

Intellectual capital and performance of small and medium audit practices

Small and
medium audit
practices

The interactive effects of professionalism

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Received 31 March 2018

Revised 3 December 2018

30 April 2019

26 June 2019

Accepted 26 June 2019

Abstract

Purpose – The purpose of this paper is to examine the interactive effects of professionalism in the relationship between intellectual capital (IC) and performance of small and medium audit practices (SMPs) within the context of a developing economy, Uganda.

Design/methodology/approach – Data were collected through a questionnaire survey of 77 SMPs registered with the Institute of Certified Public Accountants of Uganda through their managing partners. The authors utilized multiple regression analysis to test hypotheses using centered variables and an interaction term between IC and professionalism.

Findings – IC is a significant determinant of performance of SMPs in Uganda; while professionalism when acting alone is not significant, however, results have shown that professionalism interacts with IC to enhance performance of SMPs.

Research limitations/implications – This study, owing to the absence of publically available published financial statements of SMPs, utilizes a questionnaire to collect data on performance of SMPs which could be less objective. Further, as the study is limited to SMPs in Uganda, it is possible that the results are only applicable to Uganda's accountancy field. In addition, the use of multiple regression is prone to problems associated with sampling error. However, the likelihood of these problems is mitigated by the interface with data and regression analysis diagnostics that were carried out.

Originality/value – This study provides initial empirical evidence on the relationship between IC, professionalism and performance of SMPs in developing economies. The study further indicates that while IC acts independently to influence firm performance, its interaction with professionalism enhances this performance.

Keywords Intellectual capital, Professionalism, Uganda, Performance,

Resource based view and dynamic capabilities, Small and medium audit practices

Paper type Research paper

1. Introduction

Determinants of performance of firms have been a focus of academic research for long. The attention on the drivers of firm performance within professional accounting firms increased with the 2008/2009 global financial crisis (Scott, 2010; Crotty, 2009). Professional accounting service firms are expected to have high levels of intellectual capital (IC), but lapses in professionalism and ethical orientation in such firms are suspected to be a major cause of their poor performance and has led to collapse of not only small and medium audit practices (SMPs) but also the demise of a then member of the "Big 5" audit firms – Arthur Andersen (Suddaby *et al.*, 2009) reducing into the current "Big 4" (PricewaterhouseCoopers, KPMG, Deloitte & Touche and Ernst & Young). Eroded professionalism amongst auditors and accountants is also blamed for major corporate failures in the west and beyond (Sajay *et al.*, 2009), and studies continue to



document contradictory attitudes regarding professionalism in not only small audit firms but also “Big 4” firms (e.g. Suddaby *et al.*, 2009). This phenomenon motivates us to examine the interactive effects of professionalism in the relationship between IC and SMPs’ performance. The importance of SMPs in emerging economies cannot be under rated. They do not only provide employment but are also a major source of advice and support to small and medium enterprises that form the bulk of enterprises in developing economies.

The IFAC (2016b) Global Survey on SMPs revealed a number of challenges facing SMPs such as keeping up with regulations and standards, technological developments, staff related issues and retaining clients which potentially do impact on their performance and growth. In Uganda, a review of the ICPAU (2016) register for accounting practicing firms for the period 2012–2016 indicated that an average of 5 percent of SMPs dropped out of the practice. Improved performance makes it possible for SMPs to overcome the service delivery handicap, which results from a lack of adequate input capital, both physical and IC (Okpala, 2012; IFAC, 2010).

Empirical studies have suggested various determinants of firm performance like corporate governance, IC, audit committee attributes, net working capital and cash flow management (Nkundabanyanga, 2016; Kallamu and Saat, 2015; Afrifa, 2016; Clarke *et al.*, 2011; Bontis *et al.*, 2000). Professionalism, which entails belief in public service, sense of calling to the profession and belief in self-regulation (Hall, 1968; Sejjaaka and Kaawaase, 2014), and IC, which involves human capital, structural capital and relational capital (Radulovich *et al.*, 2018; Nkundabanyanga, 2016; Li-Chang and Chao-Wang, 2012; Clarke *et al.*, 2011; Kamukama *et al.*, 2010; Schiuma and Lerro, 2008; Tayles *et al.*, 2007), are expected to influence firm performance.

Research linking IC, professionalism and performance of SMPs in emerging economies especially in the African context in a single study is sparse. Prior studies have linked board governance and IC with firm performance (Enache and Hussainey, 2019; Nkundabanyanga, 2016; Kamukama *et al.*, 2010), while others have linked professionalism with quality service delivery (Okpala, 2012), better job performance (Shafer *et al.*, 2002; Kalbers and Fogarty, 1995) and organisational commitment (Sejjaaka and Kaawaase, 2014). In their study, Sejjaaka and Kaawaase (2014) found that professionalism is positively associated with organisational commitment among accountancy firms in Uganda. It is therefore proposed that a lack of professionalism negatively affects the relationship between IC and firm performance. Further, Nkundabanyanga (2016) reported that IC is positively associated with firm performance. Whilst studies by Nkundabanyanga (2016) and Sejjaaka and Kaawaase (2014) were conducted in Uganda, none of the studies examined the possibility of professionalism and IC as jointly affecting SMPs performance. These authors continue to call for more research in the area of firm performance. In the current study, we test for IC and the interactive effects of professionalism as possible drivers of performance of SMPs in an emerging economy. This is achieved by a questionnaire survey of 77 SMPs. Results of the study suggest that IC is a strong determinant of firm performance and interactive effects of professionalism enhance this performance.

This study has important implications to the academia, society and the policy makers. First, the study adds to the body of existing literature on firm performance, especially the SMPs which have been rarely studied. Second, we provide an initial empirical evidence of the interactive effects of professionalism and performance of SMPs in a developing economy setting. Third, this study alerts managing partners, members of the accounting profession, Government and Professional accountancy bodies on what matters in ensuring survival of audit firms. Lastly, the study highlights the importance of IC within the accountancy profession.

The rest of the paper is organized as follows. The next section is literature review providing a theoretical framework and a review of existing empirical literature to arrive at

the hypotheses. Section 3 provides the methodology where the research design is outlined, and Section 4 provides results of the study and a discussion of the results. The final section provides a summary and conclusions of the study.

2. Literature review

2.1 Theoretical framework

The resource-based view (RBV) theory and dynamic capabilities (DC) theory are some of the theories that can explain performance of firms in particular with regards to the importance and “mixing of” tangible and intangible resources of professional services firms like SMPs. RBV (Barney, 1991) asserts that firms possess resources which are peculiar, rare, heterogeneously present and inimitable that can be used to drive performance. RBV suggests that a firm should focus on its resource base first in performing actions, rather than the external environment. Such firm resources comprise of both tangible/physical capital (e.g. financial capital, technology) and intangible resources (IC).

Given that firms operate in an environment that is dynamic and turbulent, RBV has been criticized as too static (Williamson, 1999). Hence, the DC concept was introduced as an extension of RBV to focus on how firms could maneuver the turbulent and dynamic environments to enhance their competitive advantage (Teece *et al.*, 1997). In a highly competitive and constantly changing environment, firms need to be able to anticipate changes and prepare to make changes in their strategy and arguably in the deployment of available resources so as to gain and maintain competitive advantage.

Within the lenses of RBV and DC, a partner of a SMP is expected to monitor the changing environment and appropriately respond to remain afloat. As such, an SMP can be looked at as a collection of productive tangible and intangible capital resources that can be combined to deliver services (Hall, 1992; Barney, 1991; Grant, 1991; Wernerfelt, 1984; Penrose, 1959) and hence drive performance. The RBV theory suggests that differences in firm performance are primarily the result of resource heterogeneity across firms (Barney, 1991). This implies that the different level of IC can explain differences of those firms' performance. We therefore posit that SMPs' performance could be related to their ability to appropriately mix their resident pool of IC.

In addition, given that SMPs operate in dynamic and unpredictable markets with an ever shifting competitive landscape, we follow Teece (2007) and argue that they require special capabilities (the DC) to maneuver the turbulent environment and perform. In this study, we conceptualize professionalism to be an intangible DC that will not only underpin all other resources but can assist audit firms to integrate, build and reorganize their internal and external competences to address the rapidly changing environments. A capability can be seen as one or multiple routine that are purposefully combined and directed toward a particular goal (Helfat and Peteraf, 2009). The level of and purposeful application of professionalism within SMPs will enable them gain and maintain competitive advantage through enhancing, protecting and reconfiguring their intangible and tangible resources. We argue that the ability to act professionally is a DC. A lack of professionalism to help combine and transform existing resources, skills and knowledge into acceptable audit services demanded by the market affects performance of SMPs. It is DC that alters a firm's resource base (Eisenhardt and Martin, 2000) to propel performance. Moreover, the most critical ingredient of competitiveness of small- and medium-sized audit practices is professionalism (Otete, 2018).

2.2 IC and firm performance

IC has been defined in various ways as the difference between firms' market value and cost of replacing its assets (Rezaei and Mousavi, 2015); the aggregate expression of intangible assets possessed by an organization (Nkundabanyanga, 2016); a packaged useful knowledge

(Tayles *et al.*, 2007); and as knowledge, expertise and associated soft assets, rather than hard physical capital of firms (Li-Chang and Chao-Wang, 2012). Various authors (e.g. Clarke *et al.*, 2011; Riahi-Belkaoui, 2003; Bontis *et al.*, 2000) have synthesized IC as an intangible asset of three components of human, structural and customer or relational capital.

Human capital is seen as the individual knowledge stock of an organization as represented by its employees (Li-Chang and Chao-Wang, 2012; Bontis *et al.*, 2000); the availability of the skills, talents and knowhow of employees that are required to perform the everyday tasks that are needed for the firm's strategy (Rezaei and Mousavi, 2015) or the processes that relate to training and education to increase the levels of knowledge, skills, abilities, values and social assets of an employee which will lead to the employee's satisfaction and performance (Radulovich *et al.*, 2018; Kalkan *et al.*, 2014; Marimuthu *et al.*, 2009). Human capital is recognized as the largest and the most important intangible asset in an organization (Kalkan *et al.*, 2014). Most firms vary in performance due to differences in their human capital (Dai *et al.*, 2015). Hitt *et al.* (2001) found that human capital has direct and moderating effects on firm performance. It was also noted by Clarke *et al.* (2011) that human capital efficiency is a particularly important element of IC and a firm can benefit a lot in investing in their employees' skills and knowledge since each of them brings value to the firm. Human capital generates innovation for new products and services and improves business process re-engineering.

Relational capital includes relationships an entity has with third parties such as customers and suppliers (Clarke *et al.*, 2011; Bontis, 2001). It includes a firm's value in its franchise and its ongoing relationships with the people or organizations to which it sells (Riahi-Belkaoui, 2003). To Siddiqui and Asadi (2014), it includes organizational relations both internal and external to the firm such as with customers, employees, suppliers, strategic alliance partners, stakeholders and industry associates. Within emerging economies, relational capital was found to positively relate with both financial and non-financial indicators of performance in Malaysia (Tayles *et al.*, 2007). This is mainly because of maintaining long-standing relationships with suppliers and continually meeting customers, understanding target segments and customer profiles and getting feedback from customers. In Taiwan, Li-Chang and Chao-Wang (2012) document similar results which they attribute to relationships with key accounts, i.e. customers with a business volume of more than 10 percent of total sales. In India, Radulovich *et al.* (2018), examining relational capital in terms of strengthening existing customer relationships, closeness to existing customers, duration of relationship with distributors and quality of channel relationships, show that there is a positive relationship between relational capital and international performance of small and medium enterprises offering professional services. For SMPs, IFAC (2016b) documents results to the effect that if SMPs were to tap into relational capital and join networks, it would enhance their performance.

Structural capital on the other hand refers to the general system and procedures of a firm for solving problems and innovation in terms of organizational and technological capital (Chu *et al.*, 2006). It includes all the non-human store houses of knowledge in organizations like databases, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value (Kamukama, 2013; Li-Chang and Chao-Wang, 2012; Bontis *et al.*, 2000). Li-Chang and Chao-Wang (2012), measuring structural capital in terms of investment in IT (information technology expense ratio), document results of a positive relationship between structural capital and performance. Similarly, Tayles *et al.* (2007) found a positive relationship between structural capital and non-financial performance indicators and overall business performance but not with financial indicators of performance. Although Clarke *et al.* (2011) in Australian public-listed firms also document results of a positive direct relationship between structural capital and financial measures of performance (specifically RoA and RoE), they show that structural capital, when acting with other elements of IC, is less important.

Literature has been consistent that IC as well as its individual elements positively relate with firm performance in a number of settings and industries. Rezaei and Mousavi (2015) indicate that in the current millennium, where less people do physical work as most of physical work is done by machines due to technological advances, a lot of brainwork is instead put in systems and procedures to use available information and establishing relationships to make efficient production possible. This has made IC central in development of successful organizations. IC therefore makes it possible to coordinate the machines, people, systems, procedures, information and organizations towards the achievement of the firm's objectives. On the basis of the foregoing discussion, we state our first set of hypotheses, thus:

H1. IC positively relates to the performance of SMPs.

H1a. Structural capital positively relates to the performance of SMPs.

H1b. Human capital positively relates to the performance of SMPs.

H1c. Relational capital positively relates to the performance of SMPs.

2.3 Professionalism and firm performance

Professionalism refers to the mindset with which individuals view their occupation (McGuigan, 2011; Hall, 1968). Dinger *et al.* (2015) argue that occupational professionalism is associated with membership in a specific group defined by shared knowledge and experience, such as accounting, legal, medical, IT fields. Professionalism goes beyond a generic sense of working hard and being a good employee, but instead it confers a sense of higher standards and beliefs toward work (Hornby, 2010). Professionalism being attitudinal and behavioral mindset, conditions how individuals think and approach work, and has an influence on performance of firms because it positively impacts employees' job satisfaction and organizational commitment (Dinger *et al.*, 2015; Seijaaka and Kaawaase, 2014). Specifically, in auditing, professionalism has been found to result into desirable workplace behaviors and attitudes, higher job performance (Shafer *et al.*, 2002; Kalbers and Fogarty, 1995) and subsequently better firm performance. The absence of or a lack of professionalism is blamed for recent corporate collapses and the worldwide financial crisis and calls are made to renew professionalism (Sajay *et al.*, 2009).

Professionalism manifests into a set of five conceptually related elements that shape an individual's behavior in the workplace. These dimensions are sense of calling to the profession, belief in self-regulation, belief in public service, professional autonomy and professional identification (Seijaaka and Kaawaase, 2014; Hall, 1968). They collectively represent a mindset in professionals like auditors and they influence job performance which eventually affects audit firm performance. A sense of calling to the profession refers to the extent to which the professional feels dedicated to the profession and would work in the profession even if there were fewer extrinsic rewards (Hall, 1968). A sense of calling to the profession influences employee motivation, satisfaction and performance (Dinger *et al.*, 2015) and, we propose, it influences the performance of audit firms. A belief in self-regulation refers to the extent to which professionals believe peers are the most qualified personnel to monitor the quality of their professional work (Hall, 1968). The belief in self-regulation can improve performance of audit firms given that it has been found to positively influence supervisor-rated job performance among accounting professionals (Kalbers and Fogarty, 1995) job satisfaction and organizational commitment amongst accounting professionals (Seijaaka and Kaawaase, 2014). Further, Hall (1968) indicates that the belief in public service captures the perception that the profession is necessary and beneficial to society and organizations, while professional autonomy refers to whether workers feel that they define and control the manner in which tasks are executed. Professional identification refers to the extent to which an individual identifies with the

profession and uses peers and professional groups as a source of beliefs and opinions. These manifests of professionalism we propose do influence the performance of SMPs.

Studies linking professionalism directly to performance of SMPs especially in developing economies hardly exist. Kaawaase (2015) noted that SMPs in Uganda face competition from nonprofessional accountants within the country and this poses a threat to their survival and likely to affect their professionalism. Although the Institute of Certified Public Accountants of Uganda (ICPAU) was established to regulate the accounting profession, Ministry of Trade issues trading licenses to any person who claims to be an accountant (Kaawaase, 2015) and, consequently, market privileges, indicated by Shafer *et al.* (2002) as one of the attributes of professionalism, are eroded. Dauda *et al.* (2015) asserted that the strength and competence of a profession can be influenced by the profession itself through the policy it develops and attitude of the society. Bribery, corruption, politics, legal/tax factors and undeveloped stock markets have implications on accountancy profession and were highlighted among the challenges of the profession (Okwuadigbo, 2012). Okpala (2012) also noted that sole and small audit firms faced many operational challenges to the extent that they have adopted survival tactics which impact negatively on the quality of services rendered to their clients. A firm that exercises professionalism renders high-quality services that lead to excellent performance and reduces mortality rate of SMPs (Okpala, 2012). Professional services rendered leads to clients' satisfaction and a continued relationship, which consequently leads to maintenance of the future firm's revenue (Datin *et al.*, 2012). Okpala (2012) noted that leadership style, management of people and consumers' focus are the strongest predictors of operational performance but are lacking in most SMPs operations. Professionalism has been shown to positively relate with organizational commitment of professional accountants (Sejjaaka and Kaawaase, 2014) with perceptions of organizational conflicts (Shafer *et al.*, 2002) and that a tension exists between commercialism and professionalism in audit firms (Coram and Robinson, 2017).

Professionalism has been found to be the most critical ingredient of competitiveness of SMPs (Otete, 2018). It is therefore expected that professionalism does not only drive performance in audit firms, it is also a necessary capability that interacts with other resources to drive performance of SMPs. Hair *et al.* (2010) indicate that interactive effect is the combined effect of two independent variables coupled with the individual main effects. This means that the impact of IC and professionalism on the performance of SMPs is moderated by a third variable, the product term of the two independent variables (Jaccard and Turrisi, 2003). It is argued that testing for interactive effects is at the very heart of theory testing and development in social sciences (Cohen *et al.*, 2003). We thus develop our second and third set of hypotheses as follows:

H2. Professionalism positively relates to the performance of SMPs.

H2a. Sense of calling to the profession positively relates to the performance of SMPs.

H2b. Belief in self-regulation positively relates to the performance of SMPs.

H2c. Belief in public service positively relates to the performance of SMPs.

H2d. Professional autonomy positively relates to the performance of SMPs.

H2e. Professional identification positively relates to the performance of SMPs.

H3. Professionalism interacts with IC to drive the performance of SMPs.

2.4 Control variables

Following previous scholars, we control for confounding variables (Bartov *et al.*, 2000) namely, size of the audit firm (proxied by both the number of partners in the audit firm and number of employees) and age of the audit firm. Firer and Williams (2003) controlled for firm size in their study of IC and traditional measures of corporate performance and found that firm size is not

associated with the dimensions of productivity and market valuation. However, Kipesha (2013) found a significant positive relationship between firm size and firm performance among microfinance institutions in Tanzania. In terms of firm age, Olutayo *et al.* (2015) found that firm age is significantly and positively associated with the performance of small and medium enterprises. Kipesha (2013) also documents a positive and significant association between firm age and firm performance. Zare *et al.* (2013), in their study of firms listed on the Tehran stock exchange, found that a firm's financial performance is positively influenced by firm age. In view of the mixed nature of previous findings, we expect control variables to have a significant influence on the performance of SMPs.

3. Methodology

3.1 Research design, population and sample

The study was cross sectional involving a survey of all 184 SMPs registered and licensed by the Institute of Certified Public Accountants of Uganda (ICPAU, 2017). Using the guidance of Krejcie and Morgan (1970), a sample of 123 accounting firms was determined. The selection of 123 accountancy firms was done through a simple random sampling method. The unit of analysis was the SMP represented by the managing partner as a unit of inquiry. Names of firms were written on a piece of paper, inserted in a bowl and picked one by one without replacement until 123 firms were selected. The choice of the managing partner was based on the fact that they have sufficient knowledge to respond to the survey questionnaire. To control for common rater effects/biases, we followed recommendations of Podsakoff *et al.* (2003) where data for firm performance variable and the respondents' background information were collected first and, after a time lag of two weeks, data for the independent variables were collected from the same respondents. Questionnaires were marked with unique identification numbers per respondent to facilitate integration of the two sections. Of the 123 accountancy firms, final usable questionnaires were for 77 firms, representing a response rate of 63 percent. The resulting response rate was quite high for a survey of this type, considering that empirical studies involving surveys have been known to generate far lesser percentage response rate.

The sample size also mirrors the size one would obtain by adopting Yamane's (1967) approach of determining sample size. Yamane (1967) gives a formula where sample size is derived as: $n = N/1 + N(e)^2$, where "n" is the sample size; "N" is the total population; and "e" is the tolerable error. On the basis of Yamane's approach with total population (N), 184 SMPs and tolerable error (e) of 0.5 percent, the sample size (n) is also 77 firms.

Table I indicates that majority of the audit firms are one partner firms (66.2 percent) have less than ten employees (64.9 percent of the firms) and have been in existence for more than five years (77.9 percent). Male respondents constituted 84 percent and female respondents 16 percent. Majority of the respondents were aged between 36 and 55 years, representing 79 percent of the respondents, and 70 percent have been managing partners for 5 years and above implying that there was maturity in interpreting and answering the questionnaire. In sum, 44 percent of respondents have Masters' Degrees and only 5 percent have a Degree of Doctor of Philosophy, and all managing partners possessed professional accounting qualifications. The above findings give an insight into the nature and structure of the SMP sector in Uganda and indicate that the respondents have the technical and managerial knowledge to respond to the questions in this study's questionnaire.

3.2 Data collection instrument, validity, reliability and measurement of variables

A questionnaire survey is a common method of collecting data in social sciences when it is inevitable to rely on psychometric data for example in cases where objective archival data may be inaccessible and in private hands (Dess and Robinson, 1984). Dess and Robinson (1984) also guide that when measuring organisational performance, qualitative indices can also be used as

Background information	Frequency	Percentage
<i>Gender</i>		
Male	65	84.4
Female	12	15.6
Total	77	100
<i>Age of the respondent</i>		
Below 35 years	5	7.8
Between 36 and 55 years	61	79.2
Above 55 years	11	14.3
Total	77	100
<i>Experience</i>		
Less than 5 years	23	29.9
5 years and above	54	70.1
Total	77	100.0
<i>Marital status</i>		
Single	6	7.8
Married	70	90.9
Divorced	1	1.3
Total	77	100.0
<i>Education</i>		
Below Bachelor's Degree	32	41.6
Bachelor's Degree	7	9.1
Master's Degree	34	44.2
PhD	4	5.2
Total	77	100.0
<i>No. of partners in the audit firm</i>		
One partner	51	66.2
Two partners	22	28.6
Three partners	4	5.2
Total	77	100.0
<i>No. of employees</i>		
Less than 10 staff	50	64.9
10 and above staff	27	35.1
Total	77	100.0
<i>Age of the audit firm</i>		
Less than 5 years	17	22.1
5 years and above	60	77.9
Total	77	100.0

Table I.
Respondents and
audit firms profile

valid measures of performances. In this study, the data collection instrument was designed basing on psychometrically validated scales of IC, professionalism and performance. The scales were anchored on a six-point Likert scale with close-ended questions, since the aim was to calculate the mean ratings of the extent of agreement with the statements given.

The research instrument was nevertheless subjected to validity tests using a panel of experts and practitioners. All the variables registered a Content Validity Index above the recommended 0.7 (Davis, 1992). Reliability of the instruments was tested using Cronbach's (1951) α coefficient and the coefficients for all the study variables were above the recommended 0.75 (Nunnally, 1978).

3.2.1 Firm performance scale. Firm performance was operationalized by both financial and non-financial indicators of performance in line with previous scholars (Givoly *et al.*, 2017; Nkundabanyanga, 2016; Al-Matari *et al.*, 2014; Azubuike, 2013; Clarke *et al.*, 2011; Neely, 2003; Bontis *et al.*, 2000; Ittner and Larcker, 1998a, b). Tayles *et al.* (2007) indicate that high IC firms, e.g. those in accounting and auditing, have discarded traditional measures, such as sales and profits, and do attach significantly greater importance to employing a combination of financial and non-financial performance measures. The psychometric measures of performance that tap into aspects of income, expenses, liquidity and assets and non-financial indicators like employee productivity, customer satisfaction and size of client base are used.

3.2.2 IC scale. We follow previous scholars (Nkundabanyanga, 2016; Kalkan *et al.*, 2014; Kamukama, 2013; Kamukama *et al.*, 2010, 2011; Bontis *et al.*, 2000) to operationalize IC as inclusive of human capital, relational capital and structural capital. The human capital scale taps into the knowledge stock of an organization. Relational capital includes items that measure relationships an entity has with third parties such as customers and suppliers, while the structural capital scale taps into all the “non-human store houses” of knowledge in organizations such as databases, organizational charts, process manuals, strategies, routines and anything whose value to the company is higher than its material value (Bontis *et al.*, 2000).

3.2.3 Professionalism scale. We test for professionalism using Hall’s (1968) professionalism scale that has been widely used and recognized as valid across a number of professions (including accounting and auditing) as a standard scale of professionalism (Sejjaaka and Kaawaase, 2014; Suddaby *et al.*, 2009). The scale operationalizes professionalism in terms of belief in public service, sense of calling to the profession, belief in self-regulation, professional autonomy and professional identity.

3.3 Data analysis

Prior to data analysis, data were checked for completeness and simple frequency runs were performed to screen the data so as to identify missing values. The identified missing values were a result of omissions made by respondents and constituted 1.2 percent of the data and, thus, considered trivial (Little and Rubin, 2002). Thereafter, factor analysis was run basically to summarize the data and to find out the amount of variance in the study constructs explained by the scale items. Exploratory factor analysis was done by running a rotated component matrix thereby reducing the questions to those that are more relevant to the study variables. Before executing the principal component analysis for our scales, we assessed the suitability of the data for factor analysis based on sample size adequacy, the Kaiser–Meyer–Olkin (KMO) and Bartlett tests. The KMO and Bartlett’s (1954) test of sampling adequacy were computed to ensure that factor analysis yields different and reliable factors (Kaiser, 1974). Field (2009) explains that KMO and Bartlett tests values range from 0 to 1.

The results shown in Tables II–IV indicate that the KMO values for professionalism, IC and firm performance are 0.639, 0.843 and 0.774, respectively, and within acceptable ranges. Bartlett’s test of sphericity in all scales also reached statistical significance that is to say significant value was 0.000 for each scale. Factor analysis of the 15 items of the professionalism scale previously validated by Sejjaaka and Kaawaase (2014) revealed the presence of 5 components with eigenvalues exceeding 1 cumulatively explaining 77.67 percent of the variance in professionalism. Two items of the scale validated by Sejjaaka and Kaawaase (2014) did not load and these were “I make my own decisions regarding my work” and “We professionals have no way to judge each other’s competence.” We name the components 1–5, respectively, as sense of calling to the profession, belief in self-regulation, belief in public service, professional autonomy and professional identification. For the IC scale, factor analysis revealed the presence of

Statements	Component				
	1	2	3	4	5
The dedication of people in my profession is gratifying	0.876				
In my profession, people believe in their work	0.803				
It encourages me to see the high level of idealism maintained by people in my profession	0.759				
I feel a real "calling" to my profession	0.563				
I have ample opportunity to judge how other professionals do their jobs		0.894			
I have a good idea how well others do their work		0.888			
We professionals have a good idea about each other's competence		0.774			
If ever an occupation is indispensable, it is my profession			0.890		
My profession is an indispensable occupation			0.867		
My enthusiasm for professionalism is difficult to maintain since there is so little autonomy				0.935	
I do not have much opportunity to exercise my own judgment				0.878	
While I try, I do not read professional journals too often					0.902
One problem in my profession is that no one really knows what colleagues are doing					0.795
Eigenvalues	3.758	2.218	1.693	1.341	1.087
Percentage of variance	20.027	18.272	13.921	13.395	12.051
Cumulative percentage	20.027	38.299	52.220	65.615	77.666

Table II.
Factor structure for professionalism

Notes: 1, sense of calling to the profession; 2, belief in self-regulation; 3, belief in public service; 4, professional autonomy; 5, professional identification. KMO = 0.639; approx. $\chi^2 = 440.067$; Bartlett's test of sphericity: df = 78; sig = 0.000. Extraction method: principal component analysis; rotation method: varimax with Kaiser normalization

Table III.
Factor structure for intellectual capital

Statements	Structural capital	Component	
		Human capital	Relational capital
The firm encourages innovation and creativity	0.820		
The staff are equipped with the necessary resources needed to do their work	0.812		
Staff can access technical literature	0.742		
The staff can access all the data and information necessary to perform their work efficiently	0.741		
The firm has an organization philosophy	0.739		
Staff have positive attitude to work		0.914	
The firm has adequate number of staff to handle clients		0.698	
The firm has affiliations with other organizations			0.899
The firm collaborates well with other firms			0.846
Eigenvalues	4.921	1.257	1.159
Percentage of variance	33.058	17.961	15.674
Cumulative percentage	33.058	51.019	66.693

Notes: KMO = 0.843; approx. $\chi^2 = 352.552$; Bartlett's test of sphericity: df = 55; sig = 0.000. Extraction method: principal component analysis; rotation method: varimax with Kaiser normalization

three components with eigenvalues exceeding 1, explaining 33.05, 17.96 and 15.67 percent, respectively, of the variance in IC (cumulatively explaining a total of 66.69 percent of the variance). We name the components as structural capital, human capital and relational capital. Factor analysis of the firm performance scale revealed the presence of two components

Statements	Component	
	Financial performance indicators	Non-Financial performance indicators
The firm expenses are less than the income	0.828	
The firm meets all its liabilities when they fall due	0.827	
The firm cash inflows are satisfactory	0.818	
The firm operates using internally generated funds	0.766	
The firm efficiently manages its operating costs	0.634	
The overall productivity of the staff is satisfactory		0.831
Clients now need more services than before		0.711
Our firm has a higher market value compared to the previous years		0.680
Clients refer other clients to our firm		0.654
The clients are satisfied with our services		0.649
The firm has registered increase in client base		0.572
Eigenvalues	5.266	1.461
Percentage of variance	32.287	28.867
Cumulative percentage	32.287	61.154

Notes: KMO = 0.774; approx. $\chi^2 = 453.151$; Bartlett's test of sphericity: df = 55; sig = 0.000. Extraction method: principal component analysis; rotation method: varimax with Kaiser normalization

Table IV.
Factor structure for
firm performance

with eigenvalues exceeding 1 explaining 32.28 and 28.86, respectively, of the variance in firm performance (cumulatively explaining a total of 61.15 percent of the variance). We name the components as financial performance indicators and non-financial performance indicators, respectively.

We first obtain descriptive statistics and test our hypotheses starting with a correlation analysis where direct associations between variables were established. We then utilize hierarchical regression to test the extent to which IC and professionalism (and their respective elements) predict firm performance. Further, to test the main objective of the study (interaction effects of professionalism), we utilize multiple regression analysis and follow Aiken and West (1991) to center the IC and professionalism variables. This is achieved by subtracting their respective means from each firm's scores and computing the interaction term as the product of the centered variables. We examine changes in adjusted R^2 to test for interaction effects of professionalism after introducing the interaction term. We also examine the slopes of the regression lines arising from the models while controlling for number of partners in the audit firm, number of employees and firm age, to see if they are not parallel. An interaction exists when the regression line between the independent variable and the dependent variable is different across the levels of another variable (Aiken and West, 1991) (Table V).

Panel A: hierarchical multiple regressions:

Model 1:

$$FP = \beta_0 + \beta_1 PTNR + \beta_2 STAFF + \beta_3 AGE + \epsilon_j.$$

Model 2:

$$FP = \beta_0 + \beta_1 PTNR + \beta_2 STAFF + \beta_3 AGE + \beta_4 SC + \beta_5 HC + \beta_6 RC + \epsilon_j.$$

Model 3:

$$FP = \beta_0 + \beta_1 PTNR + \beta_2 STAFF + \beta_3 AGE + \beta_4 SC + \beta_5 HC + \beta_6 RC + \beta_7 SCP \\ + \beta_8 BSR + \beta_9 BPS + \beta_{10} PA + \beta_{11} PI + \epsilon_j.$$

Table V.
Description of
variables

Variable	Acronym	Variable description
<i>Dependent variable</i>		
Firm performance	<i>FP</i>	Measured by average rating on a 6-point Likert scale of questions on financial and non-financial performance indicators of performance
<i>Predictor variables</i>		
Structural capital	<i>SC</i>	Measured by average score of questions on a 6-point Likert scale of structural capital
Human capital	<i>HC</i>	Measured by average score of questions on a 6-point Likert scale of human capital
Relational capital	<i>RC</i>	Measured by average score of questions on a 6-point Likert scale on relational capital
Intellectual capital	<i>IC</i>	Measured by average of the aggregate scores of structural capital, human capital and relational capital anchored on a 6-point Likert scale
Professionalism	<i>c_IntCap</i> <i>PROF</i>	Centered <i>IC</i> Measured by average score of questions on a 6-point Likert scale on sense of calling to the profession (SCP), belief in self-regulation (BSR), belief in public service (BPS), professional autonomy (PA) and professional identification (PI)
Interaction term	<i>c_profsm</i> <i>IC × PROF</i>	Centered <i>PROF</i> The interaction term of intellectual capital and professionalism
No. of partners	<i>c_IntCap × c_profsm</i> <i>PTNR</i>	The interaction term of centered variables <i>IC</i> and <i>PROF</i> Number of partners in the audit firm
No. of employees	<i>STAFF</i>	A dummy variable coded as 0 if the firm's number of employees are below 10 and 1 if the firm's number of employees is 10 and above
Firm age	<i>AGE</i>	A dummy variable coded as 0 if the firm is aged below 5 years and 1 if the firm is aged 5 years or more
	β_0	Constant
	ϵ_j	Error term

Panel B: regression models to test for interaction effects:

Model 4:

$$FP = \beta_0 + \beta_1 c_IntCap + \beta_2 PTNR + \beta_3 STAFF + \beta_4 AGE + \epsilon_j.$$

Model 5:

$$FP = \beta_0 + \beta_1 c_IntCap + \beta_2 c_profsm + \beta_3 PTNR + \beta_4 STAFF + \beta_5 AGE + \epsilon_j.$$

Model 6:

$$FP = \beta_0 + \beta_1 c_IntCap + \beta_2 c_profsm + \beta_3 c_IntCap \times c_profsm + \beta_4 PTNR + \beta_5 STAFF + \beta_6 AGE + \epsilon_j.$$

4. Results and discussion

4.1 Descriptive statistics

Table VI presents a summary descriptive statistics of IC, professionalism and firm performance of SMPs in Uganda. Mean values were computed from data coded from strongly disagree (1) to strongly agree (6). Table VI shows that the standard deviations relative to the means for professionalism, IC and firm performance are small; hence, the calculated means highly represent the observed data (Field, 2009; Saunders *et al.*, 2007).

Table VI.
Descriptive statistics

Variable	<i>n</i>	Min.	Max.	Mean	SD
Sense of calling to the profession	77	2.00	6.00	4.860	0.785
Belief in self-regulation	77	1.67	6.00	3.991	0.979
Belief in public service	77	1.50	6.00	4.948	1.123
Professional autonomy	77	1.00	6.00	2.409	1.245
Professional identification	77	1.00	5.00	2.942	1.206
Professionalism	77	2.38	5.08	4.001	0.494
Structural capital	77	2.00	6.00	4.964	0.714
Human capital	77	1.50	6.00	4.448	0.941
Relational capital	77	1.50	6.00	4.188	1.156
Intellectual capital	77	2.11	6.00	4.677	0.678
Financial performance indicators	77	2.20	6.00	4.384	0.806
Non-financial performance indicators	77	2.17	5.67	4.643	0.639
Firm Performance	77	2.18	5.82	4.525	0.654
No. of Partners	77	1	3	1.39	0.588
No. of Employees	77	0	1	0.351	0.480
Firm age	77	0	1	0.779	0.417

4.2 Correlation analysis results

Preliminary analyses were performed to ensure no violations of assumptions of normality, linearity and homoscedasticity (Field, 2009; Pallant, 2007). The correlation results shown in Table VII reveal a strong and positive association between IC and performance of SMPs ($r = 0.713^{**}$, $p < 0.01$). This implies that an improvement in IC is likely to bring about a significant improvement in the performance of SMPs. Further, all dimensions of IC have a significant positive relationship with performance of SMPs in Uganda, i.e. for structural capital ($r = 0.724^{**}$, $p < 0.01$); for human capital ($r = 0.463^{**}$, $p < 0.01$) and for relational capital ($r = 0.387^{**}$, $p < 0.01$). The results imply that an improvement in any of the elements of IC will lead to an improvement in the performance of SMPs.

For professionalism, results reveal a positive relationship with performance of SMPs ($r = 0.319^{**}$, $p < 0.01$). This result implies that that improvements in professionalism will result into improvements in performance of SMPs. Findings further indicate that sense of calling to the profession ($r = 0.505^{**}$, $p < 0.01$) and belief in public service ($r = 0.389^{**}$, $p < 0.01$) have a significant and positive relationship with firm performance. The belief in self-regulation, professional autonomy and professional identification do not influence performance of SMPs.

The results, contrary to our expectations, show that all the control variables (number of partners, number of employees and firm age) are not significantly related to firm performance. This implies that control variables do not confound the main results of the study.

4.3 Regression analysis results

We utilize hierarchical multiple regressions to test the extent to which IC and professionalism are significant predictors of SMP performance. In view of the small sample size and to ensure that the study is generalizable, results for adjusted R^2 are reported (Field, 2009; Pallant, 2007) as opposed to R^2 . In step 1 (model 1), we entered control variables and observed an insignificant contribution of the control variables (Table VIII, Panel A). Given that IC is a known predictor of firm performance, its elements (structural capital, human capital and relational capital) were entered next in step 2 (model 2) while controlling for all control variables. Results show that this accounted for a significant amount of variance in the performance of SMPs (adjusted $R^2 = 0.530$, $p < 0.000$). In the final step (model 3), when elements of professionalism (sense of calling to the profession, belief in self-regulation, belief in public service, professional autonomy and Professional identity) were introduced, an extra and significant 5.2 percent variance in performance was achieved ($f\Delta = 9.423$, $p < 0.001$).

Table VII.
Pearson correlation
coefficients

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Structural capital	1															
Human capital	0.490**	1.000														
Relational capital	0.385**	0.306**	1.000													
Intellectual capital	0.882**	0.711**	0.698**	1.000												
Sense of calling	0.434**	0.358**	0.193	0.437**	1.000											
Belief in self-regulation	0.208	0.085	0.406**	0.302**	0.161	1.000										
Belief in public service	0.354**	0.440**	0.243*	0.435**	0.464**	0.223	1.000									
Professional autonomy	-0.249*	-0.260*	-0.004	-0.227*	-0.082	0.102	-0.102	1.000								
Professional identity	-0.192	-0.267*	-0.079	-0.225*	-0.189	-0.149	-0.250*	0.154	1.000							
Professionalism	0.262*	0.167	0.334**	0.331**	0.622**	0.598**	0.545**	0.416**	0.187	1.000						
No. of partners	-0.022	-0.010	-0.138	-0.069	0.062	0.067	-0.088	0.273*	0.125	0.183	1.000					
No. of employees	0.122	0.085	0.223	0.182	-0.095	0.016	0.168	-0.034	-0.157	-0.053	-0.117	1.000				
Firm age	0.008	0.037	-0.090	-0.018	0.136	-0.015	0.073	-0.102	-0.313**	-0.073	-0.127	0.129	1.000			
Firm indicators	0.638**	0.443**	0.331**	0.658**	0.434**	0.049	0.275*	-0.193	-0.100	0.219	0.041	0.143	-0.112	1.000		
Non-financial indicators	0.687**	0.402**	0.313**	0.645**	0.491**	0.170	0.440**	-0.074	-0.198	0.368**	-0.103	0.106	-0.110	0.671**	1.000	
Firm performance	0.724**	0.463**	0.387**	0.713**	0.505**	0.118	0.389**	-0.148	-0.162	0.319**	-0.032	0.137	-0.122	0.918**	0.909**	1.000

Notes: * $p < 0.05$, ** $p < 0.01$

Panel A: hierarchical multiple regressions

Item	Model 1	Model 2	Model 3	VIF	Tolerance
Constant	4.681	1.259	0.850	na	na
No. of partners	-0.033	-0.017	-0.039	1.057	0.946
No. of employees	0.152	0.047	0.095	1.129	0.886
Firm age	-0.145	-0.132	-0.177	1.094	0.914
Structural capital		0.622***	0.530***	1.595	0.624
Human capital		0.133	0.087	1.393	0.718
Relational capital		0.082	0.062	1.300	0.769
Sense of calling to the profession			0.267**	1.371	0.729
Belief in self-regulation			-0.087	1.248	0.801
Belief in public service			0.027	1.521	0.658
Professional autonomy			0.031	1.233	0.811
Professional identification			-0.021	1.231	0.813
<i>R</i>	0.199	0.753	0.787	Durbin-Watson 2.197	
<i>R</i> ²	0.040	0.567	0.619		
Adjusted <i>R</i> ²	0.000	0.530	0.580		
<i>R</i> ² change	0.040	0.527	0.052		
<i>F</i> -statistic change	1.002	28.404	9.423		
Sig. <i>F</i> -change	0.397	0.000	0.003		

Panel B: Regression models to test for interactions

Item	Model 4	Model 5	Model 6	VIF	Tolerance
Constant	4.643	4.663	4.621	na	na
<i>c_IntCap</i>	0.707***	0.674***	0.655***	1.223	0.817
<i>c_profsm</i>		0.092	0.053	1.313	0.761
<i>c_IntCap</i> × <i>c_profsm</i>			-0.128**	1.269	0.788
No. of partners	0.005	-0.013	0.021	1.165	0.858
No. of employees	0.023	0.032	0.021	1.081	0.925
Firm age	-0.111	-0.109	-0.098	1.042	0.960
<i>R</i>	0.722	0.726	0.735	Durbin-Watson 2.399	
<i>R</i> ²	0.521	0.528	0.541		
Adjusted <i>R</i> ²	0.494	0.494	0.501		
<i>F</i> -statistic change	19.552	15.868	13.729		
Sig. <i>F</i> -change	0.0000	0.000	0.000		

Notes: ***p* < 0.05; ****p* < 0.001

Table VIII.
Regression analysis

Of the subsidiary objectives of the study, results shown Table VIII (Panel A) only support *H1a* and *H2a*, to the effect that, respectively, structural capital ($\beta = 0.530, p < 0.000$) and sense of calling to the profession ($\beta = 0.267, p < 0.000$) positively relate to the performance of SMPs. All other subsidiary hypotheses (*H1b, H1c H2b, H2c, H2d, H2e*) are rejected.

Collectively, we find elements of IC and professionalism to be significant predictors of performance of SMPs, accounting for 58 percent of the variance (adjusted $R^2 = 0.580, p = 0.000$). The model as a whole is significant ($F(7, 76) = 32.473, p = 0.000$) with structural capital of SMPs as the best predictor ($\beta = 0.530, p < 0.000$) followed by sense of calling to the profession ($\beta = 0.267, p < 0.000$).

Lastly, we utilize models 4, 5 and 6 (Table VIII, Panel B) to test the main hypotheses *H1–H3*. Testing for interactive effects requires, first, centering of variables to avoid potentially problematic high multi-collinearity with the interaction term (Aiken and West, 1991). Second, Hair *et al.* (1998) indicate that for the interaction to occur, there has to be an increase in R^2 when comparing models with and without the interaction term (i.e. models 5 and 6). Sharma *et al.* (1981) further guide that the β coefficient of the interacting variable in the model without the interaction term (model 5) has to be statistically insignificant and the β coefficient for the interaction term in the model with the interaction term (model 6) has to be statistically significant in order for the interaction to be interpretable.

In line with above guidance, variables were centered and an interaction term between IC and professionalism was created, this reduced the originally high correlations between the independent variables and the interaction term. Results of regression diagnostic tests in Table VIII confirm that there was no problem of multi-collinearity since the tolerance statistics and variance inflation factors were within recommended ranges of above 0.2 and below 10, respectively (Field, 2009). The Durbin–Watson (D–W) tests resulted into a score of 2.399 within the recommended range of 0 to 4 (Field, 2009). This implies that our results are robust and generalizable.

The second condition for an interpretable interaction was also satisfied. There is a noticeable increase in adjusted R^2 in Model 6 (adjusted $R^2 = 0.501$, $p = 0.000$) from that of Model 5 (adjusted $R^2 = 0.494$, $p = 0.000$) as a result of introducing the interaction term ($c_IntCap \times c_profsm$). Results in model 6 support $H1$ to the effect that IC positively and significantly relates to the performance of SMPs ($\beta = 0.655$, $p < 0.001$); however, $H2$ is not supported, Professionalism acting alone does not impact performance of SMPs ($\beta = 0.053$, $p > 0.05$). The results are consistent with previous authors (Otete, 2018; Radulovich *et al.*, 2018; Nkundabanyanga, 2016; Maji and Goswami, 2016; Rezaei and Mousavi, 2015; Kalkan *et al.*, 2014; Li-Chang and Chao-Wang, 2012; Clarke *et al.*, 2011; Kamukama *et al.*, 2010; Tayles *et al.*, 2007; Chen *et al.*, 2005; Bontis *et al.*, 2000) who document a positive relationship between IC, its elements and firm performance.

We examined the slopes of graphs to determine the complementary effect of the independent variables and test for $H3$. The graphs were plotted by inputting the unstandardized regression coefficients (for c_IntCap , c_profsm , $c_IntCap \times c_profsm$ and the intercept) and the means and standard deviations of the centered independent variables and moderating variable (the interaction term) into Dawson’s (2018) two-way interaction effects tool. Aiken and West (1991) advise that as long as the magnitude of an effect is greater at one level of a variable than at another, it means a significant interaction has occurred. This implies that, for interaction to be significant the graph should not be parallel or must have different gradients or slopes. The graph shown in Figure 1 is not parallel and do cross each

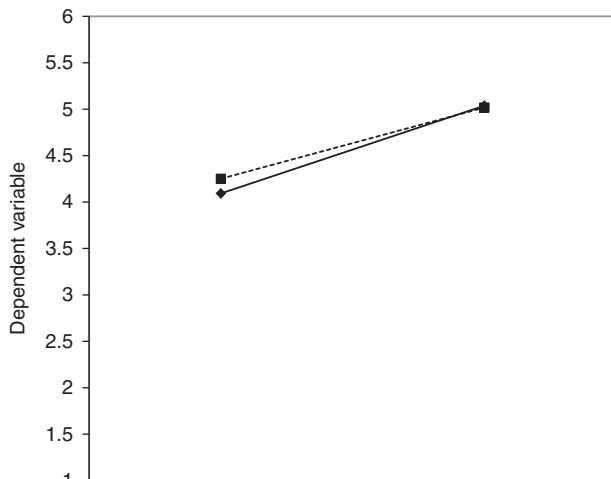


Figure 1.
Plots of the two-way interaction effects of IC and professionalism

	Low intellectual capital	High intellectual capital
—◆— Low professionalism	4.093024895	5.037830505
- - -■ - - High professionalism	4.251250765	5.017893835

other at the indicated levels of IC and professionalism with a significant multiplier coefficient for the interactive term of -0.128 ($p < 0.05$).

In view of the foregoing results, *H3* is supported. The interaction term is significant ($\beta = -0.128$, $p < 0.05$), and the adjusted R^2 increases to a significant 0.501 in the final model. Introduction of the interaction term of professionalism and IC accounts for more variance in the performance of SMPs. This indicates that IC drives the performance of an SMP and professionalism acting independently does not have an effect; however, when both variables interact, they do enhance the performance of SMPs. In the overall IC, professionalism and their interactive effects explain 50 percent (adjusted $R^2 = 0.501$, $p = 0.000$) of the variance in the performance of SMPs.

The above results suggest that it is important that in Uganda, there is a need for SMPs to pay attention to IC if performance is to be improved. This calls for the management of SMPs to capitalize on building a sound human resource base, an asset base and a good customer care base. Many SMPs were found not to be in any sort of alliance or networking with other firms (IFAC, 2016b; Kaawaase, 2015). The study indicates that if SMPs join hands and collaborate with other firms in networks, there is likely to be an improvement in firm performance and this supports IFAC (2016b) that has documented benefits of joining networks and relationships by SMPs.

The findings of this study are consistent with the findings of the previous studies, for example, Kamukama *et al.* (2010), who reported that a positive and significant relationship exists between human capital, structural capital, relational capital and financial performance in microfinance industry. In addition, Nkundabanyanga (2016), studying service firms in Uganda, provided results which show that IC has a significant contribution to firm performance. Elsewhere, Kalkan *et al.* (2014) and Chen *et al.* (2005) also observed that firms' IC has a positive impact on market value and financial performance, and may be an indicator for future financial performance. Further, Bontis *et al.* (2000), in their study of business performance in Malaysian industries, also found a significant relationship between IC and business performance.

This study supports the growing stream of literature that links IC and firm performance in both emerging economies (Nkundabanyanga, 2016; Maji and Goswami, 2016; Kalkan *et al.*, 2014; Kamukama *et al.*, 2010; Firer and Williams, 2003; Bontis *et al.*, 2000) and developed economies (Clarke *et al.*, 2011). These results imply that in every organization, regardless of its nature, IC is key to determining firm performance. Thus, in addition to availing the necessary work tools, staff have to be motivated to perform their work and there is a need to have an adequate number of staff to handle clients.

The boosting nature of the interactive term of professionalism and IC is unique to this study. It implies that while IC is important to drive performance of SMPs, the presence of elements of professionalism elucidated in this study is required to achieve higher performance of SMPs. This finding supports Otete (2018), who documents results to the effect that without professionalism small- and medium-sized audit practices will not be competitive. Specific to this study, amongst the elements of professionalism, a sense of calling to the profession was found to be the most significant that SMPs ought to emphasize. The more audit firm staff feel dedicated to their profession and believe in the work they do, the higher will be the performance of SMPs. Similarly, for the belief in public service, increasing the feeling that the profession is indispensable and beneficial to society and organizations results into higher performance of SMPs. Further, in line with the RBV theory, SMPs endowed with adequate IC will perform better than their counterparts without. Better performance is attained where professionalism, an intangible DC underpins and assists audit firms to integrate, build and reorganize their internal and external competences to address the rapidly changing environment. Professional services rendered leads to clients' satisfaction and continued relationship, which consequently leads to maintenance of the future firm's revenue (Datin *et al.*, 2012).

5. Summary and conclusion

Underpinned by the RBV and DC theory, the present study examined the influence of IC, professionalism and their interactive effects on performance of SMPs within the context of Uganda, a developing economy. This was achieved through a questionnaire survey of 77 SMPs firms. Results indicate that IC is a strong determinant of firm performance of SMPs and that professionalism interacts with and underpins IC to enhance firm performance. The result implies that SMPs ought to be innovative and creative as well as equipping their staff with the necessary resources needed to do their work. The correlation results indicate that belief in public service and sense of calling to the profession as dimensions of professionalism are significantly associated with firm performance. The implication of such a finding is that in Uganda, managing partners believe that if one has a sense of calling to the profession, for example, being encouraged to see a high level of idealism maintained by people in the accounting profession and accountants believing in their work, it spurs performance. The belief that accounting profession is important enhances performance of SMPs. Conversely, the belief in self-regulation, autonomy and information asymmetry as dimensions of professionalism are not significantly associated with firm performance.

Overall, the findings of this study have important implications for academics as well as practitioners and regulators. For academics, our results suggest that IC is more important for firm performance than professionalism though when the two interact better firm performance is achieved. The study adds interactive effects of professionalism to the IC body of knowledge. Specifically, in Uganda, it supplements Otete (2018) by examining all the IC components within SMPs. For practitioners and regulators, findings are important in development of policies affecting SMPs. For example, the study has shown that to boost their performance SMPs need to focus on their structure by being more innovate and creative as well as equipping staff with the necessary resources to work. This should include provision of technical literature and up to date software that can be used in rendering their services. It is important that SMPs collaborate with each other and join networks as this will enhance performance. The regulators like the ICPAU need to monitor SMPs and ensure that they have adequate and qualified staff and also put into practice the requirements of the professional code of conduct.

There are a number of limitations with this study and, for that case, the contributions should be interpreted with respect to the following limitations. First, owing to absence of publically available published financial statements of SMPs, the study used questionnaire for collection of firm performance information which could be less objective than the secondary data. Second, this study was limited to SMPs in Uganda and it is possible that the results are only applicable to Uganda's accountancy field. Third, although the study registered a good response rate (63 percent), the actual number of observations (77) is low, which could have affected the factor loadings. Fourth, the study used managing partners as respondents and there could be a common rater and self-report biases but this was controlled by administering the questionnaire in two phases as recommended by Podsakoff *et al.* (2003). Finally, the use of multiple regression is prone to problems associated with sampling error. However, the likelihood of these problems is mitigated by the interface with data including carrying out the necessary regression analysis validity diagnostic tests. The above limitations notwithstanding, results of this study are useful in providing empirical evidence on what determines performance of SMPs in developing economies. The study points out a number of opportunities for further research, for example, IC, professionalism and their interactive term predict only 50 percent of firm performance. There is a need for further research on what could be the other determinants of firm performance in Uganda's SMPs using measures of financial performance from financial statements of SMPs beyond those used in the current study.

References

- Afrifa, G.A. (2016), "Net working capital, cash flow and performance of UK SMEs", *Review of Accounting and Finance*, Vol. 15 No. 1, pp. 21-44.
- Aiken, L.S. and West, S.G. (1991), *Multiple Regression: Testing and Interpreting Interactions*, Sage, Thousand Oaks, CA.
- Al-Matari, E.M., Al-Swidi, A.K. and Bt Fadzil, F.H. (2014), "The measurements of firm performance's dimensions", *Asian Journal of Finance & Accounting*, Vol. 6 No. 1, pp. 24-49.
- Azubuike, V.M.U. (2013), "Technological innovation capability and firm's performance in new product development", *Communications of the IIMA*, Vol. 13 No. 1, pp. 44-56.
- Barney, J. (1991), "Firm resources and sustained competitive advantage", *Journal of Management*, Vol. 17 No. 1, pp. 99-120.
- Bartlett, M.S. (1954), "A note on the multiplying factors for various chi square approximations", *Journal of the Royal Statistical Society*, Vol. 16 No. 2, pp. 296-298.
- Bartov, E., Gul, F.A. and Tsui, J.S.L. (2000), "Discretionary-accruals models and audit qualifications", *Journal of Accounting and Economics*, Vol. 30 No. 3, pp. 421-452.
- Bontis, N. (2001), "Assessing knowledge assets: a review of the models used to measure intellectual capital", *International Journal of Management Reviews*, Vol. 3 No. 1, pp. 41-60.
- Bontis, N., Chua Chong Keow, W. and Richardson, S. (2000), "Intellectual capital and business performance in Malaysian industries", *Journal of Intellectual Capital*, Vol. 1 No. 1, pp. 85-100.
- Chen, M.C., Cheng, S.J. and Hwang, Y. (2005), "An empirical investigation of the relationship between intellectual capital and firms' market value and financial performance", *Journal of Intellectual Capital*, Vol. 6 No. 2, pp. 159-176.
- Chu, P.Y., Lin, Y.L., Hsiung, H.H. and Liu, T.Y. (2006), "Intellectual capital: an empirical study of ITRI", *Technological Forecasting and Social Change*, Vol. 73 No. 7, pp. 886-902.
- Clarke, M., Seng, D. and Rosalind, H.W. (2011), "Intellectual capital and firm performance in Australia", *Journal of Intellectual Capital*, Vol. 12 No. 4, pp. 505-530.
- Cohen, J., Cohen, P., West, S.G. and Aiken, L.S. (2003), *Applied Multiple Regression/Correlation Analysis for Behavioural Sciences*, 3rd ed., Erlbaum, Mahwah, NJ.
- Coram, P.J. and Robinson, M.J. (2017), "Professionalism and performance incentives in accounting firms", *Accounting Horizons*, Vol. 31 No. 1, pp. 103-123.
- Cronbach, L.J. (1951), "Coefficient alpha and the internal structure of tests", *Psychometrika*, Vol. 16 No. 3, pp. 297-334.
- Crotty, J. (2009), "Structural causes of the global financial crisis: a critical assessment of the 'new financial architecture'", *Cambridge Journal of Economics*, Vol. 33 No. 4, pp. 563-580.
- Dai, W.D., Mao, Z.E., Zhao, X.R. and Mattila, A.S. (2015), "How does social capital influence the hospitality firm's financial performance? The moderating role of entrepreneurial activities", *International Journal of Hospitality Management*, Vol. 51 No. 2015, pp. 42-55.
- Datin, H.H., Sofri, Y., Yuvaraj, G., Dato', I.I., Lok, C.L. and Dato', D.N.I. (2012), "Quality control practices, service quality and customers' satisfaction: the case of non-audit services provided by SMPs to SMEs in Malaysia", *African Journal of Business Management*, Vol. 6 No. 43, pp. 10729-10740.
- Dauda, A.I., Ombugadu, B.A. and Aku, S.U. (2015), "Threats and challenges to accounting profession: a draw back to the development of accounting practices in Nigeria", *International Journal of Academic Research in Accounting, Finance and Management Sciences*, Vol. 5 No. 4, pp. 96-104.
- Davis, L. (1992), "Instrument review: getting the most from your panel of experts", *Applied Nursing Research*, Vol. 5 No. 4, pp. 194-197.
- Dawson, J.F. (2018), "Interpreting interaction effects", available at: www.jeremydawson.co.uk/www.jeremydawson.co.uk/slopes.htm (accessed March 23, 2018).

- Dess, G.G. and Robinson, R.B. (1984), "Measuring organizational performance in the absence of objective measures: the case of the privately-held firm and conglomerate business unit", *Strategic Management Journal*, Vol. 5 No. 3, pp. 265-273.
- Dinger, M., Thacher, J.B., Treadway, D., Stepina, L. and Breland, J. (2015), "Does professionalism matter in the IT workplace? An empirical examination of IT professionals", *Journal of the Association for Information Systems*, Vol. 16 No. 4, pp. 281-313.
- Eisenhardt, K.M. and Martin, J.A. (2000), "Dynamic capabilities: what are they?", *Strategic Management Journal*, Vol. 21 Nos 10-11, pp. 1105-1021.
- Enache, L. and Hussainey, K. (2019), "The substitutive relation between voluntary disclosure and corporate governance in their effects on firm performance", *Review of Quantitative Finance and Accounting*, pp. 1-33, available at: <https://doi.org/10.1007/s11156-019-00794-8>
- Field, A. (2009), *Discovering Statistics Using SPSS*, 3rd ed., Sage Publications, London.
- Firer, S. and Williams, S.M. (2003), "Intellectual capital and traditional measures of corporate performance", *Journal of Intellectual Capital*, Vol. 4 No. 3, pp. 348-360.
- Givoly, D., Li, Y., Lourie, B. and Nekrasov, A. (2017), "Information content of key performance indicators and the properties of their analyst forecasts", available at: <https://ssrn.com/abstract=2990730> (accessed November 19, 2017).
- Grant, R.M. (1991), "The resource based theory of competitive advantage: implications for strategy formulation", *California Management Review*, Vol. 33 No. 3, pp. 114-135.
- Hair, J., Anderson, R., Tatham, R.Y. and Black, W.C. (1998), *Multivariate Data Analysis with Readings*, 5th ed., Prentice Hall, Englewood Cliffs, NJ.
- Hair, J.F. Jr, Black, W.C., Babin, B.J. and Anderson, R.E. (2010), *Multivariate Data Analysis: A Global Perspective*, 7th ed., Pearson, London.
- Hall, R. (1992), "The strategic analysis of intangible resources", *Strategic Management Journal*, Vol. 13 No. 3, pp. 135-144.
- Hall, R.H. (1968), "Professionalization and bureaucratization", *American Sociological Review*, Vol. 33 No. 1, pp. 92-104.
- Helfat, C.E. and Peteraf, M.A. (2009), "Understanding dynamic capabilities: progress along a developmental path", *Strategic Organisation*, Vol. 7 No. 1, pp. 91-102.
- Hitt, M., Bierman, L., Shimizu, K. and Kochhar, R. (2001), "Direct and moderating effects of human capital on strategy and performance in professional service firms: a resource-based perspective", *Academy of Management Journal*, Vol. 44 No. 1, pp. 13-28.
- Hornby, A.S. (2010), *Oxford Advanced Learners' Dictionary*, International Students Edition New 8th ed., Oxford University Press, Oxford.
- ICPAU (2016), "List of accounting Firms for the years 2012, 2013, 2014, 2015 and 2016", available at: www.icpau.co.uk/members (accessed February 14, 2017).
- ICPAU (2017), "List of accountancy firms as at 10 February 2017", available at: www.icpau.co.uk/members (accessed February 14, 2017).
- IFAC (2010), "The role of small and medium practices in providing business support to small- and medium-sized enterprises", available at: www.iaasb.org/system/files/publications/files/the-role-of-small-and-medium.pdf (accessed March 5, 2017).
- IFAC (2016b), "IFAC global SMP survey: challenges facing SMPs", available at: www.ifac.org/global/system/files/publications/files/2016-IFAC-Global-SMP-Survey.pdf (accessed March 5, 2017).
- Ittner, C.D. and Larcker, D.F. (1998a), "Are nonfinancial measures leading indicators of financial performance? An analysis of customer satisfaction", *Journal of Accounting Research*, Vol. 36 supplement, pp. 1-35.
- Ittner, C.D. and Larcker, D.F. (1998b), "Innovations in performance measurement: trends and research implications", *Journal of Management Accounting Research*, Vol. 10, pp. 205-238.

- Jaccard, J. and Turrissi, R. (Eds) (2003), *Interaction Effects in Multiple Regression* (No. 72), Sage, Thousand Oaks, CA.
- Kaawaase, T. (2015), "Successes and tribulations of SMPs in Uganda: insight from the 2014 IFAC Global SMP survey", available at: www.ifac.org/global-knowledge-gateway (accessed February 3, 2017).
- Kaiser, H.F. (1974), "An index of factorial simplicity", *Psychometrika*, Vol. 39 No. 1, pp. 31-36.
- Kalbers, L.P. and Fogarty, T.J. (1995), "Professionalism and its consequences: a study of Internal auditors", *Auditing*, Vol. 14 No. 1, pp. 64-86.
- Kalkan, A., Bozkurt, O.C. and Arman, M. (2014), "The impacts of intellectual capital, innovation and organizational on firm performance", *Procedia – Social and Behavioral Sciences*, Vol. 150 No. 2014, pp. 700-707.
- Kallamu, B.S. and Saat, N.A.M. (2015), "Audit committee attributes and firm performance: evidence from Malaysian finance companies", *Asian Review of Accounting*, Vol. 23 No. 3, pp. 206-231.
- Kamukama, N. (2013), "Intellectual capital: company's invisible source of competitive advantage", *Competitiveness Review: An International Business Journal*, Vol. 23 No. 3, pp. 260-283.
- Kamukama, N., Ahiauzu, A. and Ntayi, J.M. (2010), "Intellectual capital and financial performance in Uganda's microfinance institutions", *African Journal of Accounting, Economics, Finance and Banking Research*, Vol. 6 No. 6, pp. 17-31.
- Kamukama, N., Ahiauzu, A. and Ntayi, J.M. (2011), "Competitive advantage: mediator of intellectual capital and performance", *Journal of Intellectual Capital*, Vol. 12 No. 1, pp. 152-164.
- Kipsha, E.F. (2013), "Impact of size and age on firm performance: evidences from microfinance institutions in Tanzania", *Research journal of Finance and Accounting*, Vol. 4 No. 5, pp. 105-117.
- Krejcie, R.V. and Morgan, D.W. (1970), "Determining sample size for research activities", *Educational and Psychological Measurement*, Vol. 30 No. 3, pp. 607-610.
- Li-Chang, H. and Chao-Wang, H. (2012), "Clarifying the effect of intellectual capital on performance: the mediating role of dynamic capability", *British Journal of Management*, Vol. 23 No. 2, pp. 179-205, doi: 10.1111/j.1467-8551.2010.00718.x.
- Little, R.J.A. and Rubin, D.B. (2002), *Statistical Analysis with Missing Data*, John Wiley & Sons, New York, NY.
- McGuigan, G.S. (2011), "Crisis of professionalism in public services – addressing challenges to librarianship from a public administration perspective", *Emerald Library Review*, Vol. 60 No. 7, pp. 560-574.
- Maji, S.G. and Goswami, M. (2016), "Intellectual capital and firm performance in emerging economies: the case of India", *Review of International Business and Strategy*, Vol. 26 No. 3, pp. 410-430.
- Marimuthu, M., Arokiasamy, L. and Ismail, M. (2009), "Human capital development and its impact on firm performance: evidence from developmental economics", *The Journal of International Social Research*, Vol. 2 No. 8, pp. 265-272.
- Neely, A. (2003), *Business Performance Measurement: Theory and Practice*, Cambridge University Press, Cambridge.
- Nkundabanyanga, S.K. (2016), "Board governance, intellectual capital and firm performance-importance of multiplicative effects", *Journal of Economic and Administrative Sciences*, Vol. 32 No. 1, pp. 20-45.
- Nunnally, J.C. (1978), *Psychometric Theory*, McGraw-Hill Book Company, New York, NY.
- Okpala, K.E. (2012), "Total quality management and SMPs performance effects in Nigeria: review of Six Sigma methodology", *Asia Journal of Finance and Accounting*, Vol. 4 No. 2, pp. 363-378.
- Okwuadigbo, N.A. (2012), "The role of IFAC in survival and growth of SMPs", paper presented at the Forum of Firms of the Institute of Chartered Accountants of Nigeria (PowerPoint slides), Lagos, available at: www.powershow.com/view/3b6179-YzNmM/The_Role_of_IFAC_in_the_Survival_Growth_of_SMPs_powerpoint_ppt_presentation

- Olutayo, K.O., Jadwiga, N., Mabonga, E., Pule, S., Kibirige, R.A. and Baliruno, J.B. (2015), "Firm age and performance in Kampala Uganda: a selection of small business enterprises", *International Journal of Academic Research in Business and Social Sciences*, Vol. 5 No. 4, pp. 412-422.
- Otete, R.A. (2018), "The influence of human capital recruitment strategies on the competitiveness of small and medium sized practices in Uganda", *International Journal Entrepreneurship and Management*, Vol. 3 No. 1, pp. 58-74.
- Pallant, J. (2007), *A Step-by-Step Guide to Data Analysis using SPSS Version 15: SPSS Survival Manual*, Open University Press, McGraw-Hill Education, London.
- Penrose, E.Y. (1959), *The Theory of the Growth of the Firm*, Wiley, New York, NY.
- Podsakoff, P.M., Mackenzie, S.B. and Lee, J.Y. (2003), "Common method biases in behavioural research: a critical review of the literature and recommended practices", *Journal of Applied Psychology*, Vol. 88 No. 5, pp. 879-903.
- Radulovich, L., Javalgi, R.G. and Scherer, R.F. (2018), "Intangible resources influencing the international performance of professional service SMEs in an emerging market: evidence from India", *International Marketing Review*, Vol. 35 No. 1, pp. 113-135.
- Rezaei, Z. and Mousavi, Z. (2015), "The impact of intellectual capital on the performance of Islamic banking", *Indian Journal of Fundamental and Applied Life Sciences*, Vol. 5 No. 1, pp. 1806-1813.
- Riahi-Belkaoui, A. (2003), "Intellectual capital and firm performance of US multinational firms -a study of the resource-based and stakeholder views", *Journal of Intellectual Capital*, Vol. 4 No. 2, pp. 215-226.
- Sajay, S., Covaleski, M.A. and Dirsmith, M.W. (2009), "On the Eclipse of professionalism in accounting: an essay", in Chapman, C.S., Cooper, D.J. and Miller, P.B. (Eds), *Accounting, Organisations and Institutions*, Oxford University Press Inc, New York, NY, pp. 367-395.
- Saunders, M., Lewis, P. and Thornhill, A. (2007), *Research Methods for Business Students*, FT/Prentice-Hall, London.
- Schiuma, G. and Lerro, A. (2008), "Intellectual capital and company's performance improvement", *Measuring Business Excellence*, Vol. 12 No. 2, pp. 3-9.
- Scott, H.J. (2010), *Global Financial Crisis*, Nova Science Publishers, New York, NY.
- Sejaaka, S.K. and Kaawaase, T.K. (2014), "Professionalism, rewards, job satisfaction and organisational commitment amongst accounting professionals in Uganda", *Journal of Accounting in Emerging Economies*, Vol. 4 No. 2, pp. 134-157.
- Shafer, W.E., Park, L.J. and Woody, M.L. (2002), "Professionalism, organizational-professional conflict and work outcomes: a study of certified management accountants", *Accounting, Auditing & Accountability Journal*, Vol. 15 No. 1, pp. 46-68.
- Sharma, S., Durand, R.M. and Gur-Arie, O. (1981), "Identification and analysis of moderator variables", *Journal of Marketing Research*, Vol. 18 No. 3, pp. 291-300.
- Siddiqui, M.A. and Asadi, A. (2014), "Relational capital and performance: a case of brand developing firms", *Middle East Journal of Scientific Research*, Vol. 21 No. 11, pp. 2115-2122.
- Suddaby, R., Gendron, Y. and Lam, H. (2009), "The organizational context of professionalism in accounting", *Accounting, Organizations and Society*, Vol. 34 No. 3, pp. 409-427.
- Tayles, M., Pike, R.H. and Sofian, S. (2007), "Intellectual capital, management accounting practices and corporate performance: perceptions of managers", *Accounting, Auditing & Accountability Journal*, Vol. 20 No. 4, pp. 522-548.
- Teece, D. (2007), "Expanding dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance", *Strategic Management Journal*, Vol. 28 No. 13, pp. 1319-1350.
- Teece, D., Pisano, G. and Shuen, A. (1997), "Dynamic capabilities and strategic management", *Strategic Management Journal*, Vol. 18 No. 7, pp. 509-533.
- Wernerfelt, B. (1984), "A resource-based view of the firm", *Strategic Management Journal*, Vol. 5 No. 2, pp. 171-180.

- Williamson, O. (1999), "Strategy research: governance and competence perspectives", *Strategic Management Journal*, Vol. 20 No. 12, pp. 1087-1108.
- Yamane, T. (1967), *Statistics: An Introductory Analysis*, 2nd ed., Harper and Row, New York, NY.
- Zare, R., Farzanfar, F. and Boroumand, M. (2013), "Examining the firm age, size and asset structure effects on financial leverage in the firms listed in Tehran stock exchange", *International Journal of Economy, Management and Social sciences*, Vol. 2 No. 6, pp. 256-264.

Further reading

- IFAC (2016a), *Handbook of the Code of Ethics for Professional Accountants*, International Ethics Standards Board of Accountants, New York, NY, available at: www.ethicsboard.org/system/files/publications/files/2016-IESBA-Handbook.pdf
- Nkundabanyanga, K.S., Ntayi, J.M., Ahiauzu, A. and Sejaaka, S.K. (2014), "Intellectual capital in Ugandan service firms as a mediator of board governance and firm performance", *African Journal of Economic and Management Studies*, Vol. 5 No. 3, pp. 300-340.

Relational Capital	1	2	3	4	5	6
1. New employees find it easy to learn from old ones						
2. The staff of the firm have a good working relationship with the clients						
3. The firm has affiliations with other organisations						
4. The firm collaborates well with other firms						
5. The firm meets the clients expectations						
6. Clients complaints are handled in timely manner						

PROFESSIONALISM

Sense of calling to the profession	1	2	3	4	5	6
1. It encourages me to see the high level of idealism maintained by people in my profession.						
2. The dedication of people in my profession is gratifying.						
3. In my profession people believe in their work						

Belief in self-regulation

1. I have ample opportunity to judge how other professionals do their jobs.

2. I have a good idea how well others do their work.

3. We professionals have a good idea about each other's competence

Belief in public service

1. I feel a real "calling" to my profession.

2. My profession is an indispensable occupation.

3. If ever an occupation is indispensable, it is my profession

Professional Autonomy

1. I make my own decisions regarding my work.

2. I don't have much opportunity to exercise my own judgment

3. My enthusiasm for professionalism is difficult to maintain since there is so little autonomy

Professional identification

1. We professionals have no way to judge each other's competence.

2. One problem in my profession is that no one really knows what colleagues are doing.

3. While I try, I don't read professional journals too often

FIRM PERFORMANCE

Financial performance indicators	1	2	3	4	5	6
1. The firm expenses are less than the income						
2. The firm meets all its liabilities when they fall due						
3. There is an increase on return on assets						
4. The firm efficiently manages its operating costs						
5. The firm operates using internally generated funds						
6. The firm cash inflows are satisfactory						

Non-financial indicators

1. The firm has registered increase in client base

2. The overall productivity of the staff is satisfactory

3. The clients are satisfied with our services

4. Clients now need more services than before

5. Clients refer other clients to our firm

6. I am satisfied with overall growth rate of the firm.

7. Our firm has a higher market value compared to the previous years

Thank you once again for spending your valuable time on completing this questionnaire. Your views are very critical for this research.

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