 to 0.6 is still at the minimum acceptable level of reliability (Nunnally, 1978).

Confirmatory Factor Analysis (CFA)

The determinants of entrepreneurial intention comprise of three sub-dimensions such as attitude towards entrepreneurship, subjective norms and perceived behavioural control comprising of six-item scale, 5 item scale respectively.

Looking at each of the constructs individually in path diagram of attitude towards entrepreneurship developed using standardized co-efficient and squared multiple correlations, ATE 4 play a vital role (0.92) in determining the entrepreneurial intention followed by other variables. Looking at the subjective norm variable individually, SUN 4 plays a determining role in predicting entrepreneurial intention whose standardized co-efficient and squared multiple correlations are 0.89 and 0.61 respectively. On the other hand, perceived behavioural control variable has a greater impact on the entrepreneurial intention whose standardized co-efficient and squared multiple correlations is 0.82 and 0.61 respectively. This is due to the variable PBC 2 that plays as a strong player among other variables

Hair et al. (2010)'s summary of the CFA model exhibits that the standardized factor loadings should be 0.50 or higher. Therefore, no item in the factor loadings was dropped down as it is satisfying the best fitting measurement model. While combining the influential characters of three individual constructs in determining the entrepreneurial intention, the attitude towards entrepreneurship (0.86) followed by the perceived behavioural control (0.78) and subjective norms (0.73) has emerged as the key determinants, as per the overall results are shown in the path diagram (Figure 2).

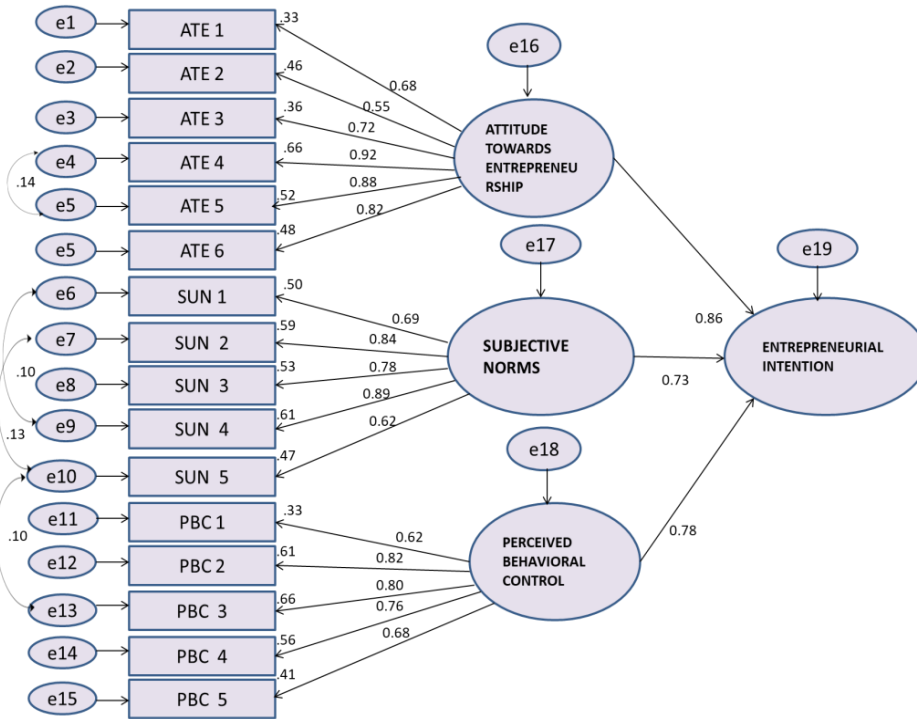


Figure 2. Path diagram.

Table 1. Model fit.

Model	CMIN	DF	CMIN/DF	GFI	AGFI	CFI	RMR	RMSEA	NFI
Index	158.610	51	3.110	0.801	0.921	0.911	0.030	0.066	0.854

Table 2. Model fit for structural model.

Model Indices	χ^2	df	χ^2/df	GFI	CFI	AGFI	RMR	RMSEA	NFI
	3.250	1	3.250	0.910	0.914	0.976	0.409	0.077	0.921

The hypothesized measurement model provides a good fit to the data with the goodness of fit index being 3.110. Similarly, CFI is 0.911, suggesting a good model fit (Table 1). RMSEA is 0.066 and lower than the threshold value of 0.80, is generally considered necessary for a satisfactory model fit. The value of RMR is 0.030 which is also found to be within the suggested range.

The AGFI is found to be 0.921, which is greater than the recommended acceptance level of 0.90. The NFI value is 0.854, which again suggest a good fit. The value of NFI generally lies between 0 and 1; larger values indicate a higher level of goodness of fit.

Structural equation modelling

The structural models are evaluated based on the path estimate and their significance along with the overall model fit. SEM is used to determine the existing causal relationship among a set of independent and dependent variable(s) (Figure 3 and Table 2).

DISCUSSION

The model shows the combined effect of all variables in influencing the entrepreneurial intention where the attitude towards entrepreneurship (0.51) as a standardized coefficient value and the regression value of 0.61. While subjective norms with the standardized coefficient value of 0.64 and the regression value of 0.46 and perceived behavioural intention with standardized coefficient value of 0.69 and a regression value of 0.51 that partly moderate the relationship. This is in line with the variable, that is, gender that acts as the moderator in this relationship.

The direct effect of three sub-dimensions such as attitude towards entrepreneurship, subjective norms and perceived behavioural control on entrepreneurial intention

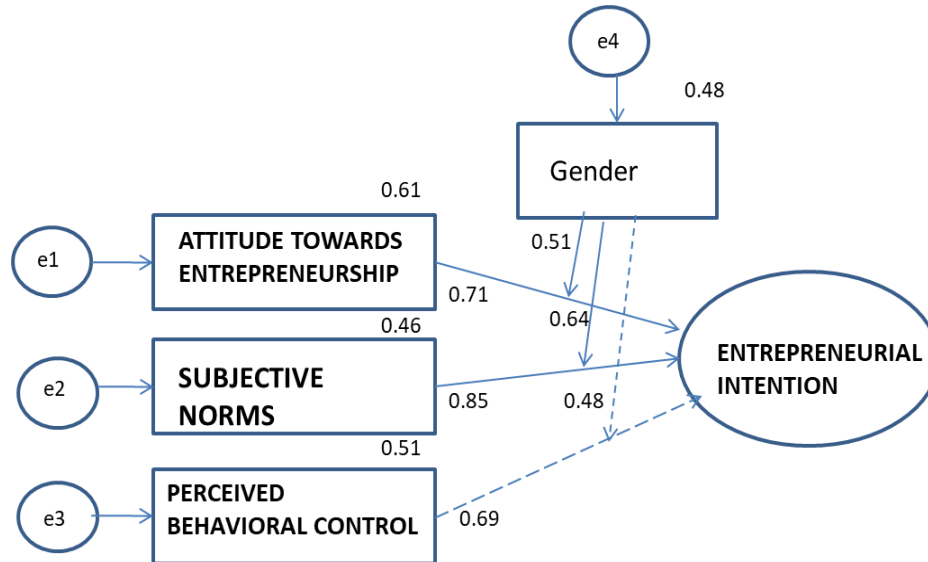


Figure 3. Standardized structural model for the determinants of entrepreneurship intention.

through the moderator, that is gender are positive as well as significant and thus validating partial moderated mediation effect. The results confirm that gender has a great influence on the determinants of entrepreneurial attitude among graduate students from the selected Universities. The results revealed that gender has a strong positive effect on entrepreneurial intention.

It could be seen from the above table that the indirect effect of attitude on entrepreneurial intention through gender as a moderating variable was high. While subjective norm, on entrepreneurial intention through gender as a moderating variable was showcasing a medium positive effect on entrepreneurial intention. However, the path perceived behavioural intention on entrepreneurial intention through gender as a moderating variable was showcasing a low positive effect on entrepreneurial intention.

After the examination of the significance of parameter estimate and the resultant model fit, the indirect effects are cross-examined through this S.E.M with the parallel moderation effect. The bootstrapping results infer that demographic variable i.e., gender plays a very important role in entrepreneurial intention.

Conclusion

1. The influential characters of three individual constructs in determining the entrepreneurial intention, the attitude towards entrepreneurship (0.86) followed by the perceived behavioural control (0.78) and subjective norms (0.73) have emerged as the key determinants, as per the overall results are shown in the path diagram. This shows that the three factors influence Entrepreneurial intention at a

different degree. This supports the study of Hair et al. (2010) who say that the CFA model exhibits that the standardized factor loadings should be 0.50 or higher.

2. The result also confirmed that gender has a great influence on the determinants of entrepreneurial. This is in line with the variable, the gender that acts as the moderator in this relationship. The model in Table 2 shows the combined effect of all variables in influencing the entrepreneurial intention where the attitude towards entrepreneurship (0.51) as a standardized coefficient value and the regression value of 0.61. While subjective norms with the standardized coefficient value of 0.64 and the regression value of 0.46 and perceived behavioural intention with standardized coefficient value of 0.69 and a regression value of 0.51 that partly moderate the relationship. The direct effect of three sub-dimensions such as attitude towards entrepreneurship, subjective norms and perceived behavioural control on entrepreneurial intention through the moderator, that is, gender are positive as well as significant and thus validating partial moderated mediation effect. This is in support of the study of Karimi et al. (2014) who say that "gender is a fundamental dimension of the socio-cultural environment and can, therefore, be a possible determinant of Entrepreneurial intention". Some schools of thought like (Blanchflower et al., 2001; Crant, 1996; Minniti and Nardone, 2007) are of the view that males are generally more interested in an entrepreneurial career than females. And those males also have a higher desire and intention to start their businesses than females.

3. This study also revealed that Perceived Behavioural Control (PBC) has more influence on Entrepreneurial Intention than Attitude towards Entrepreneurship (ATE) and Subjective Norms (SNs). This could be seen

in Figure 2, looking at each of the constructs individually in path diagram of attitude towards entrepreneurship developed using standardized co-efficient and squared multiple correlations, ATE 4 play a vital role (0.92) in determining the entrepreneurial intention followed by other variables. Looking at the subjective norm variable individually, SUN 4 plays a determining role in predicting entrepreneurial intention whose standardized co-efficient and squared multiple correlations are 0.89 and 0.61 respectively. On the other hand, perceived behavioural control variable has a greater impact on the entrepreneurial intention whose standardized co-efficient and squared multiple correlations is 0.82 and 0.61 respectively. This assertion is in line with the study of Bandura (1986) who says that; "Self-efficacy is linked to initiating and persisting at behaviour under uncertainty, to setting higher goals, and reducing threat-rigidity and learned helplessness". Thus, entrepreneurial self-efficacy is included in the measure of perceived behavioural control.

Recommendations

In line with the conclusions, this paper recommends the following;

1. That Nigerian and India schools should give their students from primary to tertiary institutions ample entrepreneurship orientation to enable them to develop the willingness towards entrepreneurship.
2. Government of both countries should make entrepreneurship studies compulsory in all their institution to enable those who do not offer the course to do so.
3. Gender bias should be discouraged in giving youth empowerment programmes in both countries. A child should be encouraged in any field of choice where she/he has an interest.

Limitations and future indications

Male respondents were not appropriately represented because of their moderately less percentage in the study which was not representative of the general population. Therefore the findings of the study should be taken with precaution. As far as implications are concerned, it is necessary to mention some of its limitations. The current study conducted once over a period seek for more reliable results later on studies should focus on longitudinal data. A structured questionnaire was used and all variables incorporated at five-point Likert-scale which allows the respondents to tick the options.

Also, the study has focused only on the positive attitudes of the entrepreneurs. Another limitation to this research is the small size of the sample that did not permit generalization; the study was carried out in only

two cities in Nigeria and India respectively; Abuja and Chennai. Future research should focus on the unanswered questions in terms of what factors help in realizing the intention to do business. And others like other key moderators can bring out multiple dimensions to the existing study which will be considered in future research.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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Full Length Research Paper

Procurement performance and profitability in foam mattress firms in Uganda

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The purpose of this study was to examine the effect of procurement performance on the profitability of Foam Mattress Firms in Uganda. Cross-sectional research design was used to execute the study. Stratified and simple random sampling techniques were employed to draw a sample size of 40 Departments whose inventory, supply chain, production, marketing, internal audit and accounting department formed the unit of analysis while inventory managers, store keepers, supply chain managers, quality controllers, production managers, accountants, and internal auditors formed the unit of inquiry. Questionnaires were self-administered to 200 respondents. The units of analysis (Departments) were each represented by five (5) respondents. The responses were aggregated to the respective units of analysis (Departments). Correlation and regression statistical analysis were performed by SPSS. The findings revealed that procurement performance is positive and significantly associated to profitability ($r=0.857$; $p<0.01$). Overall, the results indicate that procurement performance greatly influences profitability in Foam Mattress Manufacturing Firms in Uganda. The study was cross-sectional with its intrinsic weaknesses. This study was limited to Foam Mattress Manufacturing Firms sector in Uganda. Future study should examine the same in line with other private sector industries. Moreover, the findings were drawn from the study within the setting of Uganda, thus future study should examine the same in different countries.

Key words: Procurement, performance, procurement performance, profitability.

INTRODUCTION

Improving profitability demands that firms should be raised to a high level of performance (CPA Australia, 2011). This is because profitability is an essential driver of the future of all firms (CPA Australia, 2011). Conceptually, profitability is the ability of a given investment to earn a return from its use (Tulsian, 2014). Besides, firms that are managed efficiently command higher profits (Al-Jafari and Al Samman, 2015). From the

aforementioned studies, it implies that profitability is mostly influenced by overall firm's positive performance (Pandya, 2014). Moreover, profitability is key to the achievement of firm's objectives, and most importantly aids the firm to focus on growth strategies to attain these objectives (Margaretha and Supartika, 2016; Khan, 2017). Accordingly, this can be ascertained through the assessment of return on assets (ROA), return on sales

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(ROS), return on equity (ROE), return on capital employed (ROCE) and net present value (NPV) (Mwelu et al., 2014; Pandya, 2014; Al-Jafari and Samman, 2015; Richard et al., 2009). Besides, it is through being well-informed on the aforementioned assessment that firms more especially in the manufacturing sector (Foam Mattress) can develop better level of understanding on improving profitability.

In Uganda, this is articulated in numerous government frameworks and strategic plans. Particularly, Uganda Vision 2040 (Republic of Uganda, 2013) visualizes a transformed Uganda from a low-income nation to a modest upper-middle income nation. In this respect, manufacturing sector (Foam Mattress industries) development in Uganda subjugates a significant position in the government's vision. However, in spite of the important role of profitability as described earlier, profits from manufacturing firms, particularly foam mattress firms have been evidently poor (Uganda Bureau of Statistics, 2014). This is due to limited access to affordable credit, costly, unreliable, and inadequate raw materials, unreliable supply of inputs, low level of technology, and lack of innovations mastery, which adversely impacts on profitability (AFDBG, 2014).

Furthermore, Uganda Bureau of Statistics (2014) supported this evidence through the firms' performance index between 2009 and 2013 which was seen to be inconsistent. Consequently, there has been accumulated salary arrears leading to lack of motivation of staff, low re-investment rates, under production, accumulated deferred payments, poor deliveries, frequent stock outs, substandard products, failure to meet revenue targets, lack of asset utilization, customer disloyalty, poor customer service among others (Mwelu et al., 2014; AFDBG, 2014; UBOS, 2014).

In view of the aforementioned, procurement performance has been considered as an important facet to an improved profitability (Juma, 2010; Lysons and Farrington, 2006; Van Weele, 2010). Procurement performance is a measure of ascertaining the degree to which the procurement function is able to meet the objectives with least possible costs (Van Weele, 2002). Precisely, it entails how well organizational procurement objectives have been attained (value for money) (Schiele, 2007). Realising this demand firms to focus on supplier delivery accuracy, flexibility, quality conformance, cost saving, inventory flow and price effectiveness (Shalle et al., 2014; Accenture, 2002).

The major objective of this research is to examine the effect of procurement performance and profitability of foam mattress firms in Uganda's setting.

The empirical study was completed using data drawn from 200 respondents in a sample size of 40 departments drawn from a population frame of 49 departments of foam industries in Uganda (Vita Foam Ltd., Tuf Foam Ltd., Megha Industries, Crest Foam Ltd., Arua Foam Industries, Com Foam Ltd., Euroflex Ltd. and Royikems

Firms Ltd. in Uganda). This study contributes to literature through positioning procurement performance in a new context as a predictor to improved profitability. Despite the fact that procurement performance fosters profitability (Juma, 2010), this linkage has not been empirically tested in Foam Mattress firms in Uganda. The closest was by Mwelu et al. (2014), however, this focused on lean manufacturing and profitability of the manufacturing firms in Uganda. The absence of a similar study in the foam mattress firms necessitates this study. Besides, empirical evidence designates that such test in the jurisdiction of Uganda is vague.

LITERATURE REVIEW

Procurement performance

According to Van Weele (2002), procurement performance is a measure of ascertaining the degree to which the procurement function is able to meet the objectives with least possible costs. Precisely, it entails how well organizational procurement objectives have been attained (value for money) (Schiele, 2007). Realising these objectives demand firms to focus on supplier delivery accuracy, flexibility, quality conformance, cost effectiveness, inventory flow and price effectiveness (Shalle et al., 2014; Nasra, 2014; Accenture, 2002). Besides, the core objective of procurement performance is associated with quality conformance, risk management, cost effectiveness, supplier delivery accuracy and uninterrupted inventory flow (Walter et al., 2015). Therefore, it is imperative to comprehend that procurement performance is crucial to firms and its effective execution can uphold firm success (Juma, 2010).

Profitability

Profitability reinforces firm's performance and is a necessary driver of all firms' sustainability (CPA Australia, 2011). It is not just about generating money now but also safeguarding the ability to develop the firm in time to come (CPA Australia, 2011). Thus, enhancing profitability will increase the proficiency of the firm to improve performance and this is a necessity of firm proprietors and managers (Swagatika and Ajaya, 2018; CPA Australia, 2011). Besides, no enterprise can endure functioning when they are generating no profits (Smith et al., 2010). This is because profitability is an imperative facet in firm's engagements (Margaretha and Supartika, 2016). Moreover, profitability is key to the achievement of firm's objectives, and most importantly aids the firm to focus on growth strategies to attain these objectives (Khan, 2017; Margaretha and Supartika, 2016). Accordingly, this can be ascertained through the assessment of return on assets (ROA), return on sales

(ROS), return on equity (ROE), return on capital employed (ROCE) and net present value (NPV) (Mwelu et al., 2014; Pandya, 2014; Al-Jafari and Samman, 2015; Richard et al., 2009). Besides, it is through being well-informed on the aforementioned assessment that firms more especially in the manufacturing sector (Foam Mattress) can develop better level of understanding on improving profitability.

Procurement performance and profitability in an organization

Literature has positioned procurement performance as unique attribute towards improving the company's profitability (Juma, 2010; Lysons and Farrington, 2006). This means that the right practices of procurement function leads to competitive acquisition hence achieving quality supplies. Besides, the core objective of procurement is linked with quality conformance, risk management, cost effectiveness, supplier delivery accuracy, uninterrupted inventory flow and being a center for reference in the competitive industrial market (Walter et al., 2015; Shalle et al., 2014). Such practices further increase the level of profitability.

Procurement is crucial to firms and its effective implementation can promote business success (profitability). Similarly, studies have demonstrated that poor procurement performance results to financial losses due to delivery of poor materials, questionable value for money among others. This is to mean that shrinkage in profitability of organizations is linked to poor procurement performance (Juma, 2010).

Poor procurement performance is an impediment to growth of many firms and studies have positioned it as the reason for delay in timely delivery, promotes defects, and supply of poor quality materials and sometimes failure to delivery (Migai, 2010). Consequently, these constraints might have been realized as a result of outdated procurement procedures, unskilled personnel, poor integration of procurement activities, failure to install e-system procurement, nonexistence of quality assurance frameworks and up-to-date procurement policies and regulations (Juma, 2010).

Van Weele (2010) further expresses that purchasing performance policies and regulations can contribute to business success in three ways: first, by improving sales margins through substantial cost savings; secondly, through better quality and logistics arrangements with suppliers which leads to a higher capital turnover ratio and thirdly, through establishing effective relationships with the suppliers, which improves the company's return on net assets.

Similar, the aforementioned has also been demonstrated by Mwelu et al. (2014) in their study on Lean Manufacturing (procurement performance) and Profitability of Manufacturing Firms in Uganda. In the said study, cost reduction, reduction in production time,

increase in sales volume as well as profit margins, improved service delivery, increase in return on capital among others resulted from effective procurement performance hence improved profitability. Moreover, procurement performance entails how well organizational procurement objectives have been attained (value for money) (Schiele, 2007).

The aforementioned reviewed literature demonstrates procurement performance as a significant facet of profitability (Juma, 2010; Van Weele, 2010; SAP, 2007; Lysons and Farrington, 2006). Therefore, it is hypothesized that:

H1: Procurement performance is positively linked to profitability in foam mattress manufacturing firms in Uganda.

Conceptual framework

The conceptual framework shown in Figure 1 was drawn from reviewed literature. The procurement performance and profitability is independent and dependent variable, respectively. Since demographic measurements have hitherto been utilized as control variables in research (Min and Khoon, 2014; Al-Khali and Mahmoud, 2012) as cited by Ong'unya and Kalenzi (2019), gender, education, age and tenure were employed as control variable in this study. The measurements utilize for each variable is drawn from previous studies. The perception depicted from Figure 1 assumes that procurement performance affect profitability in foam mattress manufacturing firms in Uganda.

Hypothesis development

Demonstrated from the reviewed literature and theoretical framework, the following research hypothesis was framed:

H1: There is a positive and significant link between procurement performance and profitability in foam mattress manufacturing firms in Uganda.

MATERIALS AND METHODS

Study design and technique

This study adopted a cross-sectional research design. Data was obtained from a sample size of 40 departments out of 49 departments drawn from approved population frame of foam mattress industries, as advised by Krejcie and Morgan (1970) for determining sample size. The study covered Foam Mattress firms comprising Vita Foam Ltd., Tuf Foam Ltd., Megha Industries, Crest Foam Ltd., Arua Foam Industries, Com Foam Ltd., Euro flex Ltd. and Royikems Firms Ltd. in Uganda whose inventory, supply chain, production, marketing, internal audit and accounting department formed the unit of analysis while inventory managers, store keepers, supply chain managers, quality controllers, production managers, accountants, internal auditors formed the unit of inquiry. Stratified sampling technique was applied in selecting 7 inventory

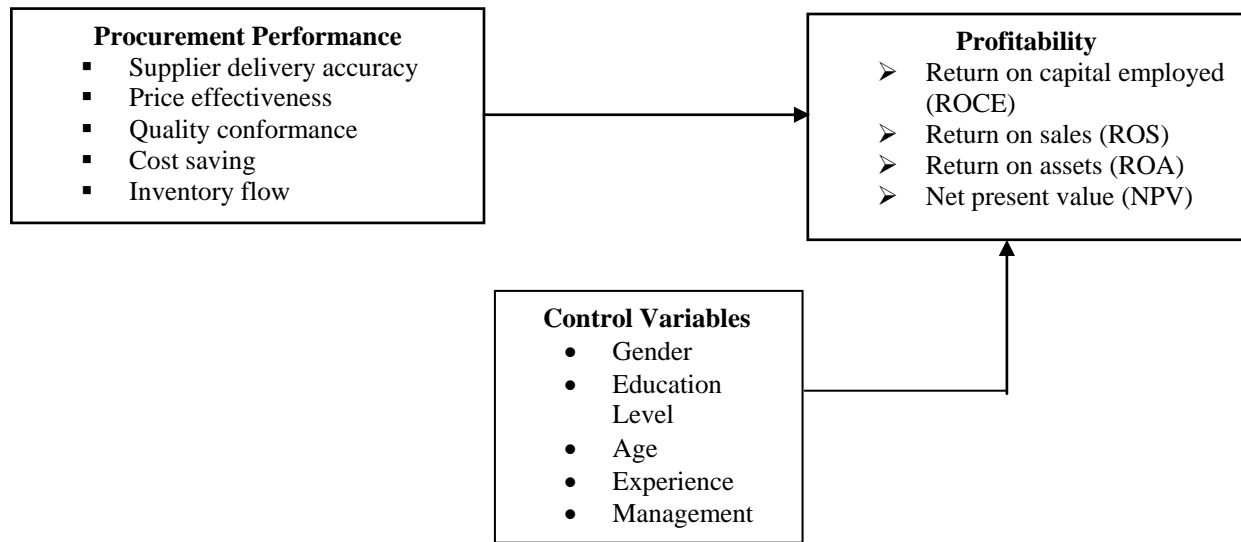


Figure 1. Conceptual framework showing the link between procurement performance and profitability.

Source: Adapted and moderated from Accenture (2002), Richard et al. (2009), Min and Khoon (2014), and Al-Khali and Mahmoud (2012).

Table 1. Reliability statistics.

Variable	Cronbach's alpha coefficient α	No. of items
Proc' Per'	0.899	30
Profitability	0.801	18

departments, 7 supply chain departments, 8 production departments, 8 marketing departments, 6 internal audit departments and 4 accounting departments. Successively, employing simple sampling technique, 6 balls marked with layer's name were provided. All designations of units of analysis (Departments) were registered on a paper and placed on those corresponding balls as per the layer's name, from which the samples were drawn without replacement until the sample size of 40 was attained. This sample size is arbitrated adequate as demonstrated by Roscoe (1975), rule of the thumb, signifying that a sample size between 30 and 500 is adequate for any study. Questionnaires were self-administered to 200 respondents.

Measurements of variables

To tap into the realm procurement performance and profitability, this study reviewed the Accenture (2002) model and Richard et al. (2009) model. According to Accenture (2002), dimensions of procurement performance include purchase price index, quality conformance, material inventory turnover, and supplier delivery accuracy. Conversely, Richard et al. (2009) identified the following accounting based dimensions of profitability: return on assets (ROA), return on sales (ROS), return on equity (ROE), return on capital employed (ROCE) and net present value (NPV). The items in both models were adjusted to fit this study. For validation purposes, the items in the tool were distributed to 10 experts comprising both manufacturing managers and academicians. The content validity index was established to be above 0.80. This was beyond the suggested minimum of 0.70 (Nunnally, 1978). Items

were anchored on a five-point Likert-like scale (1-5) ranging from Strongly Disagree to Strongly Agree. The adjusted questionnaire had 30 and 18 items, respectively.

Validity and reliability

The items in the tool were distributed to 10 experts comprising both manufacturing managers and academicians. All study variables recorded a content validity index of 0.80. This was above the suggested minimum of 0.70 (Nunnally, 1978).

Similarly, the reliability scale of the two scales of procurement performance and profitability were also established using Cronbach Alpha Coefficient as generated by Statistical Package for Social Scientists (SPSS). Cronbach alpha coefficient for all the study variables was 0.89 and 0.80, respectively. This was well beyond suggested threshold of 0.70 (Nunnally, 1978). Therefore, the scale for measuring procurement performance and profitability were reliable as shown in Table 1.

RESULTS

Correlation and regression analysis

Pearson's product moment correlation coefficient and regression analysis was utilized to evaluate the relationship between the study variables. The statistical results are shown in Table 2.

Table 2. Zero-order correlation results between procurement performance and profitability.

S/N	Variable	1	2
1	Procurement performance	1.00	-
2	profitability	0.857**	1.00

N= 40**; p < 0.01 (one-tailed).
Source: Primary data.

Table 3. Regression analysis results on the effect of procurement performance and profitability.

Variable	Unstandardized		Standardised	Model	R ²	Adjusted	ΔR ²
	B	SE B	B	F		R ²	
Intercept (constant)	3.053	0.255	-				
Gender	0.162	0.092	0.128	1.071	0.027	0.002	0.027
Age	-0.043	0.053	-0.069				
Model 1							
Management level	-0.054	0.085	-0.060				
Experience	-0.006	0.054	-0.010				
Education level	-0.048	0.058	-0.075				
Intercept (constant)	0.670	0.168	-				
Gender	0.021	0.048	0.016	92.332	0.740	0.732	0.713
Age	-0.023	0.027	-0.037				
Model 2							
Management level	0.012	0.044	0.013				
Experience	0.033	0.028	0.050				
Education level	0.026	0.030	0.040				
Proc	0.763	0.033	0.865				

N= 40, ***p < 0.001, Dependent Variable: Profitability.
Source: Primary data.

The correlation analysis results demonstrated in Table 2 exhibit a positive and significant ($r = 0.857$; $p < 0.01$) link between procurement performance and profitability of foam mattress firms in Uganda. The model assessment results unveiled in Table 3, indicate that Model 1 is statistically insignificant ($R^2 = 0.027$; $p > 0.05$). Given that demographic dimensions have earlier been utilized as control variables in studies by Min and Khoon (2014) and Al-Khali and Mahmoud (2012) as cited by Ong'unya and Kalenzi (2019) in Model 1; the control variables were controlled (gender, age, management level, experience and educational level). The findings demonstrate that control variables explained 2.7% of the overall variation in profitability. This implies that the livelihood of demographic measurements to profitability in Foam Mattress Firms in Uganda is statistically insignificant ($R^2 = 0.027$; $p > 0.05$). On the other hand, regression analysis is shown in Table 3: Model 2 established that 74% of the overall variation in profitability is illustrated by procurement performance ($R^2 = 0.740$; $p < 0.001$). Based on the correlation results ($r = 0.857$; $p < 0.01$), supported

by regression analysis results ($R^2 = 0.740$; $p < 0.001$) hypothesis (H1) is supported.

DISCUSSION

The study examined the effect of procurement performance and profitability in Foam Mattress Firms in Uganda. The study showed that the relationship between procurement performance and profitability was positive and significant. This finding is in line with Van Weele (2010), Lysons and Farrington (2006), Juma (2010), Shalle et al. (2014) and Walter et al. (2015) suggesting that as right practices in procurement function are put in place, there is a likelihood that quality conformance, risk management, cost effectiveness, supplier delivery accuracy and uninterrupted inventory flow will be achieved; as Foam Mattress Manufacturing firms in Uganda aim to ensure that they attain success (profitability), they become effective in implementing best procurement performance practices and therefore,

success is realized. Subsequently, there is a probability that salary constraints, low re-investment rates, under production, accumulated deferred payments, poor deliveries and frequent stock outs, substandard products, failure to meet revenue targets, lack of asset utilization, customer disloyalty, poor customer service among others will be settled.

Conclusion

The study assessed the effect of procurement performance on profitability of Foam Mattress Manufacturing Firms in Uganda. The finding shows that the relationship between procurement performance and profitability was positive and significant. Hence, it is necessary to note that procurement performance is significant towards improved profitability. Therefore, this study appendage to the literature through positioning procurement performance as a facet that enhance profitability in Foam Mattress Manufacturing Firms within Uganda's setting.

Although this study has unearthed significant and valuable information to pertinent stakeholders, it is also limited in the following ways:

- (1) The findings were drawn from the study within the setting of Uganda. This made it difficult to generalize the findings in relation to other countries. Therefore, future study should examine the same in line with another country.
- (2) The study was carried out in Foam Mattress Manufacturing industry in Uganda. The future study should look at the same in line with other private sector firms in Uganda or the same but in global perspective.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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