

## Post-Occupancy Management of Condominiums and Roles of Unit Owners' Associations in Akaki-Kaliti Sub-City, Addis Ababa

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### ABSTRACT

The study focuses on five sites of condominiums to identify post-occupancy management problems. Primary data was collected through questionnaire survey from leaders of unit owners' associations and sampled households. To capture physical problems in the study areas photography was undertaken. Secondary data were obtained from government archives, unit owners' associations and related sources. The data were scientifically analyzed using qualitative (document and photo analysis) and quantitative (descriptive statistics) methods. The study revealed five categories of post-occupancy problems: (1) problems in relation to rules and regulations; (2) use of common elements & building standard; (3) neighborhood environment; (4) crime prevention and safety; (5) social cohesion. The study concluded that post-occupancy problems emanated from lack of proper site selection, poor monitoring during construction and inability of owners' associations to fully execute their powers & duties. The study recommends the introduction of integrated multidisciplinary approach to mitigate natural and manmade problems.

**Keywords:** Akaki-kaliti, Condominium, Unit owners' Association, Power, Duty

### 1. Introduction

#### 1.1 Background

In Ethiopia, the dominant player in the housing sector is the state, through its various structures such as regional, zones, *weredas*, and *kebeles* level administration. The state controls the majority of the rental accommodations and it influences the supply of new housing through active involvement in material production and importation, land supply, and housing finance. (UN-Habitat, 2011:4). Addis Ababa witnessed different key players in the housing sector under different political systems. During the Imperial era, land was privately owned and the private sector was the dominant supplier. Individuals (formal and informal) and cooperatives appeared as major players during the *Derg* while real estate developers and the State through its Integrated Housing Development Program are key players under the current government. The introduction of condominium

housing in Ethiopia as well as Addis Ababa marks a new type of tenure and life style for the great majority of urban residents. The introduction of condominium housing strategy to Addis Ababa marks a transformation from single story and/ or attached housing units to apartments or multiple family buildings. This led to an increasing number of people with diverse backgrounds living together in condominiums allowing them to adopt a new style of life and enhance the importance of owners' association.

Following the implementation of IHDP projects since 2006 in Addis Ababa, a total of 78,000 units have been constructed, and out of these 53,000 were transferred to residents living in different sub-cities (UN –Habitat, 2011). Currently the number of transferred units has reached over 182,383 (AACHCPO, 2017). However, even though this form of housing has rapidly become the dominant form in the city very little has been done to study its post-occupancy management challenges. Although increasing the supply of condominiums is the ultimate goal meeting essential safety measures set by the Un-Habitat standards are equally important that remain major challenges of post-occupation management and monitoring, which have received very little attention to date.

*Akaki – Kaliti* is one of the peripheral sub-cities and potential expansion sites for large scale condominium housing development of the city making it a very important case to explore the role of owners' associations in the post-occupancy management of condominiums. Accordingly, selected samples from the area were studied in order to investigate socio-economic, physical & environmental and management challenges. In addition, challenges encountered by owners' associations and their basic causes need to be properly investigated. This study attempted to seek answers to questions: how do socio-economic factors become causes of post occupancy problem? What are the physical and environmental causes of post occupancy problems? Are the owner's associations effective in exercising their powers and responsibilities? The study aimed to identify and assess the post-occupancy management problems of condominiums and concomitant impacts in the selected sites of *Akaki–Kaliti* sub-city.

## 2. Materials and methods

Both quantitative and qualitative data sources (interviews, photos, documents, observation) were used in the study. A case study approach is more appropriate for such studies.

### 2.1 Quantitative Data Sources and Sample size

The quantitative data were collected from a sample size of 162 households in *Akaki-kality*. There are a total of 5887 households living in 200 blocks in the area. The sample households were selected from this group by employing the following formula (Kothari, 2004).

$$n = \frac{Z^2 pq}{e^2}$$

Where:

$n$  = size of sample

$e$  = acceptable error (the precision)

$Sp$  = standard deviation of population

$z$  = standard variate at a given confidence level,  $q = 1 - p$

Therefore, at 93 percent level of confidence the corresponding standard variate  $z = 1.81$  and the desired level of significance is 0.07. Since the target population number is less than 10,000, 50% is recommended to use. The value of  $p = 0.5$  in which 'n' would be the maximum and the sample

would yield at least the desired precision. Thus,  $p = 50\% = 0.5$  and  $q = 1 - p = 1 - 0.5 = 0.5$ . Therefore, the sample size is given by:

$$n = \frac{(1.81)^2 (0.5)(0.5)}{(0.07)^2} = \frac{3.276 * 0.25}{0.0049} = \frac{0.8190}{0.0049} = 167$$

To get the actual sample size, for the population less than 10,000 the sample is determined by the following formula,

$$\frac{n}{1 + n/N} = \frac{167}{1 + 167/5887} = \frac{167}{1 + 0.028} = 162 \text{ actual sample size}$$

Both primary and secondary sources were used to produce the required qualitative and quantitative data. Primary data were collected through questionnaires and secondary data from government documents and owners' association archives. (a) *Primary sources*: Leaders of Owners' Associations and sample households. (b) *Secondary sources*: Documents on condominium houses from housing development office of the Akaki- Kaliti sub-city and from the archives of the respective owners' associations and (c) *photographs*: used to provide the visual dimension of the existing condition of condominium apartments to show the post-occupancy management problems as an expression of the qualitative analysis.

*Table 1: Distribution of Sample Households and Association Leaders*

Name of Owners' Ass.	Site location /woreda/	No. of Blocks	No. of HHs	Sample HHs	Sample leaders
Comet	6	15	554	13	1
Kaliti-Gebriel	7	6	198	5	1
Cheralia	7	6	240	6	1
Total	8	9	350	8	1
Gelan (1&2)	4	164	4545	130	1
<b>Total</b>		<b>200</b>	<b>5887</b>	<b>162</b>	<b>5</b>

Source: Field Survey

## 2.2 Qualitative Data Sources

Documents, interviews observation and photographs were sources of qualitative data collected, in relation to proper site selection, neighborhood environmental problems, solid waste disposal and outdoor facilities. Moreover *photographs*: used to provide the visual dimension of the existing condition of condominium apartments to show the post-occupancy management problems as an expression of the qualitative analysis.

## 2.3 Data Analysis Techniques

Tables and Percentage figures were used to show the distribution of respondents in relation to socio- economic issues, photographs and UN-Habitat (2009) standards were employed to assess building/construction quality and neighborhood environment.

### 3. Result and discussions

#### 3.1 Key finding

Based on the research objectives explained earlier the study discloses the root causes of post occupancy problems emanated from socioeconomic characteristics, physical and environmental issues and management of condominiums. Although over 60 percent of the respondents had secondary and university education violation of rules and regulations in relation to proper use of common elements, weak crime prevention and safety protection and poor social cohesion is observed by significant portion of the occupants. Geological factors made the maintenance of condominium blocks beyond the capacity of the associations. Thus, due to manmade and natural factors a number of condominium blocks are found substandard or uncomfortable. As a consequence of lack of proper site selection some blocks built on geologically hazardous location remain a potential threat to the wellbeing of the occupants. Lack of maintenance, lack of proper playground for children, unhealthy neighborhood environment accompanied by improper liquid waste disposal and random disposal of solid waste made the sites largely uncomfortable. The owners' associations proved ineffective and passive in exercising their powers and responsibilities by enforcing the rules and regulations. This is signified by the inability of the management to stop the distractive actions of some occupants inflicting damages to buildings. In addition, all owners' associations lack management plan and their efforts are minimal to maintain strong social cohesion among the occupants

#### 3.2 Socio-economic Issues

##### 3.2.1 Tenure, Gender and Educational Status of Households

A total of 162 household heads involved to fill the questionnaires distributed in the five selected sites. Out of these 56.8 percent were owner occupants and the rest 43 percent were renters. The sex distribution of the respondents revealed that 52.5 percent are male and the remaining 47.5 percent are females. Regarding the education status of the residents of the study sites, 42.7 percent of the respondents had Secondary/TVET education. Those having primary and university education account for 23.9 and 17.2 percent respectively. The percentage of people who could read and write only was also significant and close to those having university education i.e. 16.2 percent.

##### 3.2.2 Compliance to Rules and Regulations

Among the different post-occupancy problems, a number of issues are identified and equated to rules and regulations.

*Table 2: Household responses on Post-occupancy Problems*

Problem Type	Response	No.	%
Unwilling to be member of owners' association	Yes	26	16.1
	No	136	83.9
	Total	162	100
Failure to pay membership fee	Yes	40	24.6
	No	122	75.4
	Total	162	100
Failure to attend meetings	Yes	82	50.8
	No	80	49.2

	Total	162	100
Reluctance to protect & properly use common elements	Yes	59	36.4
	No	103	63.6
	Total	162	100
High volume of noise from TV. Radio & player	Yes	43	26.3
	No	119	73.7
	Total	162	100
Coffee grinding using traditional utensils	Yes	71	44.1
	No	91	55.9
	Total	162	100
Slaughtering of animals in prohibited places	Yes	54	33.1
	No	108	66.9
	Total	162	100
Pouring liquid waste down stair	Yes	81	50.0
	No	81	50.0
	Total	162	100
Keeping pets	Yes	40	24.6
	No	122	75.4
	Total	162	100
Unable to empty septic tank timely	Yes	69	42.4
	No	93	57.6
	Total	162	100
Random disposal of solid waste	Yes	78	48.3
	No	84	51.7
	Total	162	100
Lack of proper protection of plants	Yes	71	44.1
	No	91	55.9
	Total	162	100
chewing of “ <i>chat</i> ” and smoking of “ <i>shisha</i> ” in group	Yes	32	19.5
	No	130	80.5
	Total	162	100
Harassing young females	Yes	10	5.9
	No	152	94.1
	Total	162	100
Putting solid waste in to septic tank	Yes	63	39.0
	No	99	61.0
	Total	162	100
Stealing of washed cloths	Yes	103	63.6
	No	59	36.4
	Total	162	100

Source: Computed from Survey Data

The major post occupancy problems (Table-2) were of two types. The first group of problems was noticed by its outcome. It includes putting solid waste into septic tank (39%) clogging the normal disposal of liquid waste, coffee grinding using traditional utensils (44.1%) violates article 5, sub article 5 unwilling to be a member of the association accounting for 39.8 percent violating article

12 of Proclamation No.370/2003. Noise pollution from TVs, radio and players (26.3%) violates the provision in article 5, sub article 1, which prohibits letting high volume noise from T.V., radio and players. Failure to pay monthly membership fee (24.6 %) violate article 17, sub-article 1 of the Regulation



Figure 1: Wood and Metal Workshop      Figure 2: Partial View of Satellite Dishes  
Fixed on Condominium Buildings

On the other hand, 24.6 percent of the residents keep pets violating Article 13, sub-article 1 of the Owners Association bylaws. As indicated in Fig.-1, the presence of wood and metal workshop signifies incompatible uses that harm the safety and health of the residents in a purely residential apartment besides violating the regulations. Fixing satellite dishes on buildings is also a common problem in all sites disregarding article 7, sub-article 5 of the regulations (see Fig.-2).

### 3.2.3 Use of Common Elements

Based on the nature of the common elements two aspects were identified. They are in-door and outdoor common elements. The pictures taken during the field survey depict damages inflicted by the occupants (Figs.-3), structural damages due to poor construction capacity and geological or inappropriate site selection (Fig. 4). The photographs in Fig. 3 clearly show reluctance of the occupants and the management regarding the proper use of the corridor an important part of the indoor common elements. The deliberate removal of the tiles causes a physical damage on the building and is against the regulation that provides for the protection of common elements by all residents. According to article 27, sub-article 2 of Proclamation No.370/2003 it is the responsibility of the unit owner's association to maintain proper use of common elements. But the management of the association is found to be passive unable to stop such wrong and distractive actions of some occupants. The response rate of households i.e. 36.4 percent (Table 2) proves the reluctance of the occupants to protect and properly use common elements.



Figure- 3: Dilapidated Corridor, Floor Tiles are Removed,

### 3.2.4 Crime Prevention and Safety

As observed during the field survey, the compounds of the study sites were not fenced by a permanent structure except the temporary barbed wire fences. Despite the presence of permanently employed guards at the gates of all sites to protect the safety and property of the residents such fences could not prevent unwanted intrusions from outside. In this study an attempt was made to identify threats to the safety of the occupants and their property. Based on the responses obtained from the residents, stealing of washed clothes was the main property related crime accounting for 63.6 percent (Table 2). Regarding the safety of occupants particularly women and young girls, the responses indicate that the magnitude of the problem was quite insignificant i.e. 5.9 percent. In addition to the guards in place, both the association leaders and sample household heads proved support from the nearby police was the other alternative means of protecting the safety and property of the occupants (Table 3). As indicated in the same table, more than a fifth of the sample residents (21.2%) responded that they felt indifferent. These households excluded themselves from all affairs that brought them into contact with other occupants and the management.

Table 3: Crime Prevention and Safety Protection Mechanisms in place Based on Household Head Responses

Description	Gelan	Total site	Cher.	Kaliti–Geb.	Comet	Total	%
Employing Trained	36	6	4	3	8	57	34.7
Reporting to Police	41	0	2	2	3	48	29.7
Same to others	21	0	0	0	2	23	14.4
Indifferent	32	2	0	0	0	34	21.2
<b>Total</b>	<b>130</b>	<b>8</b>	<b>6</b>	<b>5</b>	<b>13</b>	<b>162</b>	<b>100</b>

Source: Field Survey, 2017

### 3.2.5 Social cohesion

The issue of social cohesion refers to the degree of mutual relationship among the occupants of condominium houses. It is a function of different cases that affect smooth relationships. Based on the interview held with unit owners' association leaders, they unanimously agreed that no plan was prepared and implemented to bring social cohesion among the residents. As a result of lack of plan regarding the social life in the condominium sites, certain problems with their typical characteristics were affecting the community. For instance, over 63 percent (Table-2) of the occupants living in the study sites agreed that they were suffering from stealing of washed clothes. This problem negatively affected the social relation or community cohesion since the affected ones were suspicious on their neighbors.

On the other hand, the proportion of people unwilling to attend meeting accounted for 50.8percent slightly more than half of the total. This figure signifies that half of the population was unwilling to participate in issues demanding their involvement despite the obligations stated in article 17, sub-article 1 of the regulations. Some residents maintained special/exclusive relationships expressed by a unique practice such as chewing *chat* and smoking *shisha* in groups (19.5 %). The study also discovered the presence of households who were unwilling to be members of the unit owners' association (16.1%) despite the provisions stated in article 12 of Proclamation No. 370/2003. According to the article, "*every unit owner in a condominium shall be a member of the*



*respective unit owners association*”. Thus, in the study sites stealing of washed clothes, unwillingness to attend meetings, forming special/exclusive groups and unwillingness to be a member of the unit owners’ association remained serious factors of weak community cohesion.

### 3.3 Physical and Environmental Issues

#### 3.3.1 Building /Construction Quality

The structural damage due to poor construction as shown in Fig.-4, the cracks on the staircase that connects two adjacent blocks was getting wider and detaching from one of the blocks. The problem remains a threat to all up-stair occupants. Although the maintenance of the common elements was the responsibility of the owners ‘association as stated in the proclamation, the condition of the buildings in the pictures proves it is beyond the capacity of the management. Fig.-5 indicates the most serious post-occupancy problem discovered associated with inappropriate site selection. The twin photographs both side and front views show water emerging from underground (spring water) or from the basement of one of the condominium blocks. This condition violates the provisions stated in UN-Habitat (2004 & 2009), Goal 1 Indicator 1.1 & Goal 11, Indicator 3.8 ‘durable structures’ and ‘hazardous location’. Both Agendas call for the promotion of the right to adequate housing implying that housing units considered as ‘durable’, i.e. built on a nonhazardous locations. However, as indicated in both pictures, while this study was being conducted, the location of one of the condominium blocks was exactly in geologically hazardous area proving a failure to meet the Habitat Agenda.



Figure - 4: Cracks on Stair Case Joint between two Adjacent Condominium Blocks



Side View (i)

Front View (ii)

Figure -5: View of Underground Water Leaking out from the Basement of a Condominium Block

The outdoor common facilities include car parking, playing ground, solid waste collection and deposition, washed cloth drying and traditional kitchen. Based on the responses of the sampled households 71.2 percent and 80.5 percent of the sample households claimed that there were no separate car parking and playing grounds. As indicated in the pictures, both outdoor facilities were



not clearly identified and facilitated for the desired objectives. In all sites where this study was conducted, the available open spaces were largely covered by cobblestone and boys were forced to share these open spaces for playing games with cars around them (Fig.-6).



i) Mixed Use

(ii) Lack of a Proper Playing Ground

Figure - 6: Mixed Use of Playing Ground and Car Parking

On the other hand, outdoor facilities such as washed cloth, drying and solid waste collection and deposition facilities were found to be insufficient. This was supported by the responses of the residents, 72 percent and 50.8 percent respectively disclosed that the existing facilities were insufficient (Table 4). In addition, it failed to meet the Habitat Agenda Goal 5, Indicator 1.12 ‘promote access to basic services’ UN-Habitat (2004).

Table 4: Distribution of Outdoor Common Elements, Response by Sample Household Heads

Type of outdoor common element	Response	No.	%
Car parking	Yes	47	28.8
	No	115	71.2
	Total	162	100
Playing ground	Yes	32	19.5
	No	130	80.5
	Total	162	100
Solid waste collection & deposition	Yes	80	49.2
	No	82	50.8
	Total	162	100
Cloth washing & drying	Yes	45	28.0
	No	117	72.0
	Total	162	100
Traditional kitchen	Yes	91	55.9
	No	71	44.1
	Total	162	100
Slaughter house	Yes	114	70.3
	No	48	29.7
	Total	162	100

Source: Field Survey, 2017

### 3.3.2 Neighborhood Environment

The neighborhood environment was affected by the activities of the residents both negatively and positively. Here the adverse impacts of human activities as causes of post occupancy problem were assessed. In this part, the main environmental problems affecting the residents of the study sites and people of adjacent neighborhoods were identified. Among the identified problems were improper liquid waste disposal (50%), random disposal of solid waste (48.3%) violating article 11, sub-article 6 of bylaws and Habitat Agenda Goal 11, Indicator 3.7, 'regular solid waste collection', (UN-Habitat, 2004, & 2009), poor environmental sanitation and protection of plants (44.1%), violating sub-articles 1 and 2, inability to empty septic tank timely (42.4%) and slaughtering of animals in prohibited places (33.1%), violating sub-article 3 of the bylaws (Table 2).



Figure -7: Disposal of solid Waste at Condominium sites



Figure - 8: Accumulated Liquid Waste from Liking Septic tank



Figure 9: Unclean Slaughter House and Improper Disposal of Liquid Waste from the Slaughter House through a Hole

The pictures (Figs. 7, 8 & 9) show neighborhood environmental problems as a result of improper solid waste collection, deposition and disposal, unprotected open space, accumulated liquid waste from a liking septic tank and unclean slaughter house. This is against the provisions stated in Habitat Agenda Goal 1, Indicator 1.11, and ‘access to improved sanitation’. The combined impact of the above conditions adversely affects the health of condominium residents and people in the adjacent neighborhoods as well. The UN-Habitat (2009), Indicators 1.11 and 3.7, Habitat Agenda Goal 5 and goal 11, provide for access to basic services. The same pictures signify insufficient capacity to hygienically separate randomly disposed solid waste, accumulated human excreta from a liking septic system and liquid waste discharged from unclean slaughter house proving the failure to meet both agendas

### 3.4 Management

As stated in Proclamation No. 370/2003, article 10, “The unit owners’ association is an association established with a view to mutual benefits other than securing or sharing of profits.” In the light of this, the activities of unit owners’ association are explained in the objectives stated in article 11 of the proclamations. According to article 11, the unit owners’ association shall have the following objectives: (a) manage the condominium on behalf of unit owners; (b) ensure the peace and security of residents in the condominium; (c) ensure that unit owners, occupiers of units, lessees of the common elements comply with this proclamation, declaration, description, bylaws and rules; and (d) perform other necessary activities in the interest of unit owners’ mutual benefit.

As stated in Proclamation No. 370/2003, article 10, “The unit owners association is an association established with a view to obtaining mutual benefits other than securing or sharing of profits”. In the light of this the activities of unit owners association are explained in the objectives stated in article 11 of the proclamations. According to article 11, the unit owners association shall have the objectives to manage the condominium on behalf of unit owners, ensure the peace and security of residents in the condominium, ensure that unit owners, occupiers of units, lessees of the common elements comply with this proclamation, declaration, description, bylaws and rules, and perform other necessary activities in the interest of unit owners’ mutual benefit.

In addition, article 19 of the proclamation enables the unit owner’s association to have bylaws and rules derived from the proclamation. Based on this right the unit owner’s association in the study sites have adopted the following structure with a corresponding powers and duties. The General Meeting and the Executive Committee are the two important top management bodies. General Meeting: of the unit owners association is entrusted with the powers and duties of the highest governing body, approve the annual plan and budget, ear and decide on activity and audit reports of the association, elect and remove members of the executive, audit, development and technique committees, decide on matters as may be presented by the executive committee and decide on the amount of transport allowance, perdiem and other expenses.

The Executive Committee: next to the General Meeting the Executive Committee is responsible to run all the functions of the unit owner’s association. It is composed of ten members elected by the General Meeting and serves for two years. Among the many powers and duties indicated in the bylaws of unit owners’ association article 8 sub-articles 8 and 19 are worth mentioning in relation to the objectives of the study. According to sub-article 8 the Executive Committee is entrusted with the power to sue those residents who fail to comply with the regulations in relation to the use of common elements. On the other hand, sub-article 19 clearly states monitoring illegal constructions and halting all activities that damage the buildings is the power and duty of the Executive Committee.

In general, different models of condominium management are being practiced. For instance, Pratt and Zeckhauser (1991), identified two tiers of agency relationship existing in a corporation: the one between the decision control and the decision management agents and the other between the residual claimants and the decision control agents. On the other hand (Loeb 2008, Yip et al. 2007 & Chen 1999) have identified professional management by contracting a professional person or company. The current management experience in the study area (Addis Ababa, Ethiopia) is reflected by the following: the first one is Owners’ Association which is defined as a legal body established with the legal authority to act on behalf of all the owners of the condominium.



Compulsory membership in owners' association is a legal requirement. This one signifies that it is in line with the experiences of countries in transition (ECE, 2003).

#### **4. Conclusions**

The Study brings together different disciplines, and signifies the need for a multi-disciplinary approach in the sphere of urban housing development. The post-occupancy management problems identified, classified and explained in the preceding sections were caused by lack of multi-disciplinary approach reflected by socio-economic, physical and environmental factors aggravated by the inability of owners' associations to execute their powers & duties. The inability of the owners' association in executing their powers and duties as per the Proclamations No. 370/2003, bylaws and regulations is proved by the problems indicated in relation to socio-economic issues i.e., rules & regulations, use of common elements & crime prevention & safety and social cohesion. On the other hand, physical and environmental issues accompanied by poorly constructed blocks exhibiting cracks on walls and stairs, geologically hazardous location and lack of proper solid and liquid waste disposal mechanisms together signify lack of pre and post construction supervision and monitoring. Based on the results and conclusions of the study, the following points have been recommended to mitigate the impacts of post-occupancy management problems in relation to social, physical & environmental and management issues.

There must be a regular program to enhance proper awareness of bylaws and regulations of condominium housing to the occupants. This would help to reduce problems resulting from reluctance and failure to comply with rules and regulations. Maintain proper playground for children, improve unhealthy neighborhood environment by introducing proper liquid waste disposal and stop random disposal of solid waste. Build management capacity: a capacity building program definitely enables leaders of unit owners' associations to properly execute their powers and duties as stipulated in the Proclamation N0.370/2003 and bylaws. Plan to achieve strong social cohesion: Above all, a strong social cohesion promotes coexistence and cooperation among people with different social, economic, ethnic, religious and educational backgrounds. Introduce effective property and safety protection system: To mitigate typical problems such as theft fence the compounds with permanent structures and encourage the employed guards to give due attention to properties found in the compound. In order to achieve healthy urban development, integrated multi-disciplinary housing development approach need to be employed to avoid post occupation problems.

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#### **Competing interest**

There is no competing interest with this paper.

#### **Abbreviations**

AACHCPO – Addis Ababa city housing construction project office, TVET – Technical and vocational education training

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