Discrepancy Between Survey Practice and Legislation in Uganda

M. Musinguzi and M. Kisakye

Abstract

This paper discusses the inadequacy of legislation in providing an enabling legal framework for the fast changing technology in surveying and geomatics in Uganda. Change in survey techniques from analogue to digital have affected the manner in which survey data is collected, recorded, checked and disseminated. In addition, the shift in land ownership from the state to private individuals has affected the procedures for undertaking surveys. Notwithstanding these changes, the legislation governing survey work has not changed for a long time and this has impacted on the survey practice in Uganda. This study investigated the various ways in which practicing surveyors in Uganda responded to the changing technologies against a static legal framework. A semi-structured questionnaire was distributed to a sample of 100 practicing surveyors and key informant interviews were conducted to selected experts in the field. The results indicate that surveyors in the private practice have ignored most of the legal provisions and have gone ahead to use modern survey techniques and instruments. In some cases, surveyors have had to convert data generated by modern equipment to rudimentary formats in order to comply with outdated survey regulations. Likewise, government surveyors, responsible for checking survey work have, to a large extent used their discretion to approve survey work without rigidly following the unrealistic legal provisions. There appears to be an informal consensus between practicing and government surveyors on how modern equipment should be used to submit work. There is an urgent need to legalize this informal arrangement by enacting new and relevant survey legislation.

keywords:*Survey Act, Survey Legislation, Land Surveyor, Uganda*

1. Introduction

The land surveying profession in Uganda started as an exclusiveGovernment activity carried out by Surveyors employed and remunerated by the Government. However, in 1996, the Government privatized the land surveying sector, and this led to emergence of a number of private survey firms. Presently, surveys are mainly carried out by private surveyors with the government surveyors mainly concentrating on government projects and ensuring quality assurance in Land offices.

Legislation plays a very important role in the implementation of the land policy and is a key driving force for the surveying profession and industry (Williamson and Ristevski 2001). Therefore, the surveying profession needs to be regulated for Quality Assurance. Quality assurance is part and parcel of cadastral surveys, which are required for a number of land transactions including, subdivision, consolidation, conversion from customary or leasehold tenure to freehold tenure (GoU 2007).In Uganda, the survey

Act (2000) which was enacted in 1939 and revised in 2000. It generally prescribes the manner in which surveys should be conducted. Thislegislationisstatic and as would be expected, fails to keep abreast with changing technology in survey techniques and instruments.

Worse still, the Survey Act is silent on several significant issues that are pertinent to the surveying profession in Uganda, such as the existence of private surveyors,Gender and protection of private property. It is neither consistent with the Land Act nor the Constitution and it generally lacks the provisions to reflect advances in surveying technology that have occurred in the recent past. For example, the fact that it does not provide for methods of adjusting GPS measurements means they cannot be legally used in cadastral surveys, as they are not legally enforced. Furthermore, the Land Sector Strategic Plan (GOU 2001) introduced a number of other innovative changes in the land sector such as systematic demarcation and LIS that are not consistent with the survey act and survey regulations.

2. The problem

The survey Act is not sensitive to new methods of data collection utilizing modern equipment. Furthermore, despite the limitations in the survey act and regulations, there is clear evidence that modern methods of surveying have been used by some surveyors. It is not clear though, how this has been done without a supportive legal framework and whether this has had any consequences. Ideally it would be reasonable to consider that changes in technology, changes in the manner of ownership of land, emergence of new issues of human rights and so on, have led several aspects of the legislation governing surveying in Uganda to become irrelevant. This is expected to have presented difficulties to the work of a modern surveyor in Uganda.This paperdescribes the extent and limitations of the Survey Act and evaluates to what extent surveyors have conformed to the provisions of the Act.

3. Methodology

This study was intended to document the imbalance between provisions in the Survey Act against the needs of a modern surveyor. The first step involved a document review of relevant materials such as the Survey Act, the Land Act, the Land Sector Strategic Plan , the Constitution of the Republic of Uganda and other relevant books and journals. Furthermore, a semi-structured questionnaire was distributed to a sample of 100 practicing surveyors and key informant interviews were conducted with selected experts in the field. Questionnaire data was analyzed using SPSS software. Study results were organized using frequency tables, pie charts and bar graphs. In addition, proportions, percentages and a number of cross tabulations were carried out to investigate relationships between different variables. Results from the interviews were thematically transcribed into the results of the questionnaire.

4. Results and discussion of findings

4.1 Demographic Information

The majority of the respondents (54%) were below 30 years of agewhile 10% were above 50 years. In terms of education, 70% of the respondents were degree holders while 14 % had post-graduate qualifications. The majority of respondents (82%) were private surveyors as compared to the 18% who were government surveyors.

4.2 Permission to enter land

Surveyors were asked whether they sought permission to enter people's properties while undertaking surveys. 99% of the respondents (Figure 1) sought permission from the land owners and all those with interest in land, before enteringthe land to executethe necessary surveys. They explained that obtaining permission from local councils would be a precautionary measure in case disputes or any form of misunderstandings arose while in the field.

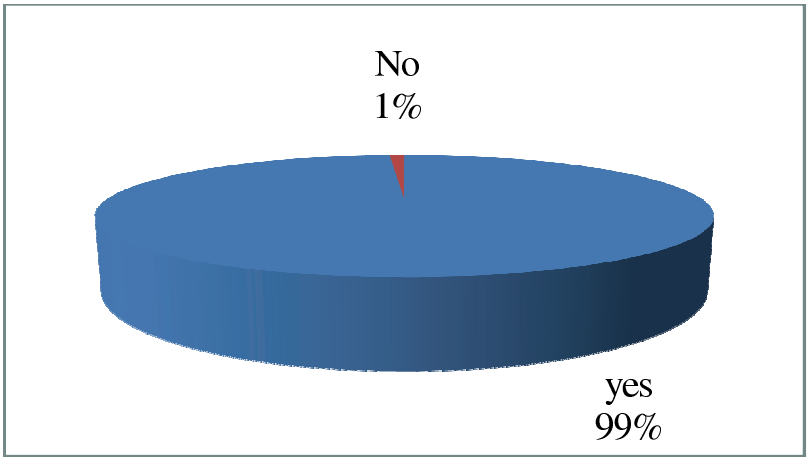

Figure 1: Seeking permission for entry into private property

However, section 16 of Survey Actempowers surveyors to enter land without seeking permission;- a provision that has, to a large extent been ignored.The reason for ignoring this provision according to informant interviews was the fear of possible consequences such as mob justice. Of recent surveyors have been injured or even killed because of land related conflicts.

4.3 Survey Instruments

Surveyors were also asked what instruments they commonly used during their work. Total Station and GPS were the most widely used instruments (Figure 2) while the Theodolite and steel band were least used.This shows that most surveyors are increasingly abandoning the old equipment in favour of new and more convenient equipment.

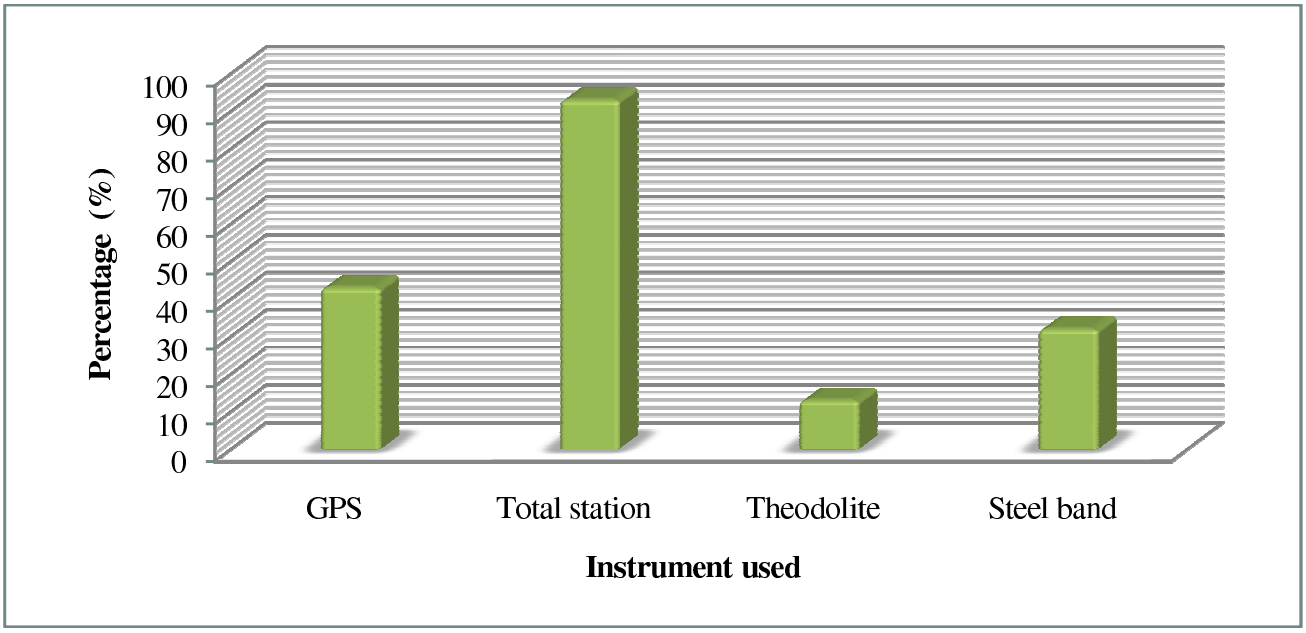

Figure 2: Survey Instruments used to field work

The GPS and Total Station are however not provided for in the Survey Act or the Survey Regulations. Through informant interviews, it was established that work submitted for checking by government surveyors is usually accepted as long as the total station is set to provide angles, and distances instead of coordinates. For GPS, an original file should be submitted to provide information on how observations were made and adjusted. These measures seem to have been devised to facilitate use of modern instruments but are not legally supported. These observationswere further confirmed by the Assistant Commissioner, Surveys and Mapping who conceded that the regulations do contain gaps and do not cater for the modern day instruments,though work done by surveyorswith these instruments is accepted and checked using certain measures that have been agreed upon.

A cross tabulation was done to compare age of respondents and the instruments used. The results are presented in table 1 below.

Table 1: Which instruments do you mainly use to do field work? - age of respondents Cross tabulation

			age of respondents			
			below 30	30-39	40-49	50 and above
Which instruments do you mainly use to do field work?	GPS	% within age of respondents	1.9%	.0%	.0%	10.0%
		Count	32	9	5	3
	total station	% within age of respondents	59.3%	39.1%	38.5%	30.0%
		% within age of respondents	.0%	4.3%	.0%	50.0%

	theodolite	% within age of respondents	.0%	4.3%	.0%	.0%
	steel band	% within age of respondents	.0%	4.3%	.0%	.0%

Source: SPSS 16.0 Analysis of Questionnaire Data

From a cross tabulation of the instruments used and the age of the respondents, it can be seen that the majority of the respondents who were below 30 and those between 30 and 49 use the modern instruments, that is, the GPS and the total station and hardly ever use the theodolite (only 4.3% as the combined total percentage). On the other hand, the majority (50%) of the respondents who were above 50 said they still use the theodolite. It is also a fact that the surveying profession in Uganda is dominated by younger surveyors from Makerere University and Kyambogo University. This reality needs to be considered while formulating legislation for surveying in Uganda

The survey regulations still contain provisions for old techniques and instruments such as field astronomy, chain surveys, sychrometers, Tellurometer and altimeters. Surveyors were asked when they last used any of the selected old techniques in the survey regulations. The results below (fig 3-7) show that these techniques are no longer used by surveyors in Uganda. Most surveyors were ignorant about some of the instruments and techniques.

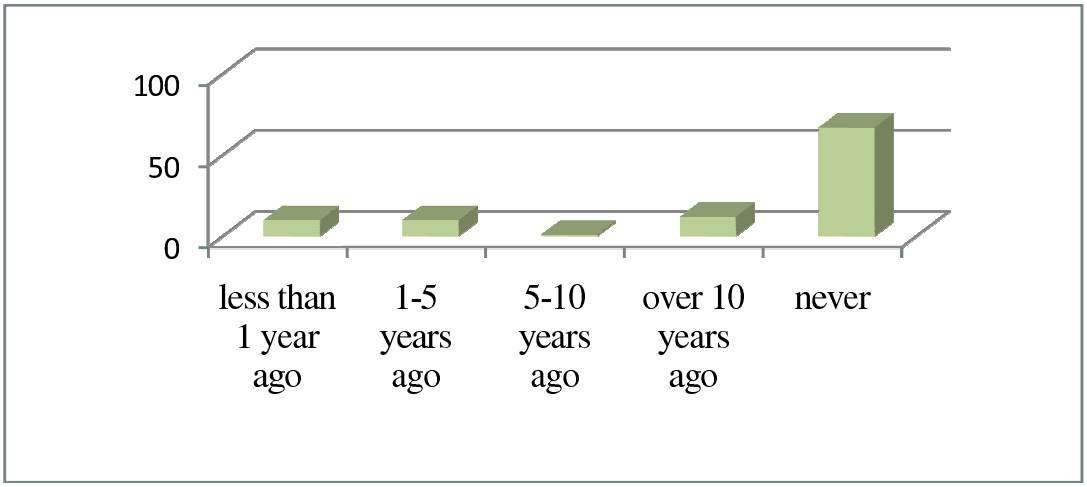

Figure 3: Field Astronomy

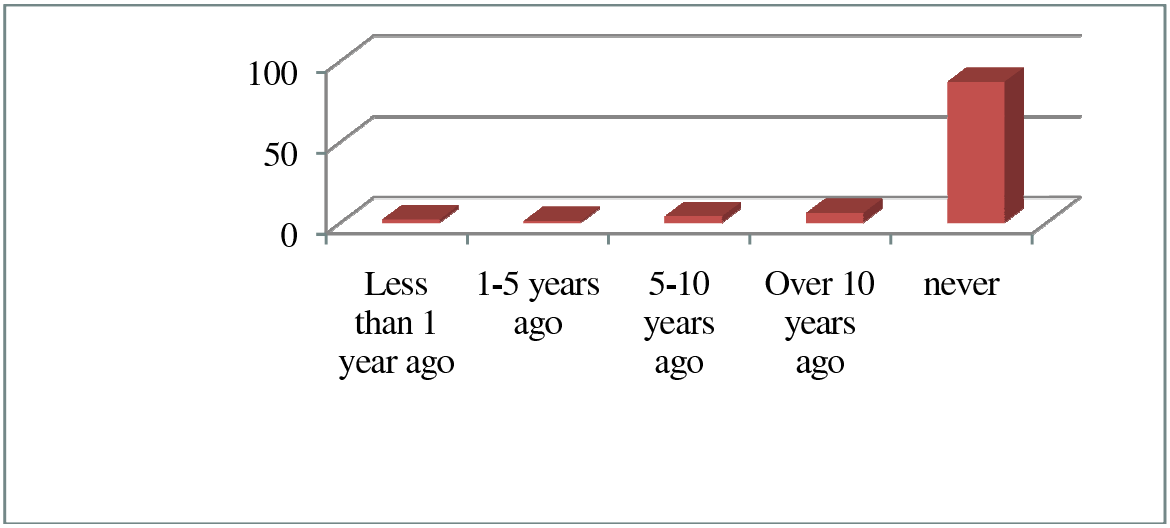

Figure 4: Chain Surveys

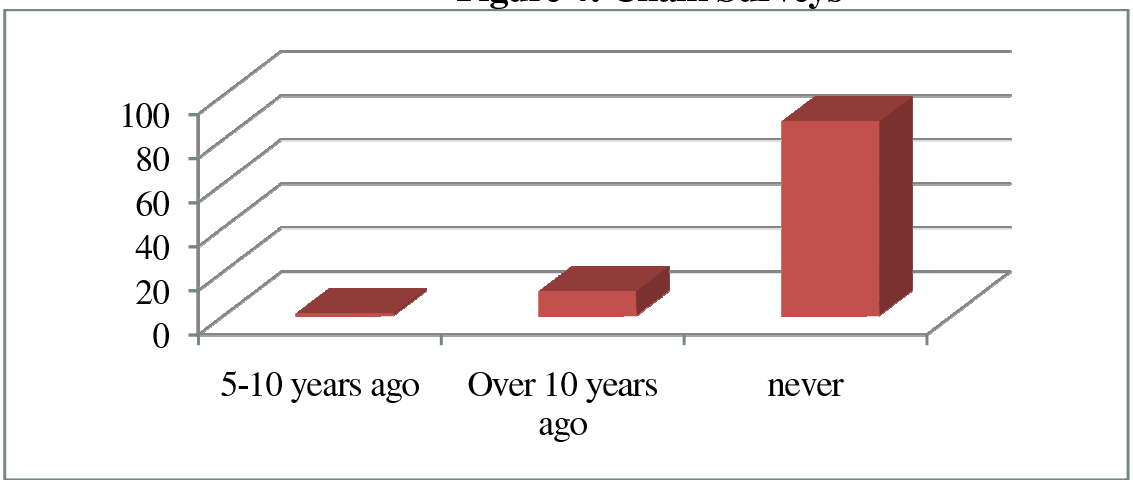

Figure 5: Tellurometer

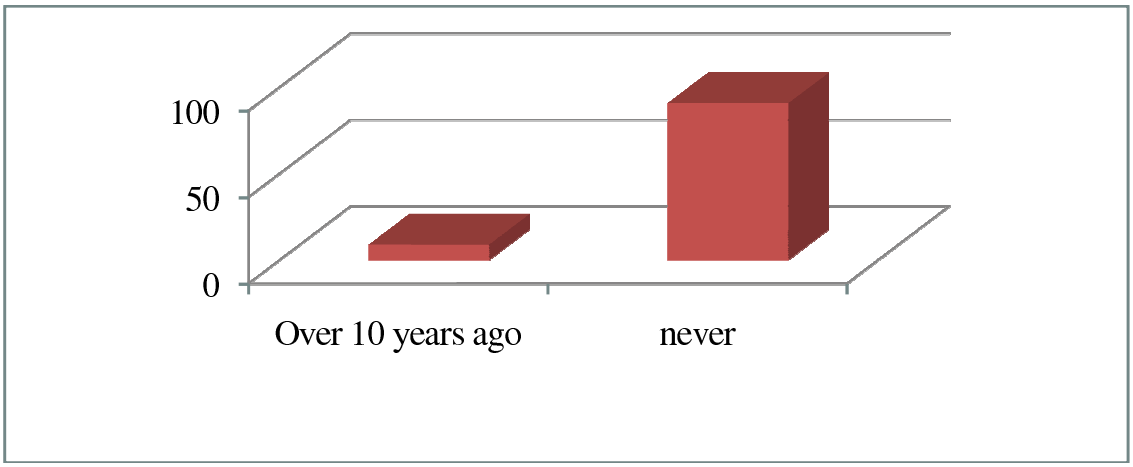

Figure 6: Psychrometer

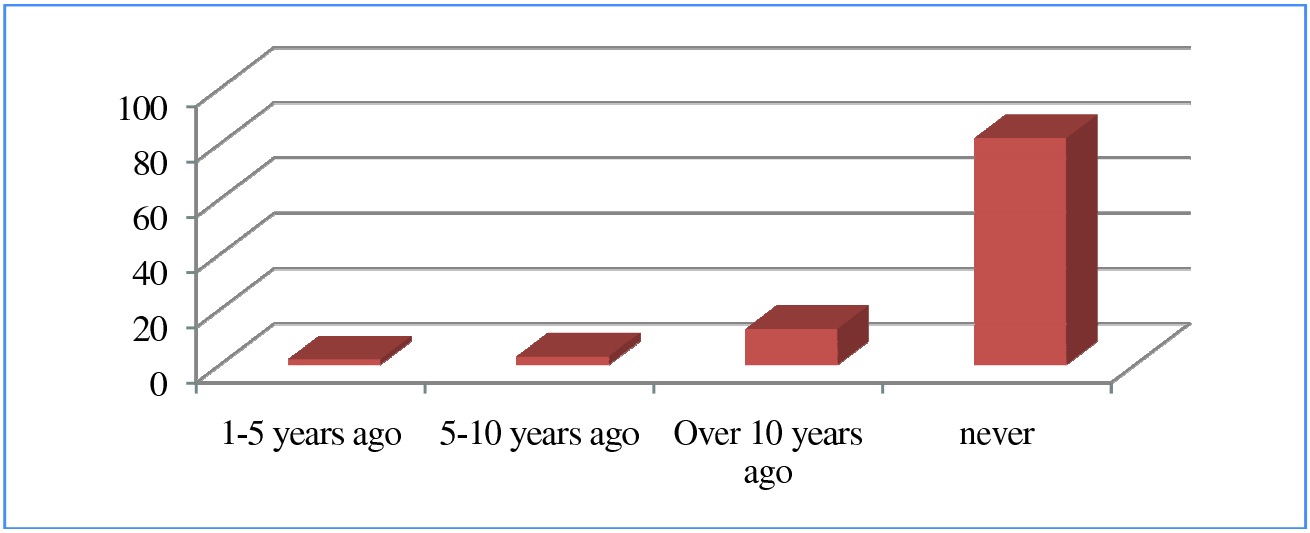

Figure 7: Altimeter

4.5 Submission of Total station or GPS work to Surveys and Mapping in Entebbe

Respondents' were asked whether they had submitted total station or GPS work for checking. From Figure 8, 82% of the respondents indicated that they had ever submitted such work to the Surveys and Mapping office in Entebbe or District Survey offices. Only 18%indicated that they had never.

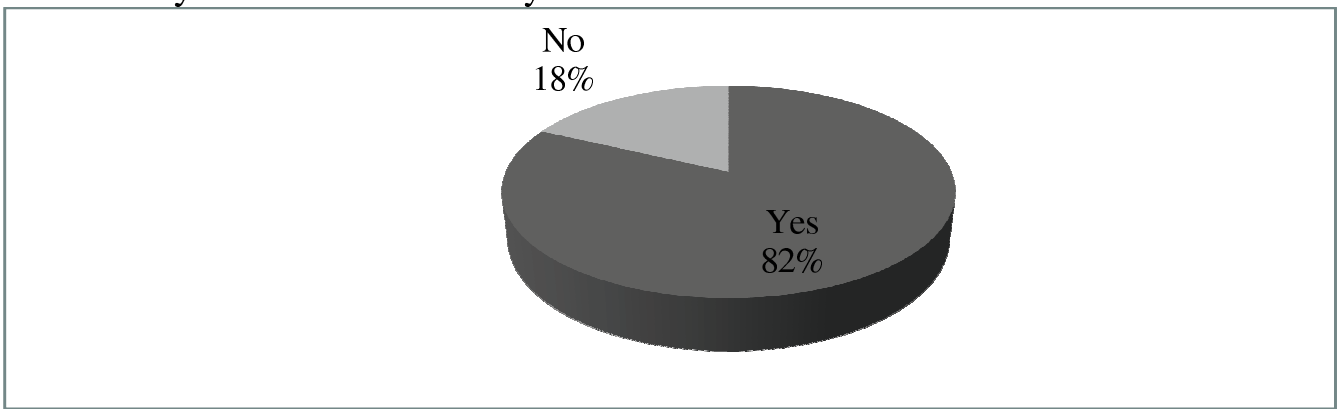

Figure 8: Submitted Work Done with GPS or Total station**.**

Of those 82% who had submitted work, the majority (58%) ensured to submit the work in the format that is prescribed by the survey regulations while only 5% said they used the format supported by the instrument. Results also revealed that in most cases, such work would be accepted by government surveyors. This is presented in Figure 9 where 99% of the respondents said their work was accepted despite use of modern survey instruments and techniques. Only 1% of the respondents had their work rejected for not being in the required format. These findings further confirm that surveyors have gone ahead to use modern instruments despite the fact that they are not provided for in the survey act or survey regulations. In some cases, surveyors downgrade the data formats in order to conform to the survey regulations.

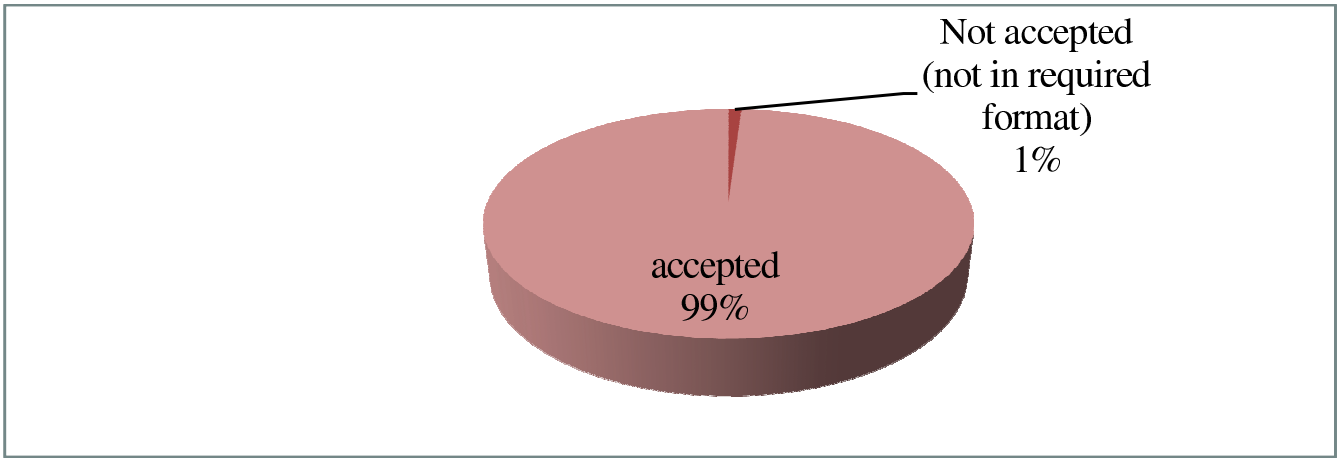

Figure 9: if work was accepted, Give reason.

Interesting to note is that 99% of the respondents whose work was accepted said that their, the work was accepted regardless of format it was submitted in. Therefore, this means that even the checking office has to some extent, not conformed to the Act by accepting the work probably because they understand that the world has moved on in terms of technology and surveying and thus have no choice but to keep up. However, such gaps in the Act have made surveyors' work more complicated and tedious especially when one has to convert one's results from a perfectly legitimate method to one that is supported by an outmoded legislation.

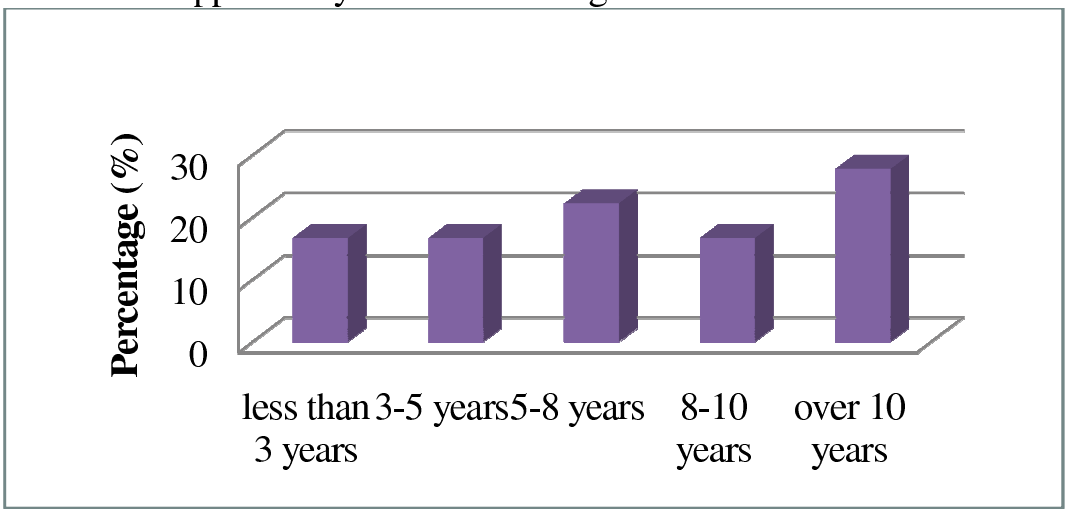

Figure 10: Time taken to register

From the research 18% of the respondents were registered surveyors and 82% were not registered. The response in Figure10 indicates that most of the registered surveyors took over 5 years to get registered after obtaining their academic qualifications. The majority (41%) of the registered surveyors cited bureaucracies and red tape while 29% conceded that they were just lazy to apply or had other pressing matters to attend to first as reasons why it took them such a long time to get registered. Therefore, while the Surveyors Registration Board (SRB) has some work to do in terms of improving the registration process to ensure it takes as little time as possible to get registered; surveyors also need to play their part by actually embarking on the application process and not procrastinating just because they expect the worst.

5. Conclusion

This study revealed that that there are substantial gaps in the Survey Act and Survey Regulations. Most of the gaps are as a result of advancements in technology for survey instruments and methods. The privatization of surveying practice in Uganda, the decentralization of land related services and the 1995 constitution further present requirements for revising survey legislation. As a result of these enormous gaps, there is a very big difference between what is in the law and what is being practiced by surveyors. It is as if the Survey Act and Survey Regulations have been informally but to a halt by both government and private surveyors. Since both these pieces of legislation do not serve anybody's interest, it is recommended that these two should be repealed and replaced with appropriate legislation.

Acknowledgement

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References

1. GOU, 2007: Securing and upgrading the land registry and Implementation of a Land Information System in Uganda- *The Baseline Evaluation Report- Private Sector Competitiveness Project (PSCPII)-*

2. GOU 2001: The LAND SECTOR STRATEGIC PLAN (2001-2011) Utilizing Uganda's Land Resources for Sustainable Development.Ministry of Lands Housing and Urban Development

3. GoU 2000: The Survey Act- revised Edition. Laws of Uganda Chapter 232 Vol X.

Williamson I. P. and John. A. Ristevski, 2001: *The reform of statutory regulations relating to the* Surveying *profession.*