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Topical Skills for Accounting Graduates within Changing Business Environment: Stakeholders' Satisfaction Levels in Rwanda

Innocent Nsengiyumva

Nyaruguru District Office

Rama Rao Bokka

University of Rwanda

Abstract

Institution managers have always been seeking competent accountants and accounting technicians to fill the gaps created by the requirements of changing business environment and criticize the existing skills of newly graduated and less experienced accounting job aspirants from Rwandan Institutions of Higher Learning. This paper analyses the satisfaction levels of various stakeholders in Rwanda towards the skills held by accounting-employees and employers' expectations, as this could remedy to the competence gap between the job market demand and human resource availability in accounting field. The target population includes the managers of selected institutions in Rwanda, the accountants employed by these institutions and the heads of departments in higher learning institutions delivering accounting programs.

The sample was chosen randomly from each stratum of population from the selected districts. The study discovers that the competences acquired are not appropriate to fulfil the necessary skills required in accounting job. Collaboration between accounting firms and academic institutions is needed to synergize accounting practical training with theoretical learning in the classroom. Accountants will also have to equip with other extra knowledge and soft skills (information technology, critical thinking and effective communication) to match the market needs.

Key Words: Business environment, competences, topical skills, accountants, accounting technicians, employers' requirements,

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1. Introduction

Business environment does not only deal with financial transactions of acquiring assets and issuing shares, but also involves social aspects such as culture, communication skills and business laws applicable (Charles, 2009). All these constitute the tangible and intangible resources for the company. Gant (1991) opined that competences are strategically most important intangible resources. In recent years, Africa is facing noticeable challenges created by technological advances which resulted in the need for skilled staff that would be able to work efficiently with this business complexity in general. According to Nora (2010) business skills, especially accounting, "play a critical role in reducing transaction costs considered to be the most significant hindrance to economic growth in Africa." Therefore, Ernest (2006) stresses that "the accountants should always put efforts to update their skills and knowledge in order to be able to continue providing valid and reliable accounting reports".

Years of political instability and the 1994 Genocide against Tutsis devastated Rwanda's economy and human resources capability (Mwanaidi, 2011). From 2 HLIs in 1995 up to 41 in 2013 (NCHE: National

Council of Higher Education, 2013), Rwanda has committed itself to rebuild its economy by increasing the number of HLIs and establishing iCPAR in 2008 to provide qualified accountants to national labor market. However, this institute revealed to The New Times that they have registered 211 professional accountants and auditors (1054, July 15th, 2012). In addition, a few numbers that MINECOFIN decided to increase by sponsoring public sector accountants and auditors who aspire to become professionals. It is justified due to the unaffordability of accounting profession due to higher costs.

A World Bank report discloses that the accounting professional education in East African countries is very expensive ranging between USD 14,000 to USD 26,000 (Nora et.al.2010). Majority of East Africans are out of reach of this professional education. The report further shed light on the weaknesses in accounting education in higher leaning institutions stating they are not contributing to proper skill building. According to The New Times (15052, July 13th, 2012), some employers lament the quality of newly graduated accounting-employees. It is being said that institutions invest much in training fresh accounting graduates, so that they become what the company wants them to be and have the skills to execute their tasks to the satisfaction of their employer.

Joseph (2010) pointed out that the accounting education is unable to meet the changing business needs. Rwanda Development Board (RDB) (LMIS,2010) reports that the service sector in Rwanda mainly banking, insurance, financial services etc., sources a large number of accountants and accounting technicians from outside Rwanda as national skilled accountants and accounting technicians are less in supply. Nora (2010) on the other hand identified that these accounting employees are contributing very meagre compared to the potential they possess. It shows the signs of nominally qualified but underemployed accounting graduates. Therefore, this requires an analysis to see the causes behind the no or underutilization of these human resources, and what is required by employers on job market.

Scenario of Rwanda

The Republic of Rwanda is a landlocked small country (26,338 sq. km), in Eastern Africa with around 12 million people recording as much high density of 337 persons per square kilometer. It is strategically located in the Great Lakes Region in the midst of Uganda, Tanzania, Burundi and the Democratic Republic of Congo. Initially (dates back to 1884) it was a German colony but after the first world war, it became the mandate territory of the League of Nations under Belgium by 1916.

The country became independent in 1962. Years of political instability and atrocious genocide against Tutsis in 1994 devastated the country's economy and its active population. In its colonial rule, Rwanda has a stunted economic growth thus resulting in inadequate development of accounting profession. A body of professional accountants was conspicuous by absence until August 2008 when the parliament has passed a legislation to establish the Institute of Certified Public Accountants of Rwanda (iCPAR). Prior to formation of iCPAR, the enterprises in Rwanda suffered from lack of properly trained professional accountants and accounting technicians with appropriate skills to handle the issues of financial reporting. Due to lack of professionalism, the rate of compliance to standard financial reporting was very low.

The first post-genocide decade (1995-2005) has been characterized by a high economic growth, development of ICT and socio-political stability. Owing to its pragmatic and prudent management of the economy, Rwanda succeeded in attaining and sustaining overall macroeconomic stability resulting in a consistent annual growth in GDP ranging from 5 to 6 percent between 2002 and 2007 (WB, 2012), which has been acclaimed as the 'Rwandan Miracle'. Rwanda made the growth scenario possible due to its success in adoption and application of information technology in the economy coupled with positive changes in global business environment.

RDB, a government agency has been the torch-bearer of the economic transformation by enabling private sector participation. Rwandan business environment has various investment opportunities that attract both

capital and human resources in all sectors. However, little is known about the sufficiency or gap of skills of accounting graduates in meeting employers' demands.

It is in this regard a survey was carried out with the following objectives:

- To examine the relationship between the accounting graduates' sufficiency levels of skills acquired at university and the employers' satisfaction levels regarding the skills held by their accounting employees;
- To establish the relationship between the components of business environment and the topical skills categories required from accounting graduates.
- To offer suggestions to attain synergy among these players towards building excellent accounting skills.

At the outset, the survey was carried out to compare the accounting graduates' sufficiency levels of skills acquired at university and the employers' satisfaction levels regarding the skills held by their accounting-employees. Further it was attempted to identify the topical competences that students must be taught and nurtured to meet the job market needs of Rwanda.

The layout of the paper includes a presentation of background, statement of research problem, objectives and hypotheses in the section while related literature review is presented in the second section. The methodology adopted in conducting this survey is highlighted in the third section. The fourth and the fifth sections narrate, respectively, the results thereof as well as the conclusion and offered recommendations.

2. Literature review

In this review of the existing literature, it is important to highlight that the term accountant used in this paper, simply, implies the technical accounting staff. The literature also presents the competences required from a technical accountant and the effect of changes in business environment on the accounting education.

The American Accounting Association (1986) clarifies the distinction between the roles of professional and the technical accounting staff as the former plays strategic and policy roles while the later handles implementation and support. However, in practice the situation is more complex and ambiguous as the technical accounting staff are those required to have more skills than a routine clerk and lesser than those required for a professional accountant.

According to International Federation of Accountants (2002) "professional accountants refer to individuals who are members of an IFAC member body with the roles of planning and directing accountancy services, advice on problems, planning and conducting financial audits of individuals, enterprises, institutions and government agencies." On the other hand, the IFAC Handbook on Code of Ethics states that the "professional accountants should comply with the prescribed fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour" (IESBA, 2012).

According to Charles (2009) the terms 'technical accounting staff' and 'accounting technicians' are used interchangeably and mainly connotes the staff performing the recording and processing the information of business transactions under the supervision of professional accountants except the trainees in the process of becoming professional accountants. IFAC (2003) states that "the technical accounting staff are the skilled support staff for professional accountants, though, when needed they work independently".

The IFAC Education Committee (2002) reveals that there has been an increased demand for certified accounting technicians due to increasing complexity and competitiveness of business, expanding breadth and depth of accounting services, pressing need for accountability, transparency and disclosure compounded by tightening regulatory frameworks. IFAC (2003) further substantiated that the need for properly qualified accounting technicians has been increasing due to limited supply of qualified professional accountants due to vibrant growth of business across the globe that demands professional

accounting services. Accounting technicians can assist the limited number of professional accountants available. Their services are also vital in small scale sector as they cannot afford to hire professional accountants. All these highlighted factors showed the importance and the need to enhance the competence level of technical accounting staff.

IFAC (2003) states that the "accounting competences are the skills that people need now and will need in the future. They include the ability to transfer skills and knowledge to new situations within an occupation". It classified the accounting skills into; "technical accounting, information technology, numeracy and communication, personal effectiveness and interpersonal, business awareness and critical thinking".

For better understanding of the topical skills to be held by newly graduated accountants, it is essential to highlight the evolution of accountancy globally, and its challenges resulting from business development and job market requirements. As early as 1993, Simons and Higgins found that "employers are primarily satisfied with graduates' technical knowledge but are unhappy with their communication skills and problem-solving ability". Albrecht and Sack (2000) opined that obviously the services of accountants are essential for recording, processing and analysing the economic transactions of enterprises to assess the results at the end of the year for internal and external reporting purposes. Preparation of accurate accounting information has become expensive due to the hiring of expertise that only can be acquired through proper and systematic education, training and practical on-hand experience. Ehab and Sherif (2003) substantiated that "this issue has become more complex as accounting has moved beyond the use of pencils, erasers, and 12-column worksheet paper towards embracing the technology of today's modern business environment". They further argued that the dynamics of business environment demand matching competencies of accountants.

Okoro (2013) studied to unveil whether the Nigerian accounting graduates have enough accounting competencies to succeed as entrepreneurs. Their study indicates that though the respondents have competencies to plan business, securing funds and managing their businesses, but they lack appropriate accounting skills like tax computation, in depth financial skills etc.

Mohammed and Ahmed (2013) made an assessment of competencies required for excelling in early career accounting profession in Tunis from the viewpoint of graduates and employers. They found a divergence of expectations as employers need more of generic skills (ethics, communication, team skills and critical analysis) while accounting graduates feel the technical skills and generic skills are needed to succeed in the profession.

In another study, Kavanagh and Drennan (2008) analysed how students' expectations are deviated from those of industry matching the students' skills required for the position and their capabilities. The study discloses a similarity in giving high priority by both the parties about the skills required to be successful. They include analytical, problem solving, communication, team work, continuous learning etc., On the other hand, both students and employers give top priority to oral communication, but in the accounting curriculum, the emphasis was on written communication.

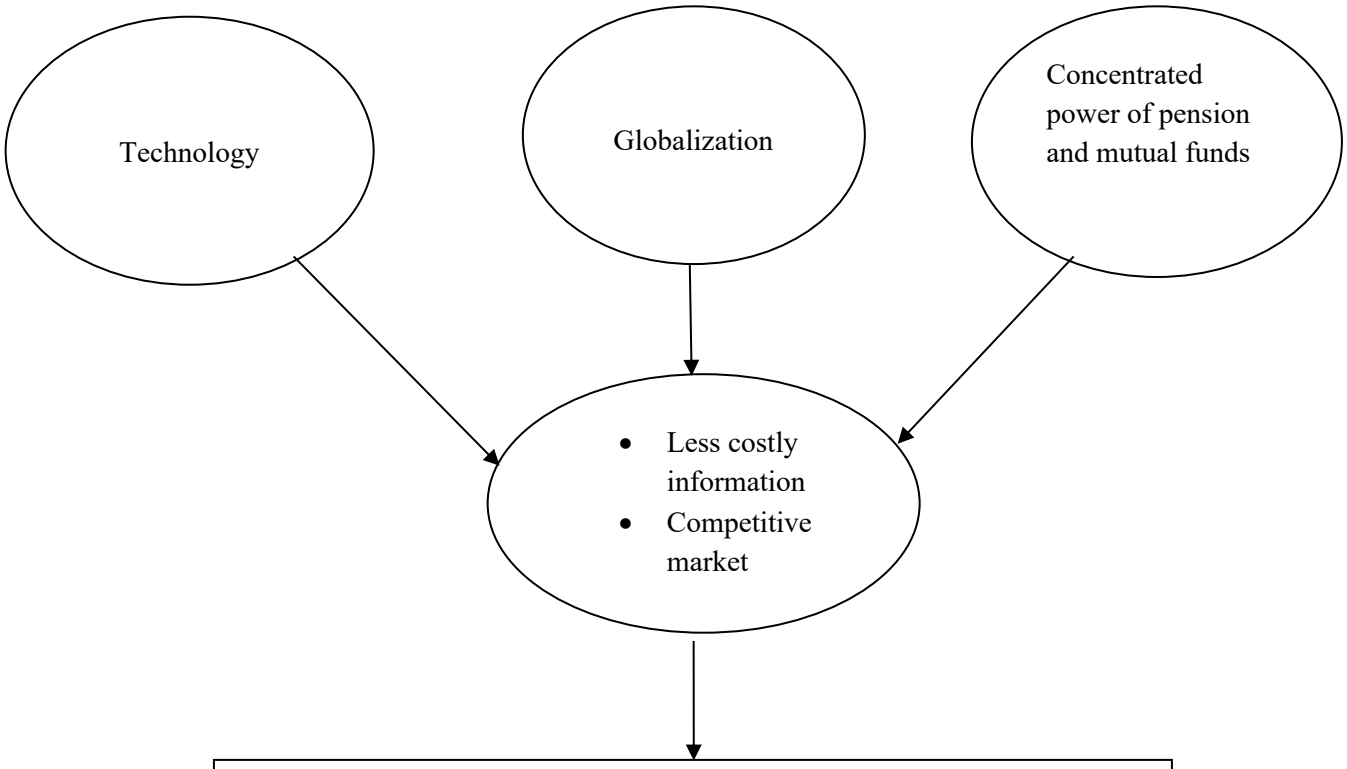
Jackling and De Lange (2009) conducted a research on skills expectation gap between selected accounting graduates of an Australian university and employers. The value of technical skills for attaining success was equally agreed by graduates as well as employers. But the employers expressed that the graduates were not taught enough in general makeup beyond technical skills to be conversant with working in groups, leadership, presentation and interpersonal skills. De Villiers, R., (2010) also confirmed that the employers' priorities are changing, and they prefer soft skills as supportive to the technical skills. Wells et.al. (2009), in their seminal work established the value of generic skills besides the technical skills for a successful accounting career. They further confirm that the accounting personnel required to be client oriented to gain professional success.

Similarly, Abyadeera and Watty (2014) by applying Bui and Porters expectation-performance gap framework studied the university teachers and employers' perspectives of accounting graduates' skills endowment to suit the job demands. The study revealed that the graduates fall short of important soft skills required for successful career. Though they are aware of the industry's expectations from accounting graduates, the teachers experienced the constraint of low confidence in building generic skills among students that help career success. Employers too confirmed that the outgoing students lack required generic talents and competencies.

On the Rwandan side, Mwanaidi (2011) states that "the accountants for many corporate entities lack the skills to prepare financial statements in accordance with applicable accounting and reporting requirements".

The global business environment has been changing dramatically, as a result of developments in various domains. Figure 1 presents, Albrecht and Sack's (2000) model of "key drivers of change in business environment". Development in technology helps gaining cost advantage in the assimilation and dissemination of information besides smoothening information flow and accessibility. Globalization, on the other hand, brought in smart mobility means and information transfer converting the world in to a single large market space making it easier to users to obtain goods and services with less time and cost either from local or global store. The increased concentration of ownership by large pension and mutual funds made the markets so competitive leading to dynamics in the investment market.

Figure 1: Business Environment – Key Drivers of Change



- Dynamic business environment
- Smaller product life cycles and littler competitive advantage
- Need for smart managerial decision making
- Rise of new firms
- Advent of novel professional services
- Sub-contracting of services
- Augmented uncertainty and risk
- Growing complexity of business transactions
- Streamlined business rewards:
  - "Elimination of or reduction in rewards for services replaced by technology
  - Unchanged rewards for traditional, but needed services
  - Increased rewards for services that help leverage technology and globalization and that assist in making better strategic decisions"
- Sophisticated financial reporting
- Active interrelationship among the players of financial markets
- Market regulations streamlined
- Market orientation and customer satisfaction

Source: Albrecht & Sack (2000)

Technology, globalization and concentration of ownership in some industry groups lay impact so strongly the business environment, since information about investees and their competitors is easily available and inexpensive. The three changes in business environment have resulted in several business developments, whilst accounting education has not been responsive. It has been a challenge in striking balance and synchronizing the teaching of accounting to suit the needs of the job market. Bringing academics to the practice has always been a challenge and particularly in matching accounting graduates to accounting practice. On international level, there have been always critics about what universities are teaching as compared to what the graduates do practically. In this regard, many authors raised their points of view on the gap between accounting education and practice.

American Accounting Association (1986) appointed Bedford Committee states that "there is little doubt that the current content of professional accounting education in USA, which has remained substantially the same over the past 50 years, is generally inadequate for the future accounting profession". Its common that the professions get changed in the course of time in their modus operandi, while teaching of those disciplines fails to commensurate with the pace and content; and this caused accounting education to be inadequate to meet its needs (Gary, 2010). The developed countries were in lead position in research and publication on accounting, which created enthusiasm in researchers of developing countries, hence they attracted to do so. Sonia (1996) reports that the Sub-Saharan African (SSA) countries have not been faring well for the want of professionally trained accountants at all levels and the absence of properly established accounting and auditing standards (Sonia, 1996).

The World Bank and IMF (2008) Report on Standards and Codes pointed that the accounting education was not sufficient to Rwanda's needs. The accounting curricula was not covering international standards of financial and auditing, professional ethics and values, hence the students seldom exposed to the standard set of skills. The emphasize was on teaching accounting technicalities whilst most of accounting text books in use had no proper treatment of IFRS and IPSAS.

The reviewed literature shows that the difference in teaching of accounting and its real-time application continues to be a challenge to the development of business world. It reveals both convergent and divergent perceptions of graduates, teachers and institutions about the required skills by incumbents for a successful accounting profession. There is commonality between graduates and employers among the researches reviewed with respect to the value assigned to the accounting skills. However, employers feel that the accounting graduates need more soft and generic skills besides technical skills. On the other hand, the accounting graduates assigned more priority to technical skills than to generic skills to become successful in the profession. While the authors noticed more studies conducted out of Africa and scant studies in Africa and Rwanda in particular.

Therefore, it can be construed that focused research on this vital element in Rwanda has not been done to know the state of mind of working graduates, industry representatives and teachers about the competences that may be considered as topical for any accounting graduate in today's Rwandan dynamic business environment. As it is evidenced from this literature review, the problem of synchronization between accounting education and practice is not new. Therefore, in the light of the understanding gained, the following two sets of hypotheses were conceived and tested in this study.

Hypotheses Set I:

H_o: Satisfaction levels of employers and the skills sufficiency levels of accounting graduates are

not significantly related

H_1: Satisfaction levels of employers and the skills sufficiency levels of accounting graduates are

significantly related

Hypotheses Set II:

H_o: There is no positive correlation between the components of business environment and the topical skills categories required from accounting graduates

H_1: There is a positive correlation between the components of business environment and the topical skills categories required from accounting graduates

3. Methodology

The targeted population consists accounting-employees and employers from 50 institutions selected in Kigali City and Southern Province (see appendix 1). These institutions as shown in Table 1 are selected purposively from Rwandan institutions which have at least three employed accountants with bachelors' degree in accounting.

Table 1: Selected institutions by economic sector

S/N	Economic sector	Numbers of institutions
1	Accounting/Audit/Tax services	4
2	Agriculture	2
3	Banks and insurance companies	9
4	Construction	4
5	Education	7
6	Energy & Sanitation	1
7	Government institution	9
8	Health	2
9	Hotels and Restaurant	2
10	Manufacturing	5
11	Media	1
12	Transport & telecommunications	4
	TOTAL	**50**

Source: Primary data, 2013

This survey covered three kinds of target population, who include employed accounting graduates, employers and accounting lecturers of the universities.

Employed accounting graduates

This category is made of accounting-employees operating in private companies, Government institutions and accounting/audit firms who have formal accounting education background. These refer to 3 accounting-employees selected from each of 50 institutions operating in Kigali City and Southern Province. This category makes a total of 150 accounting employees.

Employers

This category includes the Managers/financial officers who have authority in firm's finance and accounting affairs. For 50 selected institutions, one person in charge of finance is included in the target population, to make a total of 50 employers' representatives.

Lecturers

This category comprises 40 accounting lecturers, purposively selected from 8 Higher Learning Institutions (HLIs) operating in Kigali City and Southern Province; that conduct accounting programs. This selection is made considering 5 accounting skills categories namely Technical, IT, Communication, Interpersonal and Analytical & Critical thinking skills. These are 7 HLIs in Kigali namely AUCA, INILAK, KIE, KIM, MKU, SFB, ULK and 1 HLI in Southern Province that is NUR.

Sample size

The sample size of the respondents for this study was computed using the Sloven's formula (Galero-Tejero E. 2011), which states that, "for any given population, the required sample size is given by; $n = \frac{N}{1 + N(e^2)}$

Where; n = the required sample size; N = the population size; and e = the level of significance, which is = 0.05". As shown in Table 2, a sample of 150 respondents were chosen by applying the formula to choose from the population of 240 belonging to 50 employing institutions and 8 HLIs in Rwanda.

Table 2: Sample Size Chosen

Cluster	Category of stakeholders	Population	Sample
Kigali City	Accountants	120	92
	Employers	40	36
	Lecturers	35	32
Southern Province	Accountants	30	28
	Employers	10	10
	Lecturers	5	5
	TOTAL	**240**	**150**

Source: Primary data, 2013

The sample of respondents were chosen randomly from each stratum of the stakeholder population in the respective cluster. The sample respondents belong to employers, accountants and lecturer categories. Initially, out of the total 5 provinces of the country two were selected. Kigali City and the Southern Province were selected as they host large number of higher learning institutions and also employers. According to Table 3 the sample size for each category of respondents in these two clusters is formed in proportion of population size in its stratum.

Table 3: Sample proportion

Category of stakeholders	Population	Proportion	Sample size
Accountants	150	150*100/240=62.5%	62.5*150/100=94
Employers	50	50*100/240=21%	21*150/100=31
Lecturers	40	140*100/240=16.5%	16.5*150/100=25
TOTAL	**240**	**100%**	**150**

Source: **Primary data, 2013**

Based on prior experience, where some questionnaires were not returned or collected with non-responses from some of the respondents; the researcher opted for distributing more than the required number of questionnaires to reduce this risk. Out of 187 questionnaires hand delivered, the researcher succeeded to collect the fully filled questionnaires from 150 respondents. However, the researcher did not have control over the integrity of the respondents. Probably untruthful responses have been given by some of the respondents; this may harm the results, but it could not be avoided by the researcher.

Indeed, the limited nature of the sample size used, which was drawn from Kigali City and Southern Province, may not completely represent all the provinces of Rwanda. Thus, the findings of this study are not entirely representative of all stakeholders' perceptions about the skills to be held by accounting graduates in Rwanda. Despite these limitations, the researcher believes that the results are valid in filling the knowledge gap that the study is set out to fill.

4. Research findings

This section starts with an introduction part, which describes Rwanda business environment. It produces further the descriptive statistical analysis regarding the stakeholders' satisfaction levels as well as the inferential statistical analysis regarding the survey.

Profile of Respondents

Respondents in this study were described according to category, gender, age, academic qualification and working place. In each case, respondents were asked through a closed ended questionnaire, to provide their respective profile information, to enable the researcher to classify and compare them accordingly. Socioeconomic background and working details of the survey respondents is presented in Table 4.

Table 4: Profile of the respondents (n=150)

Characteristic	No of Respondents	% to total
Category		
Accountants	94	63
Employers	31	20
Lecturers	25	17
Total	**150**	**100**
Gender		
Male	91	61
Female	59	39
Total	**150**	**100**
Age		
[≤ 25]	4	2.5
[26-35]	45	30
[36-45]	72	48
[46-55]	24	16
Above 55	5	3.5
Total	**150**	**100**
Education		
Bachelors	81	54
Masters	59	40
PhD	10	6
Total	**150**	**100**
Working place		
Kigali City	114	76
Southern Province	36	24
Total	**150**	**100**

Source: Primary data, 2013

The respondents' characteristics illustrated in Table 4 indicate that most of the

respondents are accounting-employees (63%) followed by Employers (20%) and Lecturers (17%) respectively. The table also shows that male respondents make a greater percentage (61) than female respondents (39%); which is an indicator that women are less involved in accounting and finance field. Further, the table indicates that most of the respondents (48%) have the age in the ranges [36-45 years] and [26-35 years] i.e. 30% of respondents.

This is obvious as this range [26-45 years] includes most of the active human resources. However, the range [46-55 years] and [Above 55 years] are also represented by 16% and 3.5% respectively; especially for

accounting lecturers. In terms of academic qualification; 54% hold Bachelors' degree, 40% hold master's level while 6% are PhD holders. This is due to the high percentage of accounting employee-respondents (63%) with Bachelors' degree and low percentage of lecturers (17%) included in the research, while they are likely the ones to hold PhDs. Further, the table demonstrates that 76% of the respondents reside in Kigali City, whereas 24% remaining have their working place in the Southern Province. The reason of this discrepancy is that most of the institutions purposively selected for this research are located in Kigali City.

Description of Rwanda business changing environment

This section deals with employers' satisfaction levels regarding the changes occurred in business environment in last five years, and the current status of business environment components.

Description of changes occurred in last 5 years in Rwanda business environment.

The employers' satisfaction levels in business environment changes are determined using mean interpretation. Respondents were asked to state whether there has been a "maximization", an 'improvement", a "no change" or a "decline" among the listed components of Rwanda business environment as shown in table 5.

Table 5: The dynamism in Rwanda business environment components during last 5 years

Business environment characteristics	Mean	Std. Deviation	Interpretation	Rank
Access to capital	2.65	0.839	High	11
Availability of business competition	2.97	0.657	High	4
Availability of talented labour	2.45	0.568	Moderate	15
Availability of universities and training centres	2.55	0.624	High	13
Availability of advanced technology	3.13	0.718	High	1
Customer orientation policy	3	0.683	High	3
Electricity availability	2.77	0.717	High	7
Environmental regulations	2.74	0.631	High	8
Existence of corruption and fraudulent traffic	2.42	0.62	Moderate	16
Existence of crime-free environment	2.48	0.724	Moderate	14
Company registration, easy getting Trademarks	2.84	0.688	High	6
Presence of quality infrastructure	2.71	0.643	High	9
Quality control measures	2.87	0.718	High	5
Stability and effectiveness of political system	2.61	0.803	High	12
Taxation policy and regulatory framework	2.65	0.798	High	10
Telecommunication facilities	3.1	0.7	High	2
Average Mean Index	**2.7463**	**……..**	**High**	**…….**

Source: Primary data, 2013

Table 5 illustrates responses from 31 employers who participated in the study. The components ranked "High" include but not limited to Availability of advanced technology (AM=3.13), Telecommunication facilities (AM=3.1), Customer orientation policy (AM=3.0), Company registration, easy getting Trademarks (AM=2.84) and Electricity availability (AM=2.77). Respondents also ranked Existence of

crime-free environment (AM=2.48), Availability of talented labour (AM=2.45) and Existence of corruption and fraudulent traffic (AM=2.42) to be "Moderate". This shows that no much effort invested in improving these components, during last half decade. As depicted in Table 5, Rwanda business environment is very dynamic; because thirteen components out of sixteen showed an improvement. Consequently, the improvement made in last five years contributed to the good position of company registration period, telecommunication facilities, advanced technology and business competition (see Table 6). However, despite the improvement made in access to capital (AM=2.65) and Electricity availability

(AM=2.77), their position is still low as shown in Table 6.

Employers were asked to rate on Likert's 4-point scale (1= "Very Poor" up to 4= "Good") how they judge the business environment components listed, in connection with their industry.

Table 6: Status of business environment components

Business Environment Components	Mean	Std. Deviation	Interpretation	Rank
Access to capital	2.3871	1.1159	Moderate	15
Availability of advanced technology	2.8065	0.8725	High	7
Existence of business competition	2.8387	1.2675	High	6
Availability of talented labour	2.4839	0.9616	Moderate	12
Availability of universities and training centres	2.7419	0.9650	High	8
Customer orientation policy	2.4516	0.9252	Moderate	13
Electricity availability	2.4194	0.9583	Moderate	14
Environmental regulations	3.0645	1.0626	High	2
Existence of corruption and fraudulent traffic	2.0968	1.0118	Moderate	16
Existence of crime-free environment, security	2.6452	1.1416	High	10
Company registration, easy getting Trademarks	3.5484	0.8099	Very High	1
Presence of quality infrastructure	2.6774	0.9794	High	9
Quality control measures	2.8387	1.0032	High	5
Stability and effectiveness of political system	3.0323	1.0160	High	3
Taxation policy and regulatory framework	3.0000	1.0646	High	4
Telecommunication facilities	2.5161	1.0286	High	11
Average Mean Index	**2.7218**	……..	**High**	……..

Source: Primary Data, 2013

As shown in Table 6, respondents ranked "Very High" about company registration and getting trademarks. It implies that the current procedure of registering companies and issuing trademarks, according to employers, was good. This is obvious, as company registration process takes less than twenty-four hours, according to RDB. Other components ranked "High" include environmental regulation (AM=3.0645), stability and effectiveness of political system (AM=3.0323), taxation policy and regulatory framework (AM=3.0000), quality control measures (AM=2.8387), existence of business competition (AM=2.8387), availability of advanced technology (AM=2.8065), availability of universities and training centres (AM=2.7419), presence of quality infrastructure (AM=2.6774), existence of crime-free environment, security (AM=2.6452) and telecommunication facilities (AM=2.5161).

The respondents ranked these components' presence as "High" signalling a positive note in case of all components except the existence of business competition. But healthy business competition is indeed needed for healthy growth of the economy. However, all these components need attention in future for betterment. The last five components of business environment were ranked "Moderate" by respondents.

This category includes availability of talented labour (AM=2.4839), customer orientation policy (AM=2.4516), electricity availability (AM=2.4194), access to capital (AM=2.3871) and existence of corruption and fraudulent traffic (AM=2.0968). All these components need attention in near future for getting them improved. In other words, Rwandan business environment is suffering of lack of electricity and talented labour, difficulty to access capital, poor customer care practice and fraud.

It denotes the need for preparing the human resources to respond to fill the deficiencies in the mentioned components of business environment. As the business environment goes on changing, the pressure for new skills in different sectors in general and accounting skills in particular shall increase. Consequently, skills to be taught especially to accountants to fill the gaps and comply with the needs of the job market.

Stakeholders' satisfaction levels: comparative scenario

A comparative analysis of stakeholders' satisfaction levels about the skills held by accounting graduate employees is made to analyse how the employers, accounting employees and teachers view from their perspective the level of technical and other generic skills. Table 7 illustrates the comparative scenario of the means computed for each category of respondents.

Table 7: Comparative scenario of stakeholders' satisfaction levels with different skills

TECHNICAL SKILLS	Mean for Employers	Mean for Accounting Employees	Mean for Lecturers	Average Mean	Interpretation
1.Financial Accounting	**3.3548**	**3.3191**	**3.64**	**3.43797**	Very high
2.Finance	3.3548	3.1596	3.16	3.2248	High
3.Accounting Information System	2.7097	2.5319	2.52	2.5872	High
4.Managerial accounting	**3.3548**	**3.6915**	3.04	**3.3621**	Very high
5.Taxation	**3.3548**	3.1596	3.28	3.2648	Very high
6.Financial Reporting	3.1613	3.3298	**3.64**	**3.37703**	Very high
7.Marketing	3.0968	2.5213	2.48	2.69937	High
8.Audit and Assurance	3.0645	3.2553	3.6	3.3066	Very high
9.Business Law	3.3226	**3.4681**	3.36	3.38357	Very high
10.Economics	3.3548	2.734	3.32	3.13627	High
11.Quantitative Methods	3.0323	2.4681	2.72	2.74013	High
12.Accounting Research Methods	2.6774	2.7766	3.04	2.83133	High
13.Organizational Behaviour	**3.5806**	2.9787	2.4	2.98643	High
The Average Mean Index	**3.18609**	**3.03028**	**3.09231**	**3.10289**	High
IT SKILLS					
1.Word-processing package	2.9355	3.3723	2.44	**2.91593**	High
2.Presentation package	2.4516	1.883	2	2.11153	Low
3.Spreadsheet package	2.4194	2.0426	2.96	2.474	Low
4.Accounting package	2.2258	1.8723	**3.28**	2.45937	Low
5.Database package	2.2903	1.9468	2.84	2.35903	Low
6.Electronic package	1.6945	1.7021	2.08	1.82553	Low
7.World Wide Web	2.5806	3.5426	1.84	2.6544	High

8.File and Directory Management	2.3548	1.9894	2.36	2.23473	Low
9.Technology Management and Budgeting	**3.1935**	1.7979	2.56	2.51713	High
10.Technology Security and Controls	2.9677	1.7234	2.16	2.2837	Low
11.Intra/Extranets	2.7419	**3.4787**	2.12	2.7802	High
12.Communication software (eg. outlook)	2.0968	1.8085	2.76	2.22177	Low
13.Technology Terminology	2.5484	1.9894	1.6	2.04593	Low
The Average Mean Index 2	**2.60048**	**2.2422**	**2.38462**	**2.4091**	Low
COMMUNICATION SKILLS					
1.Oral Communication	1.9677	2.4468	2.84	2.41817	Low
2.Written Communication	2.6774	3.1702	2.04	2.6292	High
3.Conference skills	2.0645	1.8085	2.96	2.27767	Low
4.Business language	2.0968	1.9894	2.76	2.28207	Low
5.Foreign language	2.0968	2.1596	2.56	2.27213	Low
The Average Mean Index 3	**2.18064**	**2.4**	**2.632**	**2.40421**	Low
INTERPERSONAL SKILLS					
1.Teamwork ability	2.4839	2.383	3.32	2.72897	High
2.Leadership	2.6774	1.734	2.64	2.35047	Low
3.Negociation	2.9677	2.7234	3.08	2.9237	High
4.Customer orientation skills	2.0323	2.266	3.32	2.53943	High
5.Salesmanship	2.4839	2.3085	2.88	2.55747	High
The Average Mean Index 4	**2.52904**	**2.28298**	**3.048**	**2.62001**	High
ANALYTHICAL AND CRITICAL THINKING SKILLS					
1.Risk Analysis	2.9032	3.2979	3.28	3.16037	High
3.Project Management	2.2258	1.9255	3.32	2.49043	Low
4.Creativity in problem solving	2.6129	2.2553	3.24	2.70273	High
5.Entrepreneurship skills	2.3226	2.3617	3.04	2.57477	High
6.Investment Appraisal Techniques	2.5806	2.6277	2.32	2.50943	Low
The Average Mean Index 5	**2.49462**	**2.4936**	**2.98667**	**2.6583**	High
The Overall Mean Index	**2.59817**	**2.4898**	**2.82872**	**2.6389**	High

Source: Primary data, 2013

Table 7 indicates the average mean for each skill component together with the interpretation it implies. It shows that employers were satisfied with the technical skills held by their accounting employees; where they ranked organizational behaviour (3.5806), Financial accounting (3.3548), Taxation (3.3548) and Managerial accounting (3.3548) with very high score. Similarly, accountants were demonstrating high proficiencies in technical skills, where they ranked managerial accounting (3.6915), business law (3.4681) and financial accounting (3.3191) at very high level. This is view was also shared by Lecturers who ranked

technical skills at high level of importance. Among the subjects covered by accounting graduates in HLIs with high scores include Financial accounting (3.43797).

Financial reporting (3.37703) and Managerial accounting (3.3621). Generally, all categories were of the view that the technical skills were well acquired and applied by graduands. Considering the average mean, IT skills (2.4091) and communication skills (2.40421) were ranked at lower level by the respondents implying that employers were not satisfied, accounting-employees were insufficiently equipped, and lecturers put low emphasize on them at university. However, interpersonal skills (2.62001) and analytical & critical thinking (2.6583) were relatively ranked moderately higher. Thus, it can be understood, that there is a need for focusing more attention to bridge the gaps and preparing the accounting graduates with appropriate skills endowment so that they can serve better the growing needs of ever-changing business environment.

Correlation Analysis

Examining the relationship between the accounting graduates' sufficiency levels of skills acquired at university and the employers' satisfaction levels regarding the skills held by their accounting employees is one of the study objectives. Correlation analysis was used to understand how employers' satisfaction levels are dependent on the skills sufficiency levels of accounting graduates.

In this case correlation matrix was prepared to examine the relationship between the defined variables. The categories correlated include:

- Technical Skills for Accountants (ACC) and Employers (EMP).
- IT Skills, for Accountants (ACC) and Employers (EMP).
- Communication Skills, for Accountants (ACC) and Employers (EMP).
- Interpersonal Skills, for Accountants (ACC) and Employers (EMP)
- Analytical and Critical Thinking Skills, for Accountants (ACC) and Employers (EMP)

Employers' expectations compared to accounting graduates' skills sufficiency levels

The first set of Hypotheses was intended to prove whether there is (H_1) or not (H_0) a significant relationship between the satisfaction levels of employers and the skills sufficiency levels of employed accounting graduates. Factor analysis was applied to analyse this relationship and the correlation matrix was the appropriate measure used. The results are presented in Table 8.

Table 8: Correlation Matrix- Factor Analysis

Correlation Matrix	Technical Skills ACC	IT Skills ACC	Communication Skills ACC	Interpersonal Skills ACC	Analytical and critical thinking skills ACC
Technical Skills EMP	**.667**	-.408	.556	-.115	.127
IT Skills EMP	-.250	**.019**	-.111	.229	-.250
Communication Skills EMP	.554	-.187	**.143**	-.447	.054
Interpersonal Skills EMP	.671	-.130	-.082	**.754**	.671
Analytical and critical thinking skills EMP	-.108	.791	.000	.296	**.508**

Source: primary data, 2013

The table 8 shows the correlation coefficients generated by the correlation matrix of employers (EMP) and Accountants (ACC). The first three skill categories were having strong positive correlations: (r = 0.667) for technical skills (ACC-EMP); (r = 0.754) for interpersonal skills (ACC-EMP); (r = 0.508) for analytical and critical thinking skills (ACC-EMP); whereas the last two were exhibiting weak positive correlations: IT skills (ACC-EMP) at (r = 0.19) and communication skills (ACC-EMP) at (r=0.143). Therefore, there is a weak relationship between employers' satisfaction levels regarding the accounting skills and related knowledge for graduates. This indicates further, that there is a need for improvement of IT skills and communication skills as they were weak both in working field (institutions) and education providers (HLIs). Furthermore, this could be strengthened by the rejection of null hypothesis, as it can be depicted in table 9.

Table 9: Hypothesis testing

Problem formulation	Hypothesis testing		Statistical result
	Type of Hypothesis test	Sig. (2 tailed)	
Skills sufficiency levels of accounting employees (recent graduates) significantly influence the satisfaction levels of employers	Spearman Rank Correlation	0.000	Reject Ho $p \neq 0$

Source: Primary data, 2013

According to Table 10, the Spearman rank test shows a positive correlation (r = 0.679, sig. = 0.01) between the skills possessed by accounting employees and the satisfaction levels of employers.

Table 10: Spearman Rank Correlation Statistical Test between employers' satisfaction levels and skills sufficiency levels of accounting employees

	Spearman's rho		Rank of satisfaction levels of employers	Rank of skills sufficiency levels of employees
Spearman's rho	Rank of satisfaction levels of employers	Correlation Coefficient	1.000	**.679****
		Sig. (2-tailed)	.	0.000
		N	113	113
Spearman's rho	Rank of sufficiency levels of employees	Correlation Coefficient	**.679****	1.000
		Sig. (2-tailed)	0.000	.
		N	113	113

** 0.01 significant level in correlation

Source: Primary data, 2013

Therefore, every accounting knowledge, skills and abilities (KSAs) that employees need in performing their accounting jobs match with the skills that employers demand from accounting employees. For example, the accountants ranked communication skills (AMI=2.4) and analytical & critical thinking (AMI=2.4936) to be sufficient at moderate level; the same scenario occurred where employers indicated that they are satisfied at moderate level with the skills held by their accounting employees in communication skills (AMI=2.1806) and Analytical& Critical thinking (AMI=2.4946).

Regression analysis

Table 11 presents summary of regression test results of the study variables. The model account for 95.5% variations in dependent variable, indicated by high adjusted R-square of 0.955.

Table 11: Showing Model Summary

Model	R	R- Square	Adjusted R Square	Std. Error of the Estimate
1	.978[a]	.956	.955	.18905

Source: Primary data, 2013

The summary model depicted in the Table 11 indicates the R square for the regression model of 0.956. It implies that the changing business environment account for 95.5 percent of the total variation in KSAs to be held by accounting graduates. Further, it can be noticed that the high coefficient of correlation R of 0.978 is an indication of strong relationship between the study variables. Therefore, it can be construed that the changing business environment scenario strongly influence the skills requirement of graduates to be employed as accountants/accounting technicians.

Table 12: ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	113.094	5	22.619	632.886	.000[a]
	Residual	5.146	144	.036		
	Total	118.240	149			

a. Predictors: (Constant), Competition, Technology, Customer service, Change in financial reporting and Tax laws, Business Risk.

b. Dependent Variable: Topical skills for accounting graduates

Results in table 12 reveal that the independent (business environment in Rwanda) variable included in the model significantly affect the dependent (Topical skills for accounting graduates) variable (F=632.886, sig=0.000). These results lead to the conclusion that business environment components significantly explained the high influence on respondent-accounting employees' skills sufficiency levels. Table 13: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.150	.070		2.137	.034
	Competition	.206	.020	.208	10.268	.000
	Technology	.149	.021	.170	6.983	.000
	Customer service	1.007	.019	.972	52.335	.000
	Change in Financial reports and Tax laws	-.013	.017	-.015	-.777	.438
	Business Risk	-.397	.029	-.348	-13.877	.000

a. Dependent Variable: Topical skills for accounting graduates

Source: Primary data, 2013

The coefficients shown in table 13 indicate that all the components of Business Environment in Rwanda contribute to the KSAs for accounting graduates; competition (β=0.208, sig. = 0.000), technology (β=0.170, sig. =0.000); customer service (β=0.972, sig. =0.000), change in financial reports and Tax laws (β=- 0.015, sig. =0.438), business Risk (β=- 0.348, sig. =0.00). It indicates that HLIs should attune their accounting curricula to reflect the dynamics of Rwandan business environment to enable the graduates to be abreast of latest developments in the economy.

5. Conclusion

The dichotomy of the expectation-performance gap between the job market and accounting graduates from the universities employed in industries necessitated this study. Employers, accounting-employees and the teachers are the important players in this continuum, hence were contacted to know their perspectives to determine whether the skills sufficiency levels of accounting employees graduated from universities are compatible and matched with the expected competences of accounting employees by the employers. It was a survey of 150 respondents sampled out of a population size of 240 belonging to Kigali city and Southern

Province of Rwanda. The respondents of the survey include university lecturers, employers/managers and accounting employees who represented 17%, 20% and 63% respectively. The study results were analysed using both descriptive and inferential statistics.

The business environment in Rwanda is very dynamic and has changed significantly in last decade; where much improvement is especially observed not only in telecommunication facilities, but also in company registration and information technology. However, Rwanda is still facing the problem of electricity insufficiency and low access to capital among citizens. The lack of talented labour force has also been noticed as a cause for widening skills gap in the business environment.

The comparative scenario of stakeholders' satisfaction levels indicates that Lecturers ranked technical skills at high level of importance, among the subjects taught to accounting graduates at university. Similarly, accounting-employees were satisfied with the technical skills acquired, while employers were not satisfied with the IT and communication skills held by their accounting employees. It shows that there is a gap between the expectations and actual possession of accounting skills by the employees.

The survey indicated further, that the accounting graduates are sufficiently equipped with the necessary technical skills to perform their duties efficiently. However, they claimed not to have sufficient skills in IT and Communication; and this was positively correlated with the dissatisfaction levels of employers in these skill categories. These findings are in confirmation with the expert opinion of Albrecht (2002), who expressed that these generic skills are essential to take the accounting profession in to a new era.

The relationship between the satisfaction levels of employers and the skills sufficiency levels of accounting employees was found to be positive and significant. While employers are more concerned with skills gap of their accounting employees in IT and communication skills; accounting employees claimed not to have sufficient knowledge, skills and abilities in those fields. This discrepancy among stakeholders' perceptions indicate how needful is the cooperation among HLIs, employers and professionals as suggested by respondents to attain synergy towards building excellent and relevant accounting skills not only technical but as well generic. It can be concluded that the changing business environment scenario strongly influence the skills requirement of graduates to be employed as accountants/accounting technicians.

6. Recommendations

Indeed, lack of proficiencies demanded by business environment such as accounting skills and related knowledge, hinders accounting graduates to fill the vacant job market. This is in confirmation with the observation made by Mauricio (2013), who stated that possession of relevant knowledge, skills and competencies is essential to survive the dynamics of business environment. Despite the apparent satisfaction level of employers and sufficiency level of graduates about the skills held by accounting employees, the weaknesses have been suggested in the areas where employers were not satisfied, and where accountants claimed to have insufficient skills.

The study reveals that the accounting graduates' skills developed at university are not matching the skills demanded by the job market. This mismatch jeopardizes the accounting profession on one hand and the industry shall be at a disadvantage by not having the skilled accounting personnel. Therefore, it is required to make an assessment of the existing curriculum of accounting sciences and revise it to suit the market needs. Accounting education should be market oriented and updated to the business environment dynamism.

The employer-respondents suggested that there should be much emphasis on IT skills (spreadsheet package, accounting software package, database package), Communication Skills (foreign language, conference skills) and interpersonal skills (teamwork ability). Hence, the Higher Learning Institutions should prepare their accounting graduates with the specific skills needed by the employers.

The findings showed that lecturers have ranked first the core accounting subjects (technical skills) and rated less important IT skills and communication skills for accounting students. It indicates that lectures are ignorant of business environment changes and therefore tend to be out of touch with job market expectations. There should be cooperation and active collaboration between HLIs' accounting programmes, employers and professional accounting firms, in order to harmonize the accounting curricula with job requirements in the market.

7. Areas of further research

Similar research could be deployed nationwide, to involve a wider-population size covering all provinces of Rwanda. This would help to make the research findings acceptable at the national level.

Further research can also look at accounting education side, by analysing the existing curricula to undertake a documentary study to see the needed amendment in line with job market requirements.

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APPENDIX 1: POPULATION OF INSTITUTIONS IN RWANDA

1. Bank of Kigali (BK/Muhanga)

2. BRALIRWA/Kigali

3. CORAR

4. COTRACO

5. DP Auditors and Consultants

6. Ecobank/Huye

7. Energy and Water Sanitation Authority (EWSA/Huye)

8. Ernest & Young

9. Fair Construction

10. Fina Bank/Muhanga

11. Horizon Construction
12. Institute of Scientific and Technological Research (IRST/Huye)
13. Inyange Industries
14. IPRS
15. Kabgayi Catholic Institute (ICK)
16. Kenya Commercial Bank (KCB/Huye)
17. Kigali Health Institute (KHI)
18. Kigali Independent University (ULK)
19. Kigali Institute of Science and Technology (KIST)
20. Mille des Colline Hotel
21. Ministry of Agriculture (MINAGRI)
22. Ministry of commerce and industry (MINICOM)
23. Ministry of Finance and Economic Planning (MINECOFIN)
24. MTN
25. National Bank of Rwanda (BNR/Southern Branch)
26. National Institute of Statistics of Rwanda (NISR)
27. National University of Rwanda (NUR)
28. Office of Auditor General for State Finances (OAG)
29. ORINFOR
30. Prime Life Insurance Company
31. Private Sector Federation (PSF)
32. Real Contractors
33. Rwanda Agriculture Board (RAB/Rubona)
34. Rwanda Biomedical Centre (RBC)
35. Rwanda Development Board (RDB)
36. Rwanda Education Board (REB)
37. Rwanda National resources authority (RNRA)
38. Rwanda Revenue Authority (RRA)

39. Rwanda Social Security Board (RSSB)
40. Rwanda Utility Regulation Authority (RURA)
41. RwandAir
42. School of Finance and Banking (SFB)
43. Serena Hotels
44. Societe Rwandaise d'Assurance (SORAS)
45. SONATUBES
46. Sulfo Rwanda Industries
47. SUPA Industries
48. TIGO
49. University Teaching Hospital of Butare (CHUB)
50. Workforce Development Authority (WDA)

APPENDIX 2: LIST OF ABBREVIATIONS & ACRONYMS

AAA: American Accounting Association

ACC: Accountant(s)

ACCA: Association of Chartered Certified Accountants

AICPA: American Institute of Certified Public Accountants

AIDS: Acquired Immune Deficiency Syndrome

AJFM: African Journal of Finance and Management

AMI: Average Mean Index

AUCA: Adventist University of Central Africa

BK: Bank of Kigali

CA: Chief Accountant

CEO: Chief Executive Officer

CFO: Chief Finance Officer

CPA (K): Certified Public Accountants (Kenya)

CPA (U): Certified Public Accountants (Uganda)

CSS: Credit Saving Society

DF: Director of Finance

e.g: for example (example gratia)

EAC: East African Community

EMP: Employer(s)

Etc: and so on (et cetera)

EWSA: Electricity and Water Sanitation Authority

FY: Fiscal Year

GDP: Gross Domestic Product

GoR: Government of Rwanda

HIV: Human Immunodeficiency Virus

HLI: Higher Learning Institution

HoD: Head of the Department

i.e.: that is (id est)

ICPAR: Institute of Certified Public Accountants of Rwanda

IESBA: International Ethics Standards Board for Accountants

IFAC: International Federation of Accountants

IFRS: International Financial Reporting Standards

IMF: International Monetary Fund

INILAK: Independent Institute of Lay Adventists of Kigali

IPB: Institut Polytechnique de Byumba (Byumba Polytechnic Institute)

ISA: International Standards on Auditing

IT: Information Technology

KIE: Kigali Institute of Education

KIM: Kigali Institute of Management

KSAs: Knowledge, Skills and Abilities

LMIS: Labor Market Information System

MD: Managing Director

MDGs: Millennium Development Goals

MINECOFIN: Ministry of Finance and Economic Planning

MINICOM: Ministry of Trade and Industry

MKU: Mount Kenya University

NCHE: National Council of Higher Education

NISR: National Institute of Statistics of Rwanda

NUR: National University of Rwanda

OAG: Office of Auditor General for State Finances

OMI: Overall Mean Index

RDB: Rwanda Development Board

ROSC: Report on the Observance of Standards and Codes

RRA: Rwanda Revenue Authority

RRIPSEA: Reform and Regional Integration of Professional Services in East Africa

SACCO: Saving and Credit Cooperative

SAQs: Self-Administered Questionnaires

SFB: School of Finance and Banking

SORAS :Société Rwandaise d'Assurance

SPSS : Statistical Package for Social Scientists

ULK : Université Libre de Kigali (Kigali Independent University)

UPU: Umutara Polytechnic University

USA: United States of America

USD: United States Dollar