

Building Control Regulations and the Performance of Small and Medium Sized Real Estate Projects in Kigali City, Rwanda

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Abstract

This study was on the Rwanda Building Control Regulations and the performance of small and medium sized real estate projects in Kigali city from 2010 -2020. The study specifically aimed to evaluate the extent of quality assurance; the extent to which legal compliance with the provisions on building control requirements has led to better performance; and assess the challenges regarding regulation in respect to small and medium sized real estate projects in Kigali. A descriptive survey with simple random and purposive sampling was employed to select 315 respondents from the construction sector. A structured questionnaire was used to collect data. From the findings; above 80% of the respondents agreed that there is quality assurance and 72.69 % agreed that legal compliance has led to better performance of projects. Based on Spearman's bivariate correlation analysis, quality assurance (measured by approvals) is highly correlated with timeliness of the approval of construction permits ($r=0.815$) and slightly correlated with proper enforcement of regulations ($r=0.464$). Enforcement of the requirements of the RBCR (as measured by the better verification processes) is highly correlated with avoidance of high fees by projects ($r=0.682$) and improved project performance ($r=0.608$) at $p<0.005$. Challenges included, lack of awareness on general regulatory requirements; limited technical skills; procedural delays, poor professional/regulatory engagement in projects. It was recommended that; collaboration of technological advancement and legal aspects; sensitization on legal aspects in construction; professional and regulatory involvement and reduced approval time. The study will benefit real estate developers, policy makers and academicians.

Key Words: *Building Regulations, real estate, construction, performance, small and medium sized projects, quality assurance, compliance, Kigali*

Date of Submission: 08-07-2021

Date of Acceptance: 23-07-2021

I. Introduction

Globally, the construction sector is one of the largest in the world economy with approximately 111 million employees significantly contributing to overall growth of a country's economy (McKinsey Global Institute, 2020). The construction industry contributes to approximately 10% of the Global Gross Domestic Product (GDP), and employment (International Labour Organisation (ILO), 2015). Construction projects are known for their complexity in nature as they combine various interdependent tasks all taking place at the same time. It is therefore noteworthy that proper standards of practice play an imperative role in the performance of the construction sector, owing to the multi array of activities involved. It is envisaged that by 2050 an estimated population of over 800 million people in Sub-Saharan Africa will have their homes in urban areas where buildings will be used for work, study purposes and as homes (Brittlebank, 2015).

In Rwanda, a fast growing economy in the East African Region, real estate development has made great strides as evidenced by the fast spreading urbanization and the rapid growth of the infrastructure industry. Access to decent housing and favourable living conditions is a right that is well recognised by the Rwandan policies and building control code. These sources affirm the significant role played by the construction industry in national economic growth and social development. As per the Rwanda Development Board, the Real Estate sector is an important player with huge prospects in fostering economic growth (Rwanda Development Board, 2020).

Real estate development has evolved with time under policies and laws that have enabled regulation of the building/construction industry. In that respect, the Rwanda Building Control Regulations, 2012 was adopted in May 2015. This Code entails all processes related to building construction and equipment (Rwanda Housing Authority, 2019). The rationale behind the said Regulations is to actualize the overall mission of the Rwanda

Housing Authority by ensuring that all necessary legal requirements are clearly provided for and met for better urban planning and building projects. The study focused on some key aspects such as the major role played by the law and performance of small and medium real estate projects with regard to general requirements including the structural design, compliance and enforcement, quality assurance, challenges and the implications there under.

STATEMENT OF THE PROBLEM

Quality assurance is meant to achieve customer satisfaction emanating from the completion of projects in line with the time schedules agreed upon, budgetary considerations and customer specifications as per Agbenyega (2014). Globally, most real estate developers must deal with long and rigorous processes for regulatory authorizations that lack a single approval process before the start of major housing projects. Multiple authorities are responsible for the approval of various legal requirements like land documentation to provision of guidance in relation to various procedural aspects (Testa *et al.*, 2011). A study conducted in Kenya depicted a similar issue whereby procedural delays like waiting for up to seventeen months for construction permits for residential development and unclear regulatory requirements pose as constraints on the building /construction code (Ndumia, 2015). Adenuga (2013), denoted that severally, legal requirements are not adhered to in the execution of a number of projects. This is evidenced by the sub-standard work resulting from compromised quality standards which do not conform to building and construction requirements indicated by the lack of planning and control, wrong specification of construction material and a total lack of professionalism. In a study conducted by (Hitayezu, 2019), it was found that owing to the rapid urban population growth rate in Kigali 79% of the households live in unplanned settlements and this may have a bearing on the extent to which quality standards are adhered to as required by the building/ construction laws and its implications on the performance of small and medium size building projects that are the majority in such unplanned settlements.

In Rwanda, the many steps in seeking permission to build have negatively affected performance in the real estate or infrastructure sector (Rwanda Housing Authority News, 2019). Rwanda was ranked at the 106th position by World Bank Doing Business in 2018-2019 on permitting procedures, which is the worst performance of Rwanda compared to other indicators considered. Currently, the number of steps to get a building permit is 15 and Rwanda Housing Authority (RHA) recommended a reduction to 8 steps through a review of the code. If achieved, this would help Rwanda to become a double digit or better ranked country in regards to permitting procedures (Rwanda Housing Authority News, 2019). The findings of a study conducted on building standards in Rwanda (Mbereyaho, *et al.*, 2019) showed that the application of Rwanda Building Standards and even its awareness were still low. The already adopted measures used to increase the awareness and therefore promote the application of Rwanda building standards, such as building inspection, use of all relevant sources of information, involvement of representatives from all relevant agencies and institutions in designing building standards, among others needs to be more aggressive (Mbereyaho, *et al.*, 2019).

Whereas the Rwanda Building Control Regulations are in place to regulate the construction industry, there is a disconnect between the said law and practice in as far as its application or meeting quality standards are concerned, especially so in relation to small and medium size real estate development projects. This concern is owed to the large informal housing sector in urban centres in Kigali. This study therefore sought to establish the actual gaps or challenges emanating from the application of the law and understanding its role in the performance of real estate development projects.

RESEARCH OBJECTIVES

1. To assess the extent to which Rwanda Building Control Regulations (RBCR) has contributed to better quality assurance of small and medium real estate projects.
2. To examine the extent to which enforcement of the requirements of the RBCR has led to compliance and improved performance of small and medium sized real estate projects.
3. To identify the major performance challenges faced by small and medium sized real estate projects with regards to the RBCR.

II. Literature Review

The promulgation and application of building laws have been known to be the most suitable way in ensuring the reduction of community risks, safety of lives and property (Ainuddin *et al.*, 2014; UNESCO, 2009; Samantha Jones & Vishal Vasvani, 2017). In essence, the government regulatory mandate becomes paramount but to some extent is not carried out as it ought to be done (Krimgold, 2011; Samantha Jones & Vishal Vasvani, 2017). The Rwandan Government came up with mechanisms ensuring strict adherence to standards in the building and construction sector, whereby any action in contravention attracted huge fines or even demolition of structures where contravention was substantial. Instances of prohibition of construction in designated wetlands

were reported in 2008; and consistent rejection of plans to construct in wetlands by the Rwanda Environmental Management Authority (REMA) (Good fellow *et. al.*, 2013).

The quality of a construction product is dependent upon the ability to fulfil the purpose it was built for over a recommended time by the acceptable standards (Orji *et al.*, 2016). Agbenyega (2014) projects quality as a foundation for standardization, while Bala, Keftin, and Adamu (2012) deems quality management as a preventive measure of safety. According to Agbenyega (2014) the importance of quality assurance is founded on the basic rule of doing things the right way once and for all through continuous efforts of assessment, reviews and improvement of a quality assurance program. Quality assurance exists because of the degree of clients' disappointing experiences registered in the construction industry over a period, coupled with contactors' unfair maximization of profits at the cost of unsuspecting clients. Furthermore, Agbenyega (2014) observed that quality assurance emphasizes the completion of projects within agreed time schedules, budgetary requirements and customer specifications. Sirbadhoo, Hoyana and Othman (2010) perceived it as a system for avoidance of construction disasters and requires continuous application in the implementation of the entire project lifecycle. Quality assurance could be internal for the performing organization or external for clients and stakeholders. With the lack of proper regulatory engagement by government agencies mandated to enforce the legal requirements, by demanding professionalism in the construction sector right from the grant of tenders to the completion of projects, there will continue to be a challenge in upholding standards in the delivery of housing projects in the country (Orji *et al.*, 2016).

In Rwanda a report on the National Urban Policy revealed the general lack of emphasis on inspection to ensure compliance coupled with the inaccurate definitions of terms such as urbanization used in the code, responsibilities of all professionals and practitioners involved are some of the areas of concern in the report; which have implications on quality assurance and compliance in respect to the regulations; which directly impact on real estate development project performance (MINIFRA, 2010). Some areas in Kigali developed without proper adherence to regulation or organised development principles. This is an indication of quality assurance gaps and in effect poor real estate development projects (Good fellow *et. al.*, 2013). Nevertheless, the said non-compliance sprang from the unplanned infrastructure sector, which changed its face for better from the period of 2007, owing to improved legal redress. This study indicates that quality assurance has always been a challenge. However, the current study investigated whether the challenge still ensues or there is a positive impact on small and medium building development project performance. To-date, Kigali is still Rwanda's main urban centre that accommodates almost half the urban population and has experienced rapid urban growth leading to unplanned settlements with poor living conditions and accessibility which pose long-term safety risks (Hitayezu *et. al.*, 2018).

It should be noted that majority of studies related to quality assurance and compliance are linked to health and safety mostly concerning the wellbeing of those involved in construction work as opposed to measuring better project performance of the real estate sector; hence the rationale behind conducting further research such as this study.

Complexities in the enforcement of construction permits world over pose a challenge, owing to several factors such as corruption, abuse of discretionary power by authorities thus hindering due process in monitoring or regulating the building or construction industry and instances of non-adherence to building construction formalities estimated between, sixty percent (60%) to eighty percent (80%) resulting into informal buildings seem to characterise the construction sector in developing countries (World Bank Report; 2013). Ndumia (2015) highlights procedural delays such as waiting for about 17 months (2yrs) for permits. In his study he mentions causes of delays in development of residential areas; and also points out those inconsistencies which place constraints on the building/construction code.

In Rwanda, the existing regulatory framework has got some inconsistencies in the legal documents which are under review (MINIFRA, 2010). The expensive formal housing supply falls sort of the huge demand expressed by the majority of the population that cannot afford. As a result, unplanned areas in the sub-urbanized zones are accessed by the low income earners thus fuelling inadequate infrastructural development (MINIFRA, 2010). The gaps in coordination of planning, management and regulatory framework coupled with minimal economic activities for the urban populations pose a major challenge. Likewise, governance limitations in effective monitoring and evaluation strategies in the sector, weak institutional/staff capacity have negatively impacted general administration by government (MINIFRA, 2010). Relatively little information exists on the plight of real estate developers in respect of the legal implications thus expanding the gap between the *defacto* and *dejure* (practice/facts and the law). Pertinent to note is that the gaps in monitoring, compliance, enforcement, quality assurance owing to the said likely disconnect may directly impact on the performance of small and medium sized real estate projects

III. Methodology

The study adopted a descriptive survey design. Simple random and purposive sampling was employed to select 315 respondents (civil engineers, Architects, real estate agencies and regulators). The sample size was a total number of three hundred fifteen (315) respondents, which included two hundred seventy-three (273) civil engineers.

The sample size of Engineers will be determined by Solvin’s (1960) formula

$$N = \frac{1}{1 + N(e)^2}$$

Whereby: n= sample size; N=Known Population size and e=the level of significance, which is usually =0.05

Using the formula $N = \frac{n}{e^2} = \frac{857}{(0.05)^2}$

n= 273

The rest of the respondents were determined by selecting a representative number purposively as follows; sixteen participants from the real estate agencies/ valuers out of the twenty-four that were then listed online in the Rwanda Development Board directory, twenty Architects making twenty percent of the registered members in the institute of architects and six officials from Ministry of Infrastructure based in Kigali to represent the regulators. A structured questionnaire was used to collect data. The test-retest method was applied to establish validity and Cronbach’s Alpha Test was used to measure reliability. Data validity and reliability was conducted through administration of data tools to 30 systematical selected respondents. A reliability analysis was conducted using Cronbach’s Alpha while Pearson’s rank correlation and p-values were used to test for validity of the questions. Cronbach’s Alpha Test showed the questionnaire to reach acceptable reliability ($\alpha = 0.74$). All questions had p-values of <0.05). Most items appeared to be worthy of retention, resulting in a decrease in the alpha if deleted. Data analysis was done using software (SPSS).

PRESENTATION OF THE FINDINGS

Factors that examine the extent to which Rwanda Building Control Regulation has led to better quality assurance of small and medium sized real estate projects in Kigali

Spearman’s bivariate correlation analysis

	Have Approval	Within recommended time	Evidenced with professional engagement	Monitored by regulators	Proper enforcement	Non-compliance is addressed	Due Diligence
Correlation Coefficient	1	.815**	.180**	.366**	.464**	.378**	.225**
Sig. (2-tailed)	0.000	0.001	0.000	0.000	0.000	0.000	0.000
N	315	315	315	315	315	315	315

** . Correlation is significant at the 0.01 level (2-tailed).

Based on Spearman’s bivariate correlation analysis, quality assurance (measured by approvals) is highly correlated with timeliness of the approval of construction permits ($r=0.815$) and slightly correlated with proper enforcement of regulations ($r=0.464$) at $p<0.05$. Therefore, to ensure quality assurance, the authority needs to ensure timely approval of permits and show diligence and commitment in the enforcement of regulations and guidelines/conditions provided with approval permits. The findings above show that, to a large extent the respondents’ perception is that there is quality assurance in handling Small and Medium real estate projects in Kigali owing to the positive impact the RBC regulation has in the sector. However, the need to manage procedural delays, better site inspection and strengthen monitoring owing to the gaps is noteworthy.

The effects of the enforcements of RBCR requirements on the compliance and improved performance of small and medium sized real estate projects

Spearman’s bivariate correlation analysis

	Better Verification	Avoidance of high fees	Improved project performance	Better quality construction	Better adherence to standards	Reduced accident rates	Increase in business
Correlation Coefficient	1	0.682**	0.608**	0.301**	0.359**	0.482**	0.339**
Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	0.000

N	315	315	315	315	315	315	315
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** . Correlation is significant at the 0.01 level (2-tailed).

Spearman's bivariate correlation analysis, enforcement of the requirements of the RBCR (as measured by the better verification processes) is highly correlated with avoidance of high fees by projects ($r=0.682$) and improved project performance ($r=0.608$) at $p<0.05$. Therefore, high deterrent fees are actually a good tool used by the authority to enforce compliance among projects. In essence, enforcement of the RBC regulations has been a good check to poor construction services thus better or improved project performance.

Major performance challenges faced by small and medium sized real estate projects with regards to the Rwanda Building Control Regulations

The findings denoted that, 63 (20.00%) and 110 (34.92%) respondents strongly agree and agree respectively that there is lack of awareness on the general requirements of the Rwanda Building Control Regulations in small and medium sized real estate projects in Kigali thus negatively affecting entrepreneurial growth in the sector. However, given the proportion of respondents who remained either neutral 90 (28.57%) or disagree 36 (11.43%), there may be limited understanding of the expanse that the legal requirements can stretch to encourage entrepreneurial growth in small and medium real estate projects.

The study also found that Majority of respondents strongly agree 46 (14.60%) or agree 135 (42.86%) that small and medium sized real estate projects in Kigali face challenges of limited technical skills and inadequate training of contractors to favourably respond to the needs of the sector. The highly qualified tend to focus on fairly larger projects as per the data at hand thus posing a challenge for small and medium real estate projects that serve the greatest consumers of the services. This also indicates that the small and medium projects could be left under supervision of junior personnel in the sector.

The findings also showed that 36 (11.43%) strongly agree and 108 (34.29%) agree respectively that there are overlapping regulatory responsibilities by different offices. This clearly denotes that similar duties or functions are being performed by various offices that regulate the sector which corroborates the procedural delays data earlier on presented. Moreover, majority of the respondents agree (47 (14.92%) strongly agree and 117 (37.14%) agree) that small and medium enterprises face high cost of doing business and failure to detect errant behaviour of contractors such as poor attitude, fraud, among others. With over a quarter of respondents 108 (34.29%) holding a neutral view, it is evident that failure to detect errant behaviour hampers good performance in small and medium sized real estate projects.

Another challenge for small and medium sized projects presented is the lack of access to finance and lack sufficient capital as per 63 (20.00%) respondents who strongly agree and 91(28.89%) agree owing to the stringent and numerous approval requirements for construction/building. This directly affects quality assurance, legal compliance and project performance.

In relation to dispute resolution, 81 (25.71%) and 108 (34.39%) strongly agree and agree respectively that delays in dispute resolution in situations of conflict (land related) negatively affect project performance/progress in small and medium sized real estate projects in Kigali. Whereas regulation plays an important part in real estate growth, the results in respect of disputes are significant in showing that the resolution of land related disputes has a strong bearing on S/M real estate projects as well.

According to the findings of the study, 55 (17.46%) respondents strongly agreed and 63 (20.00%) agreed that small and medium sized projects are negatively impacted by corrupt tendencies amongst contractors resulting from non-compliance with law, such as financial fraud, bribes among others. However, a good proportion of respondents with a neutral view 126 (40.00%) does lay questions on the people's freedom to discuss corruption related issues. This is an indication that whereas corruption has been checked (as evidenced by the 71 responses in disagreement) to a great extent the existing practice has its down side to small and medium sized real estate projects. This therefore calls for further redress.

On the factor of procedural delays, 55 (17.46%) and 134 (42.54%) respondents strongly disagree and agree respectively that small and medium real estate projects in Kigali face delays in responses to applications for approval of construction/occupation/alteration of buildings. A large number of 108 (34.29%) responses were neutral. Hence the data presented indicates that much as systems are in place, approval is a case by case analysis that is highly discretionary thus posing a challenge where it is not rendered within recommended time as per the law. Moreover, the results showed that 36 (11.43%) / 108 (34.39%) respondents strongly agreed and agreed respectively that small and medium sized real estate projects in Kigali lack required standards to a large extent.

Furthermore, to a very large extent there is poor professional and regulatory engagement in Small and medium sized real estate projects in Kigali as indicated by 8 (11.43%) and 134 (42.54%) that strongly agreed and agreed respectively. 73 (23.17%) and 27 (8.57%) respondents disagreed and strongly disagreed. This indicated that whereas the small and medium real estate projects are lagging behind on the said fronts to a large

extent there is also considerable professional and regulatory engagement especially in upcoming areas and also location outside the city.

The above data presented evidenced that despite the quality assurance as indicated by the approval of building projects as per the regulations and enforcement of the RBC regulations positively impacting on the performance of small and medium sized real estate projects registered, challenges still ensued thus calling for urgent attention.

Strategies or Recommendations for legal compliance among small and medium sized projects

Upon analysing the way forward by way of the strategies put across to the respondents, the results acknowledge that more concerted efforts in regulation of small and medium real estate projects should be made in line with collaboration of technological infrastructural advancement and legal aspects, stronger private /government partnerships, professional managerial engagement with basic legal knowledge, shorter building/construction approval processes, due diligence in verification of professional qualifications, harmonization of construction laws with clear definitions and delineated responsibilities so as to further growth in real estate development projects were agreed upon overwhelmingly by the respondents.

IV. Recommendation

This study has shown the positive impact the law (RBC Regulations) has on real estate development of small and medium projects in Kigali. Therefore, to foster further growth in the sector the identified strategies could come a long way in ensuring quality assurance and improving performance of these projects. Strong emphasis is laid on addressing the challenges by filling the gaps by way of enforcing the legal instrument as a tool.

Furthermore, it should be noted that the law cannot operate in isolation. Other factors that improve project performance such as customer care, better human resource and managerial skills in real estate projects should work hand in hand if professionalism and quality standards are to be upheld in real estate development in general.

SIGNIFICANCE OF THE STUDY

It is hoped that the study will make positive contributions in the real estate sector by providing a better understanding of the governing law, its importance and impact on the performance of such projects. The findings will guide policy makers on the issues related to building/construction development in Kigali-Rwanda, developers, academicians and other stakeholders in the real estate and building or construction sector.

LIMITATIONS OF THE STUDY

The major limitation of the study was inadequate data on the study area due to limited information on regulation and project performance. However, extensive research on experiences from other jurisdictions on similar issues at hand served as adequate solutions to the limitation.

RECOMMENDATIONS FOR FURTHER RESEARCH

Suggested further studies include; Technology and the law in management of building/ construction projects in Rwanda; and The impact of centralized regulatory systems on project performance in the construction sector in Rwanda.

CONFLICTS OF INTEREST

The author declares no conflicts of interest regarding the publication of this paper.

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