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The Impact of Building Regulations on The Urban Fabric of The City

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II. ABSTRACT

The physical form and pattern of the built environment in a city is the outcome of prevalent planning, design standards and building regulations. Many issues related to the built environment in urban cities are the consequence of prevailing building regulations in that area. These building regulations have been copied from one place to another and adopted across the country. They have an enormous impact on function, character, quality, safety, and the image of a city. The issue is even worse in developing countries, as less than half of the urban population in developing countries can afford to build according to the prevailing standards. This highlights the need to reform/change existing regulations/standards in developing countries.

Building regulations are formulated and enforced with the aim to protect public health, safety, general welfare, and the environment. Such regulations are, presently, the means by which development authorities can control the use of available land resources, buildings and infrastructure facilities to ensure proper spatial organization and environmental protection in the city. They also provide the necessary framework and statutory regulations for planning, design and construction of buildings and associated works, safety of dangerous buildings and lands, and matters connected to enforcement and approval authorities. The built environment of an area is an outcome of enforced building regulations and thus, determines the pattern, built form and character of a city.

In general, building regulations that are enforced in different countries/states/cities can be classified as either prescriptive building regulations or performance-based building regulations. Prescriptive building regulations are the oldest type of modern building regulations, which have their origin in the nineteenth century, and are simplest in terms of understanding, adoption, implementation and inspection/monitoring. These regulations focus on regulating development through various legislated regulations related to volume, height, size, material specifications for building components and sometimes building aesthetics. Different prescriptive building regulations are based on the use/functional requirement of the plot/area/zone. These rules can be enforced either at the town level or the zone/area level or the site level, depending on the type and level of enforcement required and regulatory approach. The prescriptive approach worked well in the past, when the level of sophistication of the use of codes was relatively small and when construction technology and social needs were changing very slowly. However, they are being combined with, or replaced by, performance-based regulations in different countries. Performance-based regulations require certain performance criteria to be met, such as the overall strength of the structure, the level of insulation, energy efficiency, etc.

In conclusion, it is essential to formulate new building regulations, in accordance with the geoenvironmental (geotechnical, ecological concerns and climatic factors), developmental (uses, locational context, existing development pattern and character, available infrastructure, performance and appearance) and technological context. These regulations should be applicable at the area/zone level. To formulate new area level building regulations, the mixed approach of building regulations, which includes prescriptive, form-based, site-specific and performance-based regulations, needs to be adopted. To formulate building regulations for Alexandria, Egypt as a case study, various crucial factors/criteria need to be determined. These factors are essential for appropriate development in cities and can become the basis for new building regulations.

Keywords: Building Regulations, Building Codes, Image Of City, Identity, Urban Fabric.