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Deployment of Minimum Standard Strictures in the Kenya Building Regulations:
A Reflection

***Kigara Kamweru, Owiti K'Akumu and Robert Rukwaro**

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Abstract

The control of development in urban areas raises a tension between the protection of the common good and the need to protect the space for individual action and for innovation. The imposition of minimum standards in the regulation process compels the builders, and by extension the broader society, to commit resources to attain them. In a free society, this would require an anchoring justification that demonstrates public good over individual concerns. This paper examines how the strictures has been reflected in the Kenyan building code and relates it to the fundamental philosophy underlying the code. It concludes that the institution of minimum standards in the building regulations is a protective act. It protects the society and is a critical measure in preventing the vagaries associated with uncoordinated individual actions.

Keywords: Regulation, standards, existential threats, rights

INTRODUCTION

The COVID 19 pandemic that engulfed the entire globe in the early part of 2020s brought to the fore the nature of the shared fate of a community. Guidelines issued by various governments and by the World Health Organisation (WHO) focused on encouraging social distancing and on the use of commonly shared facilities. The crisis itself hacked back to other major crisis that have confronted humanity, underlining the fact that individual actions can and do have implications for the broader population. It brought to the fore the need for a protocol relating to how individual action can be guided so as to minimise the potential negative effects is could envision on the community.

This paper seeks to examine the logical basis of an enforced set of minimum standards for a population. The words Building regulations, building code and standard have been used intermittently. Building regulation, both as a verb and a noun, refers to the generic process of setting rules and guidelines for the process of building. Regulations refers to the various guidances used which when collected together are sometimes labelled a Building Code. The word standard is taken to mean a level of quality, or attainment.

The fundamental purpose of the building regulations is to protect people's safety, health and welfare in and around buildings. However, the regulations also carry another responsibility which is to raise the overall understanding of the building process and to nudge society to a higher standard of shelter. Thus, regulations in many countries also carry guidance on the conservation of resources, the mitigation of disasters especially on building sites and other advise on conservation of resources.

It has been argued that the process of creating shelter is a primordial one that hacks to self expression and is a right of every individual to build as they wish. Architecture is widely understood to be a way to express individuality and character (Casey, 1971). It is infused with emotion and subtle connections.

Urban developments however represent a clash between two ideals: The need for self expression and the reality of the existential threat that arises in a large dense settlement. History has shown that close and active management of the urban settlement is necessary if safety and health of the

**Corresponding author:*
***Kigara Kamweru** Senior Lecturer in the Department of Architecture at the University of Nairobi and a doctoral studies candidate in the same department.*
Email: kkamweru@gmail.com

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population is to be maintained.

Broadly, regulations that are created for activities within the public domain are meant to offer this guidance. In urban areas this is particularly critical in the guidance relating to the creation of the built environment. The underlying basis is the impact that any action within a private domain - or initiated in the pursuit of a private interest - is likely to have for the shared life or experience.

The countervailing argument requires society to maintain a degree of choice in the actions of its citizens. Thus regulation is meant to go only as far as is necessary and not be too intrusive in the choices that citizens can make in their lives. It is conceivable however that innocuous actions that may not offer a threat to other users, can also impact on the overall quality of life within a community. It is in the resolution of this dilemma that an enquiry on the logic of a minimum standards, within the building regulations, would be hinged.

An enforced regime of standards has cost implication and may also impede to a degree the scope available for innovation and expression. In the least, this requires a careful circumspection of the issues to the point where only one path is logical for resolution.

THEORY

Building regulations are an outcome of historical developments. Although regulations can be traced back to the Babylonian kingdom, the current formulation owes more to the period of the industrial revolution - the later part of the 19th century - and as a result, they are focussed mainly on the regulation of urban environments.

The development of the building code is rooted in crisis management (Rosen, 2015) This is specially to manage the density of development that is the inevitable outcome of urban settlements. In this respect, it has been noted that this action to institute some order saved the early urban environments from imminent dangers to safety of persons and, even more urgently, to the health of the population. An approach rooted on crisis places a high premium on the outcome and leaves little room for negative outcomes.

The nature of the urban settlement is such that most of the facilities required to support life, have to be shared out of practical and economic considerations. (McLaren and Agyeman, 2015) The notion of the urban area as a communal endeavour is well established (Jacobs, 1961; Newman, 1972; Mclaren and Agyeman, 2015). The urban settlement also brings to the fore several existential issues that require close management if life is to be sustained (Chadwick,1889).

Building codes are rationalised on the basis of the difference in knowledge between those who build and the users of the buildings, referred to as an asymmetry of knowledge, in order that users can be protected against dangerous practices. (Hertog,1999; Productivity Commission, 2004). Writers of building regulations tend to stick with the minimum stipulations that will create the outcome required. This outcome is usually pegged on the performance of the building element to ensure that the safety of users is assured.

Buildings have to be safe for the users. Safety especially has two important aspects to it namely structural stability and safety in the situation of a fire. They are also expected to support the goals of human health which can be jeopardised in many ways.

The mechanism for creating structural stability of a building is a sharp demonstration of the asymmetry of knowledge in the industry, assured by systems that are generally hidden from the naked eye and which require some technical education to comprehend. They may involve the placement of the right amounts of steel within concrete or the integrity of steel framework. Foundations, generally hidden from view, carry huge responsibilities in the overall stability of a structure.

A critical purpose of regulation however, is the protection of the public good. The public interest theory of regulation recognises that the regulation for the collective as opposed to the individual, is a more efficient approach (Hertog,1999). Building activities that have an impact on what is communal create the risk of conversion of public resources to private benefit, a dynamic that potentially leads to a deterioration of the public domain.

The basis for intervention is further rooted in the philosophical positions that seek to justify government authority. The theory of Utilitarianism

holds that what is good for society is that which delivers the greatest good to the greatest number of people. (Mill, 1863) Inherently, this places collective interest above any individuals interest, and establishes a moral datum to determine right and wrong.

Further positive dimensions of the regulations arise from a concern to improve public understanding. The educative values in the process of regulation is an additional public good. Science lies at the core of the content of the regulations and has been the springing point in establishing their logic. (Chadwick, 1889) The communication of the best approach in building as established by science, may sometimes take the form of an absolute prescription, but is meant to be educative and informative. Underlying this is the fact that a large part of the population has little or no access to the findings of science. Thus a compelling formulation of the regulations becomes a beneficial approach for all society.

RESEARCH METHODS

The reality of regulation is a social construction, a result of a reasoned reaction to manmade situations. Underlying the current statement, is a logical process of thought geared toward a desired outcome.

The paper is not based on empirical research but is a conceptual paper. Jaakkola (2020) suggests four approaches to the research design for conceptual papers: Theory synthesis, Theory adaptation, Typology and Model. As a conceptual paper, the arguments are not derived from data in the traditional sense but involve the assimilation and combination of evidence in the form of previously developed concepts and theories (Jaakkola, 2020; Hirschheim, 2008).

Table 1 summarises a comparison of the main research elements in empirical research and conceptual design.

The paper relies primarily on an interpretation of the incumbent Building Code for Kenya usually referred to as the Building Code 1968, and in addition makes reference to the proposed Building regulations issued by the Ministry of Housing in Kenya (MOHK) in 2009 with the revisions of 2015 and 2022, for the statements of the building regulations. The Building Code is a formal tool of governance and was created for the practical purpose of guiding the process of building. The code embodies the expectations of society for the process of creating the physical aspect of the built environment.

The research design is interpretive, analyzing code clauses to characterize and understand the standards they set. Deductive reasoning is used to explore the philosophy of public goods and the theory of regulation in the public interest.

TABLE 1
Research design elements in conceptual design

Empirical research	Conceptual paper equivalent
Theoretical framing	Choice of theories and concepts used to generate novel insights
Data (source, sample, method of collection)	Choice of theories and concepts analyzed
Unit of analysis	Perspective; level(s) of analysis /aggregation
Variables studied (independent/dependent)	Key concepts to be analyzed/explained or used to analyze/explain
Operationalization, scales, measures	Translation of target phenomenon in conceptual language; definitions of key concepts
Approach to data analysis	Approach to integrating concepts; quality of argumentation

Source: Jaakkola, 2020

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In the sections that follow, the dilemma of imposing minimum standards is analysed to set out the wider concerns it occasions. This is then related to the theory of regulation and an analysis of the provisions within the Kenya building code.

RESULTS

The Dilemma of Minimum Standards

The dilemma of dealing with minimum standards arises from the tension that exists between what society must protect itself against, and what it can tolerate. Those markers are dynamic and undergo re-interpretation all the time. At the individual level the desire for self expression and a desire for a degree of individuality exists. In some cases, this is a response to circumstances at the household level like affordability or cultural concerns.

Broadly speaking the two bookends of decision and mitigation are what is done at the individual level, i.e. at the level of the household or specific building guided by a design developed by the developer, and, what is done at the communal level in terms of all the systems created to allow functionality of the city. These include the road system, the water supply system and the drainage system. One may also add the energy system (electric power) and the communication system. These two level are not mutually exclusive and must harmonise if functionality and efficiency is to be achieved. A major justification for enforced standards is to be found in the need to harmonise these two systems.

It is broadly accepted that whatever may be built, must not compromise human health. Some of the critical arrangements that are created and shown to be the most practical in dealing with this matter at the municipal level, themselves must maintain certain parameters. As an example, the sewer system in the city is a critical design in the creation of a drainage system that effectively eliminates a huge threat to human health. This however inherently demands that any construction must make downstream arrangements to connect to that system. Such a decision would seem to be a reasonable rule to ensure that the health of the population remains protected.

In similar fashion, the question of safety of people and structures would need to follow strictures that are in place at the municipal level. For fire safety, building would need to align with the firefighting provisions available for the municipal level. This may thus translate into specific material usage in some parts of the building or the provision of risers for the use of fire fighters.

A further consideration would relate to long term costs. The typical developer may not always be aware how choices made at the time of construction will develop over time. At a certain level, this may impact on the economy (supply and demand chains for certain materials). Such considerations may justify authorities to prescribe materials or choices to be made.

As a further consideration, there is the externalised costs that arise from acceptance of lower standards. These may include the mitigation of risks which translates to investments in surveillance and supervision. Some low standards for example may attract pests or deteriorate faster and thereby creating new risk factor like safety and fire risks. The costs of such externalities will be bourne by all of society and therefore are a concern of a higher level.

On the hand however, it is acknowledged that imposing minimum standards of construction and formulation has cost implications. It requires the acceptance that individual must invest a certain minimum in such constructions even though they may prefer a different approach. This may raise the question of equity in society especially in the situation where affordability is an issue.

The argument can also made that imposition of standards has the negative effect of stifling innovation. The process of design is a process of problem solving and designers respond to the challenge to creating solutions to difficult circumstances.

The imposition of minimum standards presupposes an insight into how society sets its values and how they wish to live. This goes to the realms of politics and the inherent right of people to determine critical issue of their lives. The technical arguments will have to pass the test to popular acceptance at the risk of a fightback or covert resistance.

The Theory of Regulation

One of the major functions of law is to order

society (Funk,1972). The system of laws and regulations help to give structure to interactions and transactions that are the daily fair of life. Through the law, rights are established and restrictions spelt out so that there is a broad framework that determines what is good and bad.

The laws also serve an educational purpose, helping society better appreciate proper conduct and thus benefiting from realisations of science and development of knowledge generally.

Whereas these goals as spelt out here are noble, the reverse side seeks to protect the freedom of action of individuals. As a consequence, law is necessarily restrained and does not seek to interfere with the choice citizens make in their personal space. Especially the law would not be developed in a way that puts economic strain on individuals by causing them to make unnecessary investments.

These two positions sitting are in opposition and create a tension, posing the question as to when it is appropriate to lay down minimum standards. Apart from the curtailment of operational space, minimum standards have an economic implication and will mostly translate into higher costs. Similarly, and as a consequence, any imposition of such minimums has political implications of overbearing or oppressive authority.

It follows therefore that any such imposition of standards must have a very compelling argument to justify them and must not be seen to be exclusionary. It is this dilemma that requires to be interrogated. On one hand the mitigation of the impact of intervening actions on the built environment requires the oversight role that may require that such directions be set. The reverse requires the protection of the freedom of action and innovation that will allow citizens to express themselves freely.

The Kenya Building Code Provisions

It is not the stated purpose of the regulations to guide design or to impose a standard of life on the population. In this respect the codes refrain as much as possible from specifying materials to be used, for example - rather communicating the level of performance required to safeguard everyone's safety.

The Kenya Building code as it exists now has a clear attitude towards the setting of minimum standards. An analysis of the language of the Code and tabulation of the same shows the code is fundamentally focussed on securing the health, safety and convenience of users of buildings (Kamweru, 2023). In this respect the code could indicate the necessary performance parameters and leave builders to achieve the targets. However, the codes go further and delivers instruction and guidance beyond these basic concerns, most notably the use of resources and the mitigation of disasters on building sites.

The various clauses of the code may be categorised to reflect the broad directions used. Integral theory as used by Buchanan (2011) is a tool usable in this situation to disaggregate the concerns articulated. The application of an All Quadrants, All Levels framework of analysis to categorise the clauses in these broad aims:

(a) Actions on Personal space. These are actions that seek to accommodate the human needs of every individual user. They include the preservation of life as interpreted through a concern for the stability and firmness of buildings, through fire safety measures built into the structures and also the sanitation measures that must be provided.

(b) Actions on private space that have implications outside that space. Such actions relate especially to the concerns between neighbouring properties and the prospect that actions taken on a particular property might become a factor in a neighbouring property. Examples may include the siting of a building in relation to its boundaries or in some cases the design and use of party walls. Such arrangements may have implications for structural safety and also the behaviour of a fire.

(c) Actions on public space by serving individual needs. These are actions that are expected as part of the common practice in the situation or actions that express a community's desires and comforts. Such actions especially impact the shared spaces like the roads and road reserves, the natural resources like parks, riparian land and forested spaces.

(d) Actions on public space for public good. These actions relate to the broader environment and are concerned with the character of the

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environment and its life sustaining qualities.

Using this framework and applying it to the code statements identified, a revealing pattern is discernible. In several instances, the code very clearly seeks to curtail the space for free action. This is done through several devices: Prescriptive regulation, where little or no choice is given to a building in the consideration of an issue; Performance standards, where the outcome required is categorically stated; Mandatory provisions, where a particular arrangement of required is prescribed; and Minimum standards, which state a reference point usually a dimension, that must not be exceeded in the indicated direction.

Further interrogation shows that the particular issues where the code sets out minimum standards can be characterised in a manner that reveals the underlying concerns. The broad categories where the code is categorical on the specific standard to be met fall broadly in the categories that affect safety of people. These include structural stability of buildings which is a critical category. Structural stability is implied in the codes strict specification of materials to be used in some instances. There is also concern indicated for good workmanship, in order to give assurance of rigidity of the elements (MOHK, 2009).

In addition, strict specification is used for the clauses that deal with fire safety, a concern that permeates most of the regulation related to material use and the siting of buildings.

The category of regulations that address sanitation and related issues also observes a strict protocol in stating what is acceptable and leans heavily of statements of minimum standards. It is also clear that regulations that relate to human anthropometrics (like dimensions of stair ways, ceiling heights or dimensions of passageways) are stated with a minimum specification clearly indicated.

Whereas the code is mainly prescriptive, we may also take note that it is also strongly educational. The clauses of minimum specification while carrying out the protective role outlines above, also serve to communicate good practice by channeling the best science available on the matter. This additional role reinforces the justification for the minimum standards.

DISCUSSION

Some broad themes within the building code constitute the bastions of the entire regime of regulations. Within these pillar are embedded the critical justifications that support a push toward imposed standards.

In the initial formulation, the historical roots constitute a strong foundation for the thrust of the regulations. The genesis of the regulations is in a public health crisis and the management of urban areas (Chadwick, 1889; Rosen, 2015). Within this broad concern, the issues of structural stability of structures and their resilient behaviour in the case of fire are articulated. Further, the sanitary arrangements that prevent diseases from spreading are incorporated.

These mirror the historical incidences like the Great Fire of London, and the crisis of the industrial cities in the early part of the 19th century (Benevolo, 1971; Richardson, 1887).

The nature of urbanisation and the imperative of shared resources provide a further pillar in the construction of the building regulations. A town or city is fundamentally a communal undertaking, and for its sustenance and resilience relies on the dynamics of this sharing process (McLaren and Agyeman, 2015).

A critical part of this undertaking, is the prudent use of resources, Urban resilience depends partly in the "metabolism" of the settlement, seen as the resources that must be injected into the system as a matter of necessity (Resilience Alliance,2012). At the individual building level this manifest in the need to supply water, electric energy and the connection to circulation arteries.

A further area of concern is the temptation that may arise with rapid urbanisation to sacrifice human comfort is the rush to provide required infrastructure, notably residential housing. The asymmetry of knowledge between ambitious developers and uninformed and sometimes desperate users poses a big risk and the regulatory mechanism must be invoked to prevent a "moral hazard" - a situation where users may be made to suffer for the risky behaviour of developers.

The concern with the environment and the place of urban systems in it, provide an additional theme for the critical justifications. Emergent themes include climate change and the role of urban systems in it. It is now an accepted fact that urban systems are major contributors to the negative dynamics of climate change. Within this understanding, buildings play a big role- weather related events have been putting buildings and human life at risk in different parts of the world.

An attitude to positive mitigation measures will require that buildings be constructed with these vagaries and risks in mind. The universal nature of this concern offers a justification for some minimum standards to be imposed.

Acceptable regulations that are economic, safety conscious and health protecting and which rely on a bedrock of minimum standards, will conform to community expectations and social norms. A shared history is a firm basis for predicting societal expectations and will inform formulations relevant to a locality.

Such a framework would provide a broad understanding of what can be prescribed as a minimum, especially if building practice tends to involve personnel not versed in the principles underlying the standards, a situation obtaining in Kenya today. As illustration, the Kenya Institute for Public Policy Research and Analysis (KIPPRA) casts doubt on the building's sectors ability to deliver safe houses (KIPPRA, 2023). Prescribed minimum standards are easily adopted, as rules of thumb, raising adherence, and are easier to inspect and enforce, and therefore are an effective factor in intervention measures.

CONCLUSION

The identification of a nexus between the act of regulating the building process and its outcomes on one hand and the protection of human life on the other provides a powerful argument for an authoritative control that oversees management of the process. An ethical approach to the governance of public affairs has at its core the protection of life, and a justification for the authoritative approach is provided for enforceable lines of action.

The institution of the urban settlement - the city - is relatively complex and conceptually removed from the broad situations of human settlement in history. There is therefore a logic in suggesting that the necessary tools for its proper management will supersede and possibly revise the primordial understanding of each individual space for personal preference and action.

The institution of minimum standards in the building regulations is a protective move. It protects the society and is a critical measure in preventing the vagaries associated with uncoordinated individual actions - the tragedy of the commons. It marks a break from a primordial life to an existence that is cognisant of the shared life and the hazards of dropping the guard in its attendant protocols.

It is also an educative venture. Minimum standards are a channel to communicate to society the best approach to a particular task in building. It is in fact how authorities maybe able to give society the benefits of scientific research especially where such research reveals jeopardy in alternative approaches. These measures are good for society.

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