Department of Architecture
Faculty of Engineering, Cairo University
7th International Conference

ARCHCAIRO 2017

BUILDING INNOVATIVELY INTERACTIVE CITIES

HORIZONS AND PROSPECTS

27-29 March 2017 Cairo

CONFERENCE PROCEEDINGS

BUILDING INNOVATIVELY INTERACTIVE CITIES
HORIZONS AND PROSPECTS

Under the Auspices of
HE-Dr. Mostafa Madbouly
Minister of Housing, Utilities, and Urban Communities in Egypt

Conference Topics:

1- ANTICIPATE: CITIES AT A TIME OF RISK

2- REACT: RESOURCE EFFICIENT CITIES

3- INTEGRATE: BUILDING CITIES FOR ALL

4- PROMOTE: BRANDING NEW CITIES

5- INNOVATE: REAL ESTATE AS A TOOL

PREFACE

URBAN INNOVATION

occurs at the controversial interface between the multifaceted approaches, led by governmental entities; stakeholders' development strategies, and community interest groups. At the time of transformation, people continue to influence their habitat and beyond. While facing the compelling challenges of the present, innovative development poses itself as an inevitable response to future demands. In socio-economic disparities and environmental crises, innovation necessitates a mode of action to act responsibly in addressing issues in unconventional manners. The production of space becomes a responsibility towards the development of human resources, promoting their needs, capacities, and advancing a decent quality of life.

This conference addresses a key manifestation of "responsible innovation" in the human activity of "***dwelling***" and "***urbanization***"; in light of the scarcity of resources and rising demands, the conference invites academics, experts, practitioners, and policy-makers for a critical debate. The aim is to develop a two-fold approach; one fold reads into the future by daring to imagine a different ***form of life*** that pushes the boundaries of responsibility and creativity in the pursuit of a ***vision for new-innovative cities***, that integrate productivity, effectiveness, and attractiveness. The other fold claims an ability to anticipate and pre-empt the various risks and uncertainties of such development and expansions.

The conference seeks to push forward the boundaries of current practices and knowledge to embrace innovative solutions, novel approaches, and grounded technologies within realistic comprehension of economic risks and environmental implications. It investigates different scales and situations, various urban forms and morphology, and various localities and totalities. It provides a platform for academics to present recent research, findings, and answers to pressing issues of building new cities and expanding existing ones worldwide within their ecological limits, formulating images, architecture, public spaces to create liveable, working, and productive cities. Furthermore, experts and researchers will be invited in roundtable discussions and workshops to develop ideas for new "innovative-responsible" cities. The conference welcomes contributions from diverse practices that support a quest for better living conditions to all urban dwellers while withholding their aspirations within a transforming world.

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DECISION MAKING IDEOLOGY: CORRELATION ANALYSIS BETWEEN INFORMAL SETTLEMENTS GROWTH & UPGRADING POLICIES IN EGYPT

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Abstract

Planning new cities & communities seeks comprehensive development approach dealing with our complex city systems with all its diversities. The interchanging dynamics between the subsystems that contribute in generating our cities play an important role in balancing these systems and stabilizing its momentum. Since formal and informal systems integrate within market dynamics; strategic policies for new cities development should be inclusive for both of them. In this paper, the development management in Egypt is investigated through assessing the effectiveness of decision making ideology and procedures to upgrade informal settlements and restrain its growth. The paper also reflects on integrating intervention strategies for informal settlements with the whole city agenda.

Informal settlements in Egypt grew substantially in spite of the intervention policies practiced; which promotes further investigation for the ideology of decision making behind these policies. This paper constructs a correlation analysis between growing informal settlements and upgrading policies implemented. The paper marked the gaps these policies fail to fulfil; tracking down the poor practices, legal procedures and coordination policies for decision making process. Paper methodology depended on investigating literature of studies, records and statistics, besides performing interviews with officials responsible for both planning and implementation of upgrading policies in Egypt.

The findings of this paper assist in establishing a platform for evaluating the applicability of Good Urban Governance within the Egyptian legislation framework. The main issue concluded was poor institutional setup that have intersecting jurisdiction of different entities, poor understanding for legislations and failure to develop a steering structure for city development. This became a result for issues in urban upgrading development summarized in problem underestimation, symptoms treatment and project syndrome. Problem underestimation is a result of asymmetrical information, symptoms treatment is due to inadequate data analysis instead of evidence core based analysis while project syndrome is the inability to scale up successful upgrading projects into upgrading policies ***due to poor cooperation strategies on the national management level.***

Keywords

Decision Making Ideology, Informal Settlements, Upgrading Policies, Good Urban Governance, Egypt

1. Introduction

On September 2000, World leaders met to discuss pressing issues related to humanity & environmental development in the Millennium Summit held by United Nations in New York. They agreed upon the Millennium Development Goals (MDGs) concerned with reducing hunger, poverty, illness and discrimination by promoting commitments on national leaders to provide standard quality of life for their citizens. Goal n° 7 stated the parameters that *"Ensure Environmental Sustainability"*; from which Target 11 declared

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that in order to do that we need to *"Achieve significant improvement in the lives of at least 100 million slum dwellers by 2020"* (UN-Habitat, 2003).

The relation constructed between environmental sustainability and improving the lives of slum dwellers continued to prevail in the New Urban Agenda as well as in the Sustainable Development Goals (SDGs) declared in 2015; where it confirmed that in order to *"Make cities inclusive, safe, resilient and sustainable"*, all should have access to adequate and affordable housing with basic services by 2030; stating clearly that slum dwellers are in fact a distinctive part of the city (UN-Habitat, 2015).

Yet informal urbanism was not received as an effective partner in city development from the beginning. The ideology behind defining this phenomenon has changed through years. Scanning different literature, the word "Informal Settlement" is explained by various terminologies depending on the context & perspective. Some recognize it as a positive feature demonstrates an active community that solves its own problems (De Soto, 2000). Others treat it as a negative symptom of economic & culture degradation as well as weak urban management (Acioly Jr, 2007). So decision makers build their policies depending on how they see informal urbanism; as a disease, as a symptom of a bigger problem, or as an opportunity.

Sustainable development management pursues satisfying human needs and aspirations, reflected on physical, environmental and socio-economical progress. The first aspect to have a sustainable platform for development management is strategy generation by all development partners (El-Refaay, November 3, 2016). They should agree on defining the areas of development, the targets need to be achieved and the standard baseline to measure positive progress in city development (Andersson, 2015; Thomas, 1996; UN-Habitat, 2009).

The second aspect is accurate estimation for potentials and challenges formulating areas of development. Development of comprehensive database for all parameters and variables is essential for a core and evidence based analysis (GTZ, 2009). The third aspect is the coordination strategies between development partners, along with the steering structure and institutional setup that provides the procedural platform for development management (El-Refaay, November 3, 2016; Yousry, November 10, 2016).

The prevailing ideology for academics, researchers and human rights advocates that cities have social responsibility towards those in need. Mostly people living in slums are subjected to poverty, illiteracy, sickness, crime & above all life threating conditions. Young generations are considered the productive sector for city's development, while living in such conditions will affect their role in the society and end them up as a liability (Acioly Jr, 2010). Levels of hatred crimes & terrorism can be tracked back to the feeling of injustice and inequality between different social classes. Involving this sector into the community will increase their sense of belonging and decrease their sense of exclusion.

Egypt has been facing the challenges of slums & informal settlements since decades and most of intervention policies practiced have failed to effectively solve informal urbanism drawbacks. The concept of informal settlements is paradoxically perceived by different governmental sectors in Egypt (Mahmoud & Elrahman, 2016). Therefore, the ideology of intervention policies conducted is different and have diverse backgrounds. Different reports and statistics have a diversity of estimations for the actual number of informal

settlers in Egypt; as it ranges between 40% to 75% of urban population according to different sources (Tadamun, 2014).

The fluctuation in the estimations resulted from having different understanding for the same problem, different authorities dealing with it, as well as different methodologies for collecting data (Arandel & El Batran, 1997; GTZ, 2009). This relates to the second aspect of sustainable development; accurate comprehensive database for areas of development. Problem underestimation or misinterpretation in Egypt comes as a direct result of lack of accurate information about informal areas. There is no integrated database for informal inhabitants' actual population numbers, their financial status, their legal rights, and the registry of land if it exists as well as many other data that need to be covered in order to have a comprehensive understanding for the existing status.

Records could be find in different sectors within the government's different authorities; such as the Ministry of Housing, Utilities & Urban Development (MHUUD), the Ministry of Planning, the Informal Settlements Development Facility (ISDF), …etc. These different authorities that have changed scope and strategy throughout time, provide inconsistent information about informal settlements (Arandel & El Batran, 1997; GTZ, 2009). Another problem that used to affect the accuracy of information is that the published figures regarding informal areas' sizes or numbers were occasionally reduced than the actual figures. This practice was common to enhance governmental public image in order to support its strategies and promote its viability (GTZ, 2009).

The third aspect; defining coordination strategies is correlated with the successful assigning of roles and responsibilities. Different jurisdictions should not intersect to provide a sustainable setup for development management and an effective channel for monitory evaluation. Since Egypt have developed through changing political and socio-economical agendas; laws and legislations are changing constantly and not always in a constitutional way (Zahran, November 14, 2016). Diverse reforms and additions to the original laws and legislations made the legal framework saturated with decrees and adjustments which in return makes tracking, understanding or practicing these legislations a difficult process. The majority of stakeholders suffer from legal ignorance don't have a full understanding for law limitations, so most of their decisions are built on false assumptions.

In sum, defining the goals and areas of development, accurate estimation for potentials and challenges involved, and introducing a cooperative strategy that involve all stakeholders defining their role in decision making process are essential aspects. Principles of Good Urban Governance has prevailed as a comprehensive approach that deals with these aspects as it brings out the importance of equity of access to decision making process as well as civic engagement and community participation (UN-Habitat, 2009). The capacity building for active parties, governmental or non-governmental, is an essential for providing comprehensive and adequate solutions for informal urbanism drawbacks, as it is a highly complex system that needs an effective integration between involved stakeholders.

2. Methodology

The paper investigates the correlation between informal settlements' growth and the intervention policies targeting it. Therefore, the methodology for data collection and analysis focused on these areas and their active stakeholders. The paper investigated areas

of sustainable urban development in respect with decision making process ideology in Egypt from the perspective of upgrading intervention policies. The adopted methodology is divided into theoretical and practical studies.

2.1. Theoretical Study

The paper reviewed the academic researches, records and reports concerning the correlation between the growth of informal settlements and the intervention policies developed by decision makers. These studies summarized the problems of decision making in Egypt as well as the incompetent urban management as a whole. This paper focused only on the operational, institutional and legalization problems, disregarding the physical and socio-economical perspectives. The analysis for this part considered the principles of Good Urban Governance and the Urban Governance Index (UGI) as measuring baselines for assessing the performance of the institutional setup.

The literature study in this paper is divided into two sections. The first section investigated the ideology behind the formation and existence of informal system in Egypt. It allocated its position in city system dynamics and investigated its defining characteristics. The second section overviewed the ideology of intervention policies conducted through history to correct or prevent the informal phenomenon. It linked this ideology with the changing political and socio-economic status that affected city's agenda for development.

2.2. Practical Study

For the practical part, one to one interviews are held by the author(s) with selected stakeholders from different entities related to urban management generally and informal upgrading specifically. These interviews are clustered into four groups:

- *Non-Governmental Entities Group*; the selected entities are concerned the mediator for the interviewing process and they include 2 sub-groups. The first is the international agencies that work as consultants, introduce technical support for the governmental entities, or conduct researches on the Egyptian context. The international agencies selected are the UN- Habitat and GIZ (German Society for International Cooperation). The second sub-group is the local consultancy and research offices, organizations and initiatives concerned with urban studies. The selected entities are Tadamun, Madd, Cluster & Megawra.

These two types of stakeholders are vital to be at the first stage of interviews for two reasons. First they introduce connections with other different stakeholders, governmental and non-governmental, on all institutional levels, from local to national. So they are considered the link between the horizontal and vertical alignment of developed policies. Second these stakeholders work on comparing the urban theories and studies with the actual implementation of the action plans proposed. They develop these theories with evidence based data from pilot projects.

- *Strategic Managers Group*; the selected entities are basically the policy makers and strategy developers. They are national governmental entities that produce strategic and detailed planning, as well as action plans and codes of procedures. They also manage the data collection & analysis needed for executing a project, monitoring the process of implementation and allocating funds and resources, depending on their role in the institutional setup. These are key stakeholders with high power and

interest, yet the coordination procedures between them is not clear in the literature. Also the data they collect, the work they do and the reports they produce are not all accessible to public.

The entities selected are the Informal Settlements Development Facility (ISDF), the Social Housing Fund, the Economic Housing Funds and the Central Agency for Reconstruction; all subjected to the authority of Ministry of Housing, Utilities and Urban Communities (MHUUC). Also for assessing land policies, regulations and planning strategies; the author(s) selected the General Organization for Physical Planning (GOPP), the New Urban Communities Authority (NUCA), the Egyptian Survey Authority (ESA) and the National Center for Planning State Land uses, and the Ministry for Planning, Follow-up & Administrative Reform.

- ***Local Executives Group***; the selected entities are the executive arms for implementing the action plans for upgrading policies. They work closely with laws implications as well as beneficiaries of the upgrading projects. They test the validity of proposed scenarios and procedures by both evidence & result based data, yet they don't have much of authority or resources to change these plans. The selected entities are the Urban Upgrading Units (UUU) and the Informal Upgrading Units within the Cairo, Giza and Qalyubeya governorates, the urban planning & engineering units in the local administrations, and the departments for defining properties, registry and building permits.

- ***Experts & Academic Researchers Group***; this group is for experts and academic advisors that have both theoretical and practical experiences in informal upgrading. They are key personals that have worked in governmental and non-governmental entities as well as national and international agencies. This stage of interviews is important to have a comprehensive perspective over the effectiveness and efficiency of informal upgrading policies specifically and the ideology of decision making process in Egypt generally. Their opinion will validate the overall study results.

The relation between the different stakeholders in the four groups is illustrated in Fig. (1). This paper is a part of an ongoing research assessing good urban governance in promoting informal upgrading policies in Egypt. Due to time limitations, the findings of this paper is concluded from a sample of interview respondents from all different groups illustrated in Fig. (1).
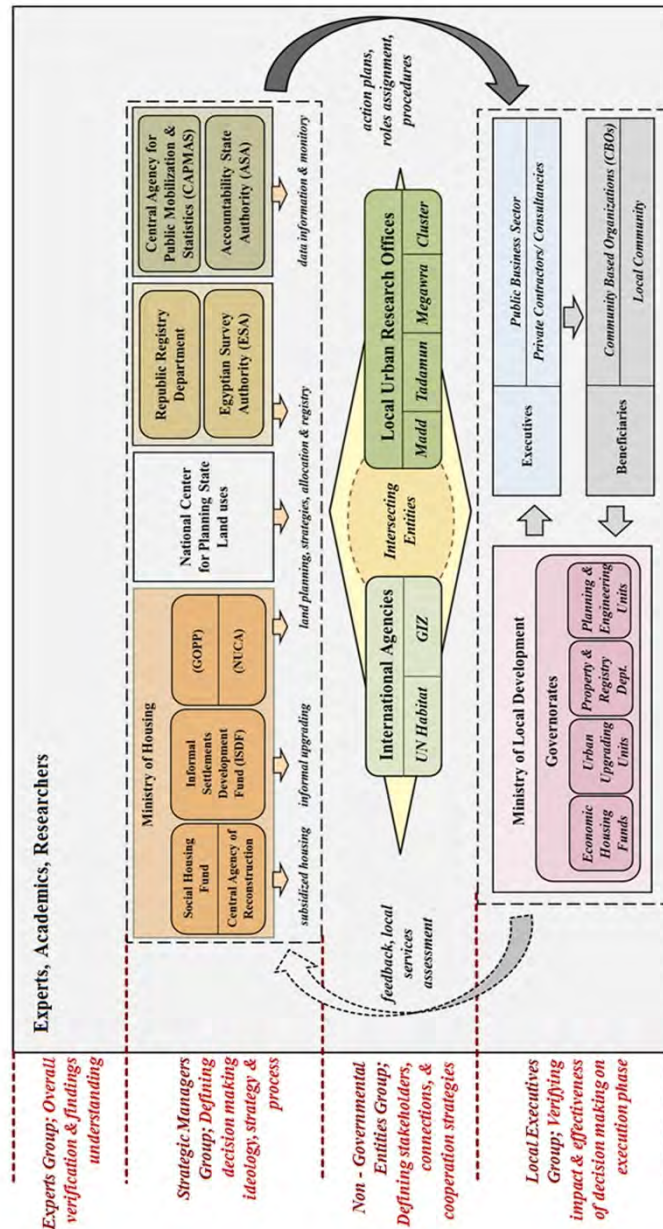
Fig. (1): Methodology for Practical Study
Source: Authors

3. Housing Policies within Sustainable Urban Development

In the integrated city system strategy, the governmental housing policy for lower income groups is the complement strategy for restraining the growth of informal housing market. Thus the failure to provide adequate or/and affordable housing through this policy is correlated with the increase of informal settlements; the citizens' spontaneous proactive action for fulfilling their basic need for shelter (Acioly Jr, 2010; GTZ, 2009; UN-Habitat, 2003). The housing policy should address the housing provision system for all income levels; housing finance systems, strategy for balanced market for housing sector main components (land, building materials, infrastructure & labor) as well as defining the public sector role in this process along with other involved stakeholders through laws and regulations (Hassan, 2011).

These policies are generated as a result of incremental experiences in the city urban management and successive practices in housing market dynamics. Thus each city has its own system that works with its cultural, socio-economical, political and environmental changes and replicating practices might work in some cases but not in all contexts. Egypt is a unique setup, where layers of history, cultures and defining incidents have tangled together to generate the complex system dynamics that controls all aspects of life within it (Sims, 2011). Thus applying replicated practices within its context should be carefully studied before generalizing it on the whole city. Also Egypt is divided between different regional areas, where each of them has different spatial and socio-economical characteristics that reflect directly on any strategy implemented on a holistic approach.

Applying Good Urban Governance has been encouraged recently by different international entities, promoting it as an integrated tool for development management and an effective methodology for decision making (Thomas, 1996; UN-Habitat, 2009). It is argued that the formal government - and its traditional hierarchical centralized way of decision making - is no longer the best methodology to address the phenomenon of informality. Governance as a substitute ideology for decision making, requires a much higher level of partnership and participation from different parties involved other than governmental institutions. It has clear principles including sustainability, efficiency, transparency, accountability and equity of access to decision making (UN-Habitat, 2009). These principles require bases in the institutional framework as well as a certain level of awareness among the different stakeholders involved, especially citizens.

For instance, the ideology of good urban governance promote decentralization as a tool for applying subsidiarity and equity of access to decision making. Yet in order to conduct this strategy within the Egyptian context, we need to have strong municipalities and local authorities with full jurisdictions and independent financial resources. In a sensitive political context, with a weak monitory and accountability systems, that would be difficult to achieve. Also having unstable economic status, pushes the government to centralize its resources to manage it closely and effectively, protecting any leakage of financial assets through corruption or ineffective management. Therefore, the application of principles of good urban management on city strategies for upgrading informal settlements for example have to be aligned with the potential and challenges of the Egyptian context and its overall ideology for decision making and development management.

4. Informal Housing System in Egypt

The informal housing is an active sector in the Egyptian local economy. According to statistics, it has been able for decades to provide a continuous supply for affordable housing units serving the limited income citizens, more than what the government with all its resources could provide (Arandel & El Batran, 1997; GTZ, 2009). The informal population growth in Greater Cairo Region (GCR) is compared with the formal one in Fig. (2) developed by (Sims, 2011). It shows that the informal housing units are under higher demand than the formal ones, which are in spite of being generated in large quantities; failed to increase the population of its beneficiaries. This is not restricted to GCR or to the period prior to the public revolution in 2011. The informal housing between 2011 & 2014 has provided and delivered almost 6.5 million housing unit; 3 times more than what was planned by the government in the same period and 43 times what was actually provided for low income groups (Shawkat, 2014).
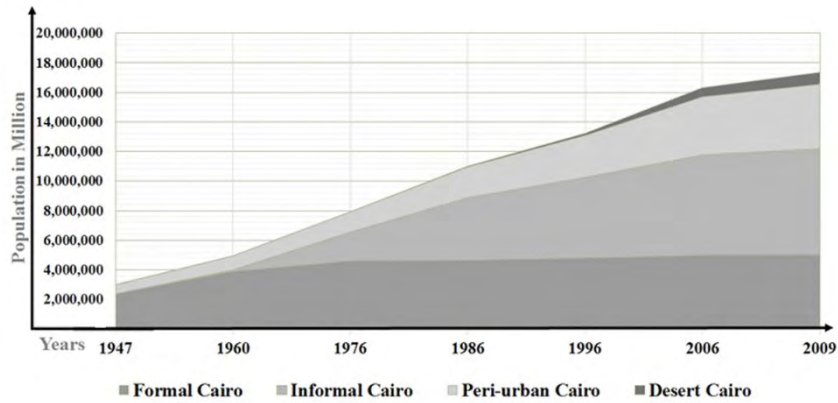
Fig. (2): Population Growth of Component parts of Greater Cairo 1946 -2009, based on CAPMAS census
Source: (Sims, 2011; UN-Habitat, 2003)

4.1. Causes and Incentives for Laws Violations

Different parameters contributing in the definition of informal settlements are tangled together to form a very complex understanding for the terminology. Yet they all agree that informality is a type of violation for the laws supported by the official authorities in which informal settlements are the physical urban manifestation of such violations (ElMouelhi, 2014). The increasing need for housing units gives developers, either formal or informal, an incentive to acquire more land and develop it to participate in the housing market.

However, the informal housing market is more vibrant since it competes unfairly with the formal one and works in an opposite direction as illustrated by (Acioly Jr, 2010) in Fig. (3). The informal market doesn't need to follow the regulations giving it a more
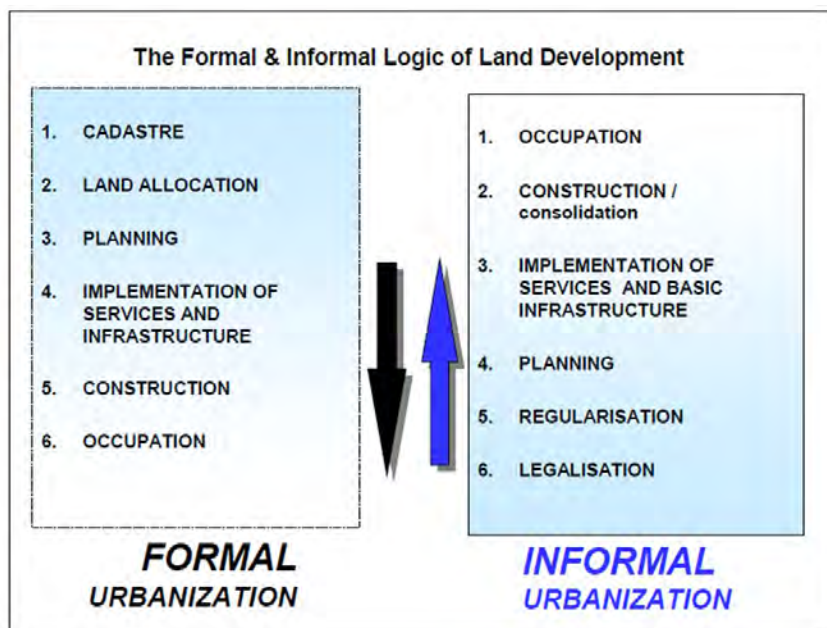
Fig. (3): Formal & Informal Logic of Land Development
Source: (Acioly Jr, 2010; Shawkat, 2014)

opportunity to increase its profit and speed up its production rate. That explains its high production rate as it doesn't consume a lot of time or resources in planning or land allocation processes.

Land violations are the most common in defining informal areas in Egypt. Since land prices have been increasing substantially since the 1960s, low income groups couldn't access the land market and was unable to gain land ownership easily (Arandel & El Batran, 1997). Programs of leasing public lands or selling it through subsidized prices are very limited in Egypt, while private land is definitely sold for the best & highest land use price. As a result, gradual informal occupation of land has taken place by those who couldn't buy or rent a housing unit (Soliman, 1996).

Another issue is that land registry procedures are quite complicated and costly for low income groups; so most of them don't go through legal procedures to sell or lease their land and they do it only following customary rules (GTZ, 2009; Hassan, 2011). Yet the illegal changing of assigned land uses from agriculture to urban is a much bigger problem. Egypt has lost 35% of its arable land since 1950 due to urban extension on the peri-urban areas, and it still losing between 10 to 30 thousand feddans each year for the same reason (GOPP, 2014). This type of land informality represents almost 80% of informal settlements in Egypt (Khalifa, 2011) since the profit value of land exchanging its use from agriculture to urban is about 200% (Barthes, 2014).

On another level, informal inhabitants usually argue that they need to have more foot print and more separated spaces within a remarkably small residence and that they don't have the luxury to have big rooms, or openings in every room or wide stair cases as recommended by law. Also they tend to have multiple floor heights with a minimum clear height for each floor due to same reasons. Informal developers who control the informal land and building markets tend to promote the same arguments to gain more profit by increasing the densities and number of units designed per plot (Morales-Schechinger, 2016b). They also justify for the same reasons why informal areas tend to access infrastructure through extending water pipes or electricity wires illegally to their residences.

All these aspects illustrate how the inadequate formal system contributes in increasing informality and laws violations. Understanding the informal market dynamics and working in consistency with its causes might introduce a better chance in exploiting its assets and limiting its threats. The failure of any development scheme is basically dependent on the disagreement of its active stakeholders on what is important and have higher priority. That in return results in conflict in implementation and either passive or negatively active involvement from these stakeholders or beneficiaries as the upgrading practices don't meet with their needs and priorities.

4.2. Legislation Challenges for Informal System

Violations of land laws are mostly what official authorities in Egypt use to define informal areas. That was clear in the mapping made by ISDF to classify unsafe and unplanned areas, giving areas that suffer from land violations a priority from other deteriorated or deprived areas (10Touba, 2016; Ibrahim, 2016, December 6). The land laws are defined and issued on the state level, and they are much more distinctive than building and tenancy regulations. Building laws are defined and issued on the districts and

governorates level, which makes it more complicated and difficult to track on the national level.

If we added the violations in building laws to the statistics of informal settlements, the percentage of these areas will increase substantially; as violating these laws are not restricted to informal areas defined by Egyptian authorities. Furthermore, tenancy laws are defined and regulated by the owners' or occupants' associations, so it is based on the building level. These laws are variant and continuously changing, and adding the violations of them to the definition of informality will put a higher percentage of housing in Egypt under the informal category as shown in Fig. (4).

The problem is that the laws regulating land, buildings and inhabitants are changing constantly, adding layers of complication on the housing provision process and on the rights and obligations of each party involved (GTZ, 2009; Hassan, 2011; Sims, 2011; UN-Habitat, 2003). Also these laws are overruled by presidential decrees and temporary regulations along the Egyptian history. All the previous aspects illustrate that the ideology of informal market depend on finding the easiest and the most profitable way to fulfill the market needs, which is a justifiable approach. On the other hand, the inefficient formal system contributes in making following the laws for decent citizens more difficult and manipulating the laws for corrupt ones more tempting.
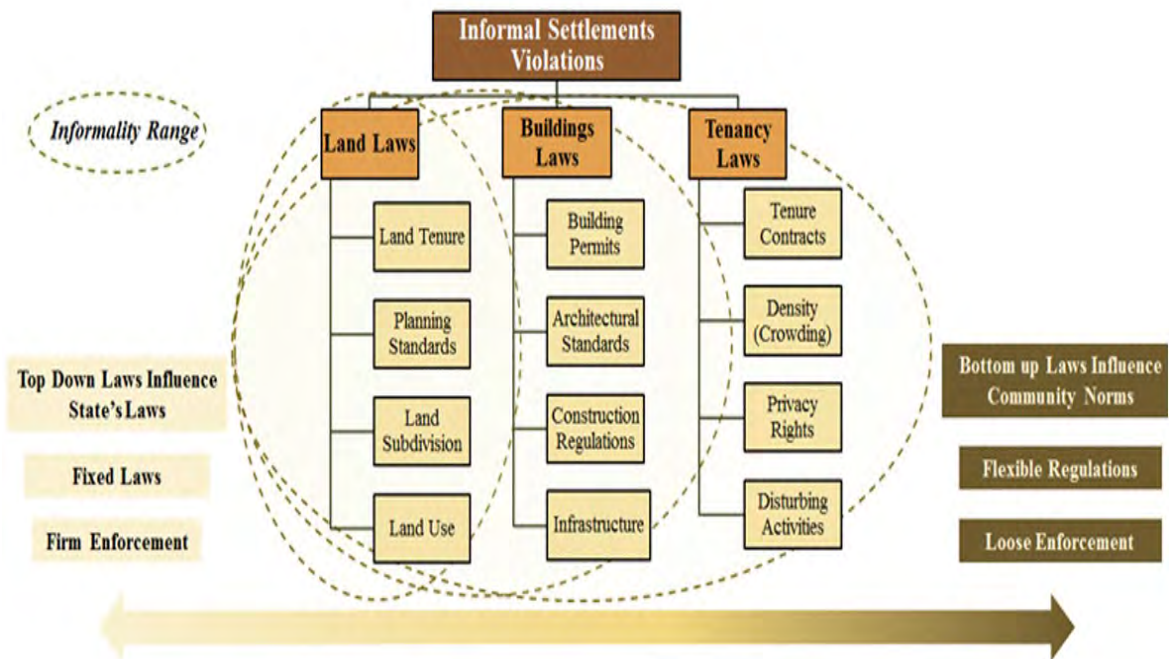

Fig. (4): Informal Settlements' Laws Violation & Spectrum for Legislation
Source: Authors

5. The Ideology behind Upgrading Systems and Strategies

The development of pro-poor policies, or strategies targeting the urban poor and their informal agglomerations are classified into 3 categories as shown in Fig. (5); corrective, containment and preventive polices (UN-Habitat, 2003). Corrective policies are the ones related to improving the lives of slum dwellers and upgrading their existing environment (Khalifa, 2015). Containment policies restrain the spread of the phenomenon to limit its growth and retain sprawling. While preventive polices are concerned with introducing alternatives for citizens with higher probability of occupying informal settlements as advised by (UNDP, 2005). These policies tend to track the root causes of the problem by providing inclusive and subsidized housing policies (Khalifa, 2015).
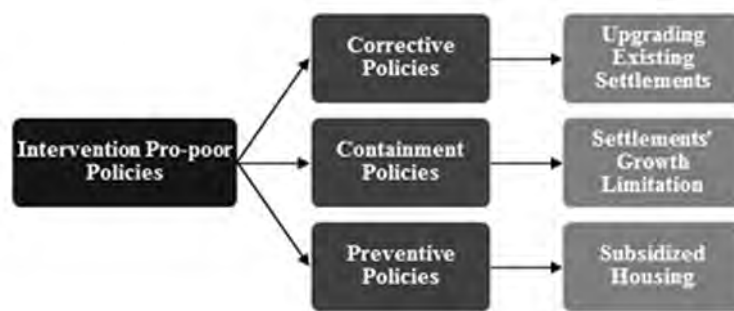
Fig. (5): Intervention Strategies Categories

Source: Author based on (Khalifa, 2015; Shawkat, 2014; UN-Habitat, 2003)

5.1. Perceiving Informality & Intervention Policies Timeline

At the beginning slums were considered as a plague that need to be demolished. Slum dwellers were blamed for their living conditions and attitude of trespassing others' property (Khalifa, 2011). They were excluded and accused of being criminals and drugs addicts; which at the time in most of the cases they were. But this perception has evolved with their evolution where slum dwellers became not only poor, unemployed or outlaws, but also well educated, working and descent middle class inhabitants.

The world community at the later time perceived slum dwellers as victims of economic & culture degradation as well as weak urban management (Acioly Jr, 2007). Informality was received as a direct cause of fast urbanization, liberal strategies and failed housing policies that were not inclusive and didn't provide alternatives for different income levels. Yet it considered slum dwellers as helpless ineffective partners that didn't need to be necessarily involved in the decisions related to their futures; which promoted an up down approach of the decision making processes overlooking some of the inhabitants' actual needs.

Later this perception has changed realizing the effective role of slum dwellers and promoted community participation with different levels according to each settlement level of maturity. Now slum dwellers became "heroic entrepreneurs" that solved their own problems and gathered together as a strong community (De Soto, 2000), creating

their own economy and forcing their existence to the city. However, the old perceptions have not really vanished from the minds of policy makers at different levels; which creates a continuous conflict in providing the adequate solution between different stakeholders managing the issue. According to how informality was perceived through time, intervention policies were generated to cope with the ideology of this understanding for causes and effects of the phenomenon.

Intervention policies started with forced evictions that denied the right of these settlers to exist where they are. However, this only relocated informality in other locations but never restrained it (UN-Habitat, 2003). The shift afterwards went to resettling these communities in other locations planned and constructed by governments. This caused huge financial burden on governments as well as negative consequences resulted from breaking the exiting community and usually resettling it away from job opportunities & adequate services. Yet many countries are still following these policies in reallocating settlements placed in danger locations. Eventually enabling & empowering the community to help themselves was the next paradigm adopted by policy makers and academics (UN-Habitat, 2003).

Enabling faced multiple challenges in providing the land, supporting the citizens, managing the whole process and achieving fast results that governments and political parties pressured to have. That moved policies later to physical upgrading of informal areas through introducing infrastructure & services. Afterwards, paradigms have shifted to a more comprehensive approach of upgrading that involved socio-economic aspects, until it reached an integrative approach that tangled all the city policies and resources, including upgrading ones, to a city system that function all together through governance principles achieving development for the whole city (Khalifa, 2015).

5.2. The Validity of Upgrading Policies

In spite of the developed ideology in both perceiving informality phenomenon and dealing with it, not all stakeholders involved in the process are convinced with the recent approaches and favor more the old ones. They question the validity of upgrading policies from different perspectives. For instance, they argue that upgrading & titling of slums could be an incentive for current and possible future informal dwellers that are attracted to these affordable areas. They state that countries following this approach are approving violation of regulations done by citizens and soon enough these countries will lose control (Morales-Schechinger, 2016a).

Responding to these arguments, researchers debated that governments are the main reason for slum formation in the first place through their poor policies for subsidized housing and market monitory (Acioly Jr, 2010). That claim is based on accusing governments of lobbying with higher income levels and businessmen, where they mostly supported policies in their favor. The involvement of countries in improving the lives of informal dwellers is a compensation of its failure to provide access to adequate and affordable housing Also working with the community and encouraging their participation in developing the country and improving their lives is an indicator for sustainable development systems (UN-Habitat, 2003, 2015; UNDP, 2005).

Upgrading opponents had another argument stating that upgrading is not necessarily supporting the poor. The main beneficiaries of providing services & titles for these areas are the informal speculators and developers that are waiting to force out the poor in

exchange for higher rent or selling values from the middle class or even the rich (Morales-Schechinger, 2016a, 2016b). Yet this only occurs to slum areas in prime locations and not in all cases. Gentrification, which is the replacement of one social class by another forced by market dynamics or cultural pressure, has certain conditions to occur (Acioly Jr, 2010). Besides that, titling is not the only way for security of tenure, where authorities could provide security without selling the land.

From the economic aspect, the informal sector is totally outside the formal market. Governments lose large sums of money that circulates informally and goes into the pockets of informal investors & speculators who don't pay taxes or exemptions. Inhabitants of informal settlements do pay money, but in an incremental behavior that formal sector don't usually offer. On the other hand, slum areas offer various housing and payment opportunities, but in rather poor building conditions and no safety nor healthy regulations. Cities work as integrated systems, so we can't exclude a part of the equation that not only presents a distinctive proportion from its citizens & lands but also from its resources.

5.3. Pro-poor Intervention Policies in Egypt

Reflecting on the Egyptian context, the three strategies of corrective, preventive and containment has been developed through decades. The preventive policies resembled in subsidized public housing for low income groups was the first strategy developed by the country after the 1952 revolution. The government took on its burden building fully developed units in locations near city center and near industrial zones, providing it for rental and purchase. After the October Working Paper and the liberal agenda strategy, the government has slightly reduced its production of public housing, giving more incentives for cooperatives and private sector to participate in the housing market.

The shift was then towards creating new urban communities – the New Towns Policy – that prevailed until now. It depended on further extension in both East & West of GCR and developed to introduce twin cities and satellite cities approaches all around Egypt. All the previous preventive policies were national agendas that didn't have a systematic approach or a clear vision for the number of beneficiaries. The systematic programs for public housing started later in terms of national projects determined for specific target groups, with different housing provision systems, conditions, locations, areas and payment procedures.

On the other hand, corrective policies represented in upgrading informal settlements had a later start than the preventive ones. At the beginning there was only pilot initiatives subsidized and monitored by international funds like Hai El-Salam in Ismailia and El Nasserya Project in Aswan. Yet the systematic policy intervention started after some incidents of social unrest due to radicalization and the destructive Earthquake in 1992. The National Program for Urban Upgrading was announced in 1994, and included the Informal Settlements Upgrading Program (ISDP). After the Dweiqa Rockslide incident in 2008, the ISDF has been constructed having different agendas and procedures (Gohar, 2016, December 8; Khalifa, 2015).

The ISDF main agenda is to classify and map informal settlements, define the level of degradation and risk, and finally introduce technical support for the local government to upgrade these areas as well as financing and monitoring the process. There are dozens of projects that have been done since then to resettle, rehabilitate, renovate or remove risks

from determined areas. Yet more informal settlements are being added to the map every year (Gohar, 2016, December 8). The ISDF came up with the classification of informal areas in Egypt into unsafe areas and unplanned areas, giving priority to unsafe areas where it classified them into four grades of risk urgency levels (Khalifa, 2011).

6. Findings

The findings of this paper are divided into 3 sections. The first section is the literature findings which evaluate intervention policies conducted within the Egyptian context to restrain the growth of informal settlements. It correlates the formal agenda with the informal one, along with the supply and demand markets for housing provision, the socio-economic and political changes within a comprehensive perspective. The second section is the interviews' findings where it reflects the literature findings on the evaluation of the sustainable development aspects illustrated in *section 1*, and investigate the effectiveness of intervention policies. Finally, the third section is an initial attempt introduced by authors to operationalize the correlation analysis between intervention policies and informal settlements growth taken into consideration Good Urban Governance principles.

6.1. The Correlation Analysis between Informal Growth & Intervention Policies; Literature Findings

Egypt has experienced tremendous changes, politically and socio-economically, which changed its national strategies and agendas throughout time. These changes are classified to definite eras by different literature (Hassan, 2011; Khalifa, 2015; Tadamun, 2014). The reflection of political changes and socio-economical aspects is important to evaluate the strategies conducted within the comprehensive understanding of the country's development agenda at the time. The following diagram construct a relation between the different strategies implemented since 1952 revolution until present, and the existing political status along with remarkable incidents that shifted the paradigm of these strategies and changed the scope of intervention; Fig. ().

In the communalism era, the ideology for the state was to be totally responsible for housing provision for lower income groups. The State also controlled the rent rates through rent control laws, the building industry through nationalization, and the land supply for developing these projects (Sims, 2011; Wahdan, 2013). This resulted from the sensitive political status after the revolution. This trend of centralization and controlling all assets by the state was not sustainable, as it deprived the housing market from private sector participation (Hassan, 2011), and increased immigration from rural areas towards industrial zones (Arandel & El Batran, 1997; Soliman, 1996). When the Arab-Israel War started in 1967, the housing provision system collapsed as all the financial resources was targeted to the military. During this period, the control over the evolution of informal areas was weak. Areas like Mansheyt Nasser and Ezbet El Hagana grew substantially to provide housing for lower income groups (GTZ, 2009).
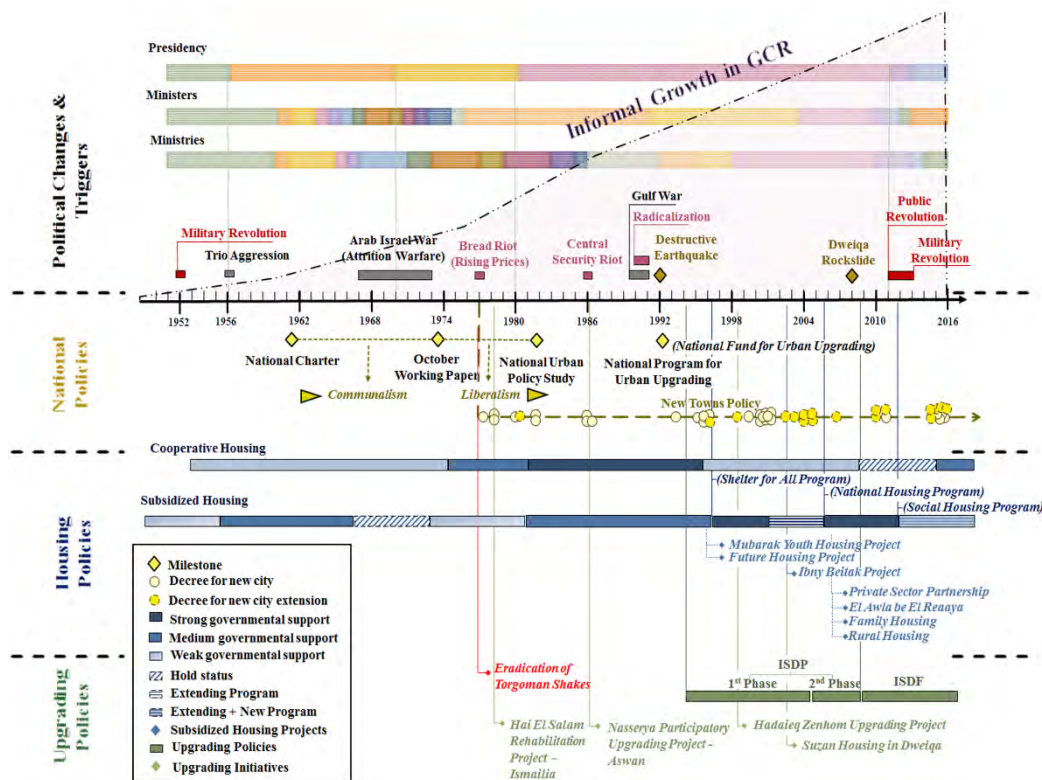
Fig. (6): Correlation between Informal Growth & Intervention Policies
Source: Authors based on (Hassan, 2011; Khalifa, 2015; UN-Habitat, 2003)

After the war in 1973, the state shifted its strategy towards liberalism and started to promote its withdrawal from the housing market, leaving the role for cooperatives and private sector (Alpopi & Manole, 2013; Hassan, 2011). It supported the cooperatives through loans and facilitation in land acquisition, and supported the private sector through subsidizing the building industry (Hassan, 2011). The New Urban Communities Authority (NUCA) was established by presidential decree in 1979, to attract the urban extensions away from agricultural land towards the desert. However, building in the desert cost the state more than was planned in extending infrastructure and roads to connect these areas (Sims, 2011, 2015). This financial burden was added to the housing prices, excluding the urban poor from these new communities.

Therefore, in spite that formal provided housing units increased, the vacancy rate of it also increased (Sims, 2011). The rent control law was still a problem for rental market and the obligation of having at least 67% rental units in each privately developed building, discouraged owners to rent their units waiting for a legislation change (Hassan, 2011). So urban poor targeted informal areas as it had more affordable units with much alternatives in space and provision system. The Open- Door policy was not also sustainable, as it injected large sums of money in the market without proper steering for the development

management. Therefore, the majority of financial influx benefited the informal market as shown in Fig. (6), where the informal growth rate in GCR was maximum compared to other periods.

In 1981, president Mubarak called for the National Urban Policy Study that was conducted by USAID, along with some local consultants (Dorman, 2013; Sims, 2015; USAID, 1981). This study intended to investigate the potentials, opportunities and challenges of urban development, as well as evaluating the strategies implemented. Yet the recommendations for this study hasn't been taken into consideration in full (Dorman, 2013). On the positive side, the support for the cooperatives increased, the provision for housing loans was facilitated with the establishment of the Housing & Development Bank, and the rent control law was adjusted to allow for free market, but fixed the value for rents (Hassan, 2011). Yet the scheme for New Towns continued, more cities and residential units were constructed, with no economic base or adequate access to services. After radicalization incidents and buildings collapse in 1992 Earthquake, the State started the systematic approaches for intervention policies.

On the upgrading level, the National Urban Upgrading Fund was established in 1994. It worked on two phases program, the Informal Settlements' Upgrading Program and the Informal Settlements' Belting Program under the authority of GOPP. The first phase was concerned with providing infrastructure for deprived areas, while the second developed detailed physical plans for areas of possible extensions around informal settlements to restrain its horizontal growth (Khalifa, 2015). After Dewiqa incident in 2008, the mapping effort was once more redone by ISDF to map out the informal areas and reclassify it differently than what was done by GOPP, having different priorities and strategies. The GOPP fund program stopped and unsafe informal areas were targeted by ISDF instead of deteriorated ones in general, giving priority to life threating conditions.

On the affordable housing level, the State started consecutive systematized programs, correlated with the last 3 electoral periods of President Mubrak; These programs are Shelter for All Program in 1999, Mubark National Housing Project in 2005, and finally the Social Housing Program declared in 2011 before his stepping down after the public revolution. These schemes provided alternatives for provision and loaning systems, along with specified selection criteria for each project such as newlyweds, family housing, widows and elders. Also it specified schemes for rural and incremental housing (site & services) (Khalifa, 2015; Sims, 2015). However these programs failed to deliver for the target groups, as applying conditions, targeted locations and delivery systems excluded them (Shawkat, 2014).

All these efforts couldn't reduce the substantial growth of informal settlements. The state entered, at that period, regularization and speculation vicious cycles of land development; Fig. (1). Regularization and titling of informal areas increased the incentives for people to occupy more land and densify the existing ones while the housing prices in informal areas kept rising, being on higher demand. On the other hand, giving incentives and tax exemptions for legal serviced land to encourage private developers to build for the lower income groups, resulted in speculation of these lands (Morales-Schechinger, 2016a). The government couldn't control neither the informal demand side and the continuing violation of lands nor the formal speculators supply side and its exploitation for weak enforcement of laws. For instance, the private investors scheme, in the Mubarak National Housing Program, only 25% of the allocated land were developed and the rest 75% is still vacant until now (Shawkat, 2014).
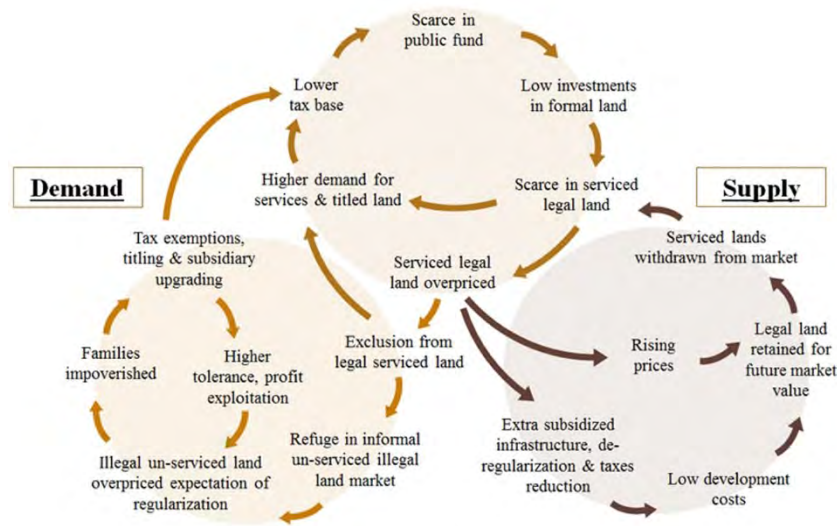
Fig. (1): Vicious Cycles for Regularization & Speculation
Source: (Morales-Schechinger, 2016a; Shawkat, 2014; UN-Habitat, 2003)

6.2. Reflection on Sustainable Urban Development Aspects; Interview Findings

The evaluation of the intervention policies performed in Egypt is investigated from 3 aspects of sustainable development explained in *section 1*; strategy generation, accurate problem estimation, and cooperation strategy, as following:

- ***Strategy Generation Institutional Setup:*** Defining strategies and national agreement on it lacked authenticity and was based on centralized methodology for decision making. Defining goals didn't involve valuable stakeholders in its generation, and was unrealistic concerning city resources and its sustainable development (Ibrahim, 2016, December 6). The scope of the Ministry of housing had changed constantly as well as the minster responsible, with no clear justification within short periods in the earlier times; Fig. (6), affecting the validity of decision making. The change of the ISDF executive chairman from Minister of Local development, to Minister of Informal Settlements and finally to Minister of Housing, affected the projects implemented and slightly shifted the working methodology with each change within only 8 years (Gohar, 2016, December 8). These consecutive changes show an inconsistent strategy for decision making in Egypt.

- ***Accurate Estimation for Potential & Challenges:*** Having accurate estimation for development areas have faced challenges, either due to lack of resources, lack of transparency or/and lack of coordination between different resources. There is general trend currently from officials, academics, and consultancies to map informal settlements and classify more its characteristics, along with mapping the territory of unplanned areas and deprived districts (Ibrahim, 2016, December 6). However, these studies and researches are not aligned. The international agencies cooperate their efforts and researchers through development groups meetings (El-Refaay, November 3, 2016; Yousry, November 10, 2016). Governmental entities are don't have a systematic cooperation strategy or protocol for sharing information.

- ***Generating Cooperation Strategies & Steering Structure:*** Alignment of governmental projects, strategies and plans is quite a difficult process within the complicated legislation system that most of its practitioners are not totally aware with its limitations and exemptions. In spite being a very centralized system of governing, the Ministries and governmental agencies and funds seem to be working under very different agendas and there is weak synergy for their efforts. For instance, the strategic and detailed development plans produced by GOPP don't align with the spatial financial plans of Ministry of Planning or that of infrastructure networks or even that of land jurisdictions produced by the National Center for Planning State Land Use (Nada, 2016, November 17; Zahran, November 14, 2016). All this weaken the ability of the institutional setup to host a national wide city policy. It can manage successful small scale projects, but it is unable to scale them up to adopt national policies.

6.3. Generating Variables for Valid Assessment of Correlation between Upgrading Policies and Informal Settlements' Growth

To develop a sustainable strategy for intervention policy towards informal settlements, different variables have to be taken into consideration in designing the appropriate and affordable formal housing system that could substitute the informal one. The following tables; Tables (1,2) summarize these variables and attributes, based on literature and performed interviews (El-Ibrashy, December 6 , 2016; El-Refaay, November 3, 2016; Gohar, 2016, December 8; Ibrahim, 2016, December 6; Nada, 2016, November 17; Shaath, 2016, December 8; Yousry, November 10, 2016; Zahran, November 14, 2016). These are initial derivation of variables that need further validation through ongoing research, interviewing involved stakeholders and analyzing the legislation framework with its gaps and contradictions.

Table 9: Defining Variables for Housing Provision System

	Measuring Variable	Attributes			
Housing Provision Process	Spaces Alternative	Area		No of Rooms	
	Payment Alternative	Rent	Possessive Rent	Installments	Loan
	Provision Requirements	Age	Gender	Social Status	Occupation	Income level
	Delivery Time lag	Announced Time of Delivery		Actual Time of Delivery (% of announced)	
Adequate Housing	Access to transportation	Good	Poor	None	
	Access to Infrastructure	Good	Poor	None	
	Access to Services	Average person/area from each essential service			
	Access to Jobs	Average Distance from Current Job Occupation			
	Crowd Factor	Area/Person – Person/Room			

	Measuring Variable	Attributes		
Affordable Housing	Percentage from Household Income	Percentage of Increase more than 25% of income level		
	Percentage of failing to pay	Percentage of Evicted Households		Percentage of Payment Extension
Security of Tenure	Probability of eviction	High	Medium	Low
	Reliability of property documents	High	Medium	Low

Source: Authors based on (10Touba, 2016; Hassan, 2011; Shawkat, 2014; UN-Habitat, 2003)

The first category of variables illustrated in Table (1), shows the measuring indicators for successful housing provision system. These variables are concluded from the definition of adequate housing and appropriate delivery defined by the UN-Habitat (UN-Habitat, 2003). Also these variables summed up the indicators published by (10Touba, 2016) for built environment deprivations (BEDI), the factors used by (Hassan, 2011) to evaluate housing policies in Egypt and the parameters used for comparing Egyptian public housing projects introduced by (Shawkat, 2014). The second category of variables illustrated in Table (2), discuss the sustainability of the housing provision system depending on Good Urban Governance indicators and its operationalization introduced in the global campaign for urban governance paper (UN-Habitat, 2002, 2009). Also it concluded its attributes from intervention policies failure justification introduced in (10Touba, 2016; GTZ, 2009; Hassan, 2011; Shawkat, 2014).

Table 2: Defining Variables for Housing Provision Sustainability

	Measuring Variable	Attributes		
Accountability	Delivery Failure Penalty	Exist	Compensation	None
	Dispute Resolution	Known/Easy	Known/Complex	Unknown/None
	Monitory Evaluation	Good	Poor	None
Transparency	Selection Criteria	Known/Stable	Known/Changing	Unknown
	Actual Date of Delivery	Known/Accurate	Known/Inaccurate	Unknown
	Public Hearing for Complaints	Exist/Effective	Exist/Ineffective	None
	Accurate Published Reports	Exist/Accurate	Exist/Inaccurate	None

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	Measuring Variable	Attributes			
Participation & Civic Engagement	Defining Needs	Public Hearing	Focus Groups	Surveys	None
	Assigning Responsibilities	Consultation	Placation	Partnership	Delegated Power / Citizen Control
	Community Monitory	Exist/Effective	Exist/Ineffective		None
Equity of Access to Decision Making	Managing Authority	Impact		Interest	
	Funding Authority	Impact		Interest	
	Technical Authority	Impact		Interest	
	Executive Authority	Impact		Interest	
	Monitory Authority	Impact		Interest	

Source: Authors based on (10Touba, 2016; GTZ, 2009; Hassan, 2011; Shawkat, 2014; UN-Habitat, 2002, 2009)

Further research will measure these variables for subsidized housing projects in Egypt, reallocating housing projects for informal settlements and will compare them with the informal housing in Egypt to test these projects effectiveness in attracting users towards them instead of informal areas.

7. Conclusion

Managing sustainable urban development in complex city systems needs a comprehensive study for all fields contributing in forming these systems. Overlooking informal development while planning for new cities will only result in an inadequate policies and strategies that will fail to satisfy the actual needs and waste financial resources. The findings of this paper were divided into three sections. The first discussed the problem and investigated current situation analysis on the effect of adopted intervention policies on informal existence and growth. The second section analyzed the results of the first section from institutional, operational and legal perspectives. It reflected the literature findings on development management aspects by performing interviews with involved officials. It concluded three main issues in reflection with sustainable development and effective decision making ideology. The weak institutional setup, the lack of an agreed strategic vision among stakeholders, the lack of appropriate steering structure and problem identification resulted in intervention policies that suffered from problem underestimation, symptoms treatment and project syndrome.

Problem underestimation is a result of asymmetrical information due to lack of information (data collection problems), lack of coordination (data integration problems) or/and lack of transparency (the right of data acquisition). Symptoms treatment is a result of weak analysis and incomprehensive upgrading approaches that don't focus on all

aspects involved. The analysis strategy is generic and figures dependent not depending on evidence core based detailed analysis. That is a direct result for not having a clear agreed strategy that involve all aspects of development, yet it seeks fast results and checklists assessment. Project Syndrome is a result of poor coordination strategies between active stakeholders and weak steering structure that makes scaling up successful upgrading projects into upgrading policies more challenging. That is due to inconsistent organizational setup that have crossing jurisdictions in controlling different city resources needed for adopting successful comprehensive upgrading policy.

The third section of the findings introduced an attempt to have a systematic database for evaluation of the formal and informal housing systems, in order to be able to develop a successful strategy of involvement in the urban management system. This variables system is still under progress and when used, will provide a clear understanding and estimation for the informality problem, a core analysis for the potentials and challenges and guidelines for strategy development on a national level rather than a project level. Tracking down the gaps in the ideology of decision making in Egypt will provide a base platform for receiving the principles of Good Urban Governance, and evaluating its applicability within the Egyptian context on upgrading strategies. Tailoring these principles according to our needs, potentials and challenges is essential for its success. This platform is meant to support the validity of decision making in Egypt regarding upgrading strategies as well as the holistic sustainable urban development for our old and new cities.

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