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Cultural and needs- based housing development case study: the Bugis community in Makassar City

Arifuddin^{a*}

^{a)}Lecturer of Dept of Architecture, Engineering Faculty, Hasanuddin University, Kampus Unhas Tamalanrea,
Jalan Perintis Kemerdekaan KM 10, Makassar, 90245, Indonesia

Abstract

A smart housing form fulfillment if refers to the culture and resident needs. This study aimed to identify the communities opinion regard the needs and ideas of housing form based on cultural in Bugis residential areas in Makassar. This study analyzed through statistical methods based on the human needs theory. Results of the study indicate that needs of the community to the housing in general has fulfilled expectations. The application form of Bugis house in Makassar suggested using a modern house form with traditional style. Fulfillment aspects of security, comfort, and convenience can support Makassar city into a smart city.

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1. Introduction

Culture is a mindset that is revealed in the behavior and activities of human beings as a form of reaction to the nature challenges occurring hereditary. Furthermore, cultural values are the patterns of thought and certain actions are revealed in the activities, which will ultimately have an impact on the work of human beings, including the physical form of buildings and urban (Daeng, 2008; Rapoport, 1983; and Poerwanto, 2008). According to Rapoport (1983), physical changes in the environment arising from cultural changes that are grouped into two parts, namely a

* Corresponding author. Tel.: + 62 81342779477; fax: +0-000-000-0000 .
E-mail address: arifuddinak@yahoo.co.id

culture that can not be changed (core-culture) and cultures can be changed (peripheral-culture). In a previous article, Rapoport (1980) revealed that the main element which is considered as the core culture, among others: a) community characteristics such as ethnicity, language, religion, b) a system of family and kinship, c) the pattern of housing, land status, d) food, e) ritual and symbol systems, f) status and social identity, g) behavior and communication, h) cognitive scheme, i) privacy, control, territorial, j) behavior in the home and neighbors, and k) institutional includes: ways of working, cooperation, trade. According to Altman and Chemers (1984), culture appeared in the built environment such as home design, home placement, and public buildings.

In each of the different social morphology lies the different of cultural logic as well as the manifested social value. In this case, every individual has opportunity to express cultural values and attitudes followed. Santoso (2008) revealed that real traditional backgrounds of Nusantara (Indonesia) community have a unique understanding such as a different cultural concepts with modern society in managing the environment. Every individual or community group has the right to determine the life goals and principle based on the cultural values understood.. Each individual has a role to play within a culture. This role establishes a routine to a person's life (Lang, 1994). The life principle shaping the lifestyle of a person or society. According Suriansyah (1999) changes in the socio-cultural values will affect the changes in people's lifestyles, and affect the formation of the built environment form. A settlement or city assessed smart socially if the people can enjoy the safety, convenience, and comfort in the city suit his lifestyle. Lifestyle is formed from the various demands of individuals or groups daily needs. The individual needs variable can be measured using Maslow's theory. Maslow Identifies five sets of basic needs from the most fundamental to the most esoteric in a hierarchy of prepotency (Maslow, 1987 in Lang, 1994). These five basic needs include: physiological needs, safety and security needs, affiliation needs, esteem needs, and self-actualization needs.

Smart fulfillment of housing form refers to the culture understanding and the needs or desires of its inhabitants. Homes or housing is a construction form of a cultural process. However, the facts show that the development of globalization and modernization in accordance with the changing conditions of the surrounding nature, will provide a variety of influences both the influence of non-physical and physical influences, especially against a form of urban housing (Arifuddin et al, 2015). This is in line with the view of Antariksa (2007) that in terms of the community's role in the housing formation, the influencing internal factor is culture, while external factors consist of modernization and globalization aspects. How things are going, it is associated with the phenomenon of urban life increasingly heterogeneous. Besides, a weakened tendency showed such as the spirit of togetherness, community loyalty, and a sense of responsibility towards the commonweal. Individuals feel more loyal to his family, to job, to the group, or to fellow ethnic. According to Schneider in Tang (1996) that the situation which occurred in urban communities characterized by discrimination of people based (on) technology, power, ownership, and non common value system, a situation that naturally evolve according to the society needs.



Fig. 1. Map of Makassar City Region

Bugis community in Makassar city is a case which will be highlighted in this study. They have a different local cultural wisdom from the other community, specifically in the housing development.. These facts essentially give an

explanation about the importance of the people's views analyzes involvement on the form of housing required in accordance with their cultural values in promoting the settlements or cities identity. Therefore, this study aims to discuss some things, among others: to identify the opinion of housing existing condition and their ideas for the development of housing based on the culture and needs. Based on the opinions and ideas are expected to be the basis of innovative development in the Makassar city in particular the development of houses, housing and urban settlements which is livable, sustainable, and self-identity that will be directed collaboratively by the parties policymakers, practitioners, and academics.

2. Methods

In general, this study links between the public opinion and architectural data. This study took the data as much as 200 respondents of the Bugis in 10 villages which are predominantly inhabited by the Bugis community in Makassar city covering villages such as Mampu, Gusung, Cambaya, Tallo, Buloa, Rappokalling, Batua, Sudiang, Bolurokeng, and Kapasa. Study of public opinion related to socio-economic backgrounds and the existing of housing form are analyzed using the qualitative-descriptive of cross tabs technique. To identify the ideas of public opinion, an interviews is conducted with respondents (using questionnaires) about the form of houses / housing that can be applied to the future with reference to A. Maslow's theory. Besides, the community were also asked regarding to the opinion about the Bugis community home/housing with a cultural wisdom values based. The data of the respondents about opinions and ideas of the development of the Bugis community house form that can be applied in Makassar city (are) analyzed using correlation analysis technique then described according to the results of observation housing conditions, and ultimately recommending the innovative ideas of housing scheme in Makassar city in accordance (with) modern science and technology developments.

3. Result and Discussions

3.1. Cultural views of the Bugis About Home and Housing

Basic values inherent in personal self of Bugis society contains the general and specific values. Along with thoughts and ideas, the base value then will affect to the human behavior (Hamid, 2003). Bugis behavior patterns seen in his life, is a manifestation of action that is closely related to cultural values which are summarized in the concept of "*siri' na pesse*" (summarized from: Hamid, 2003; Abidin, 2003). The house division vertically refers to cosmology of Bugis termed as *ri ase* (above) as a symbol of the sky where the holy spirit is *ri awa* (below) as a symbol of the underground, while a human life lies in *ale bola* (main room) as a symbol of earth. Horizontal orientation, based on the binary between the West-East and South-North. The direction which is seen as the main one becomes orientation of the head (*ulu*), the West direction as a symbol Qiblah and the South as a symbol of life. While the opposite direction as the orientation of the foot (*toddang*) is East or North direction (symbol of death). Horizontal orientation in the Bugis familiar with the concept of the four corners of the compass, where the direction of Qibla is seen as sacred. In addition, it is also known a structural concept of zoning space from public space (the patio and living room) to the most private space (the main bedroom and the centers of home). The general character of the egalitarian Bugis form a patterned home/housing or open access. Open attitude seen in the use of simple fences, *lego-lego* (terrace house) as a means of social interaction. Social stratification in the Bugis community remains visible in the form of a house like on the front of the roof ornament symbol (*timpa laja'*). Home development processes such as multifunctional usage of space performed by changing functions of living room to a dining room and bedroom, changing functions of service room to a business space, etc. (Arifuddin, 2002).

3.2. Bugis Community Lifestyle in Makassar City

Some behaviors of urban communities can be identified as relevant to the daily needs such as: the need for appearance of the body and clothing, eating habits or diet, demand for clean and healthy life which is understood in line with the development of science and technology, the habit of transportation, the need for home security and

housing, as well as ways to improve the quality of life (Arifuddin et al, 2014). Based on information from the Bugis community in Makassar city, their lifestyle can be described as follows:

- a. Bugis community has a shopping lifestyle, whether in the markets or in modern shopping facilities (at least every 6 months. Although there are many restaurant facilities, they tend to eat at home together, and occasionally drop the kids and family to eat outside the home.
- b. Healthy lifestyle everyday done by eating / drinking but they are less likely to exercise and break. To the upper-middle-income people in general control their health annually.
- c. In general, people from the upper middle class incomes, tend to do daily trips pattern by private vehicle but are not taken in a timely manner, due to the phenomenon of traffic congestion in the city.
- d. In general from the middle to upper income groups do one of daily social interaction by a limited guests reception, while the middle to lower income groups, are still being voluntarily accept guests without previous delivery but with limited time.
- e. They sighted in average that efforts to increase self-esteem pursued through the quality of life achievement (personal/family success) through hard work. But some still see the quality of life can be achieved through education and charity worship.

3.3. Opinion of Home Needs Fulfillment

The opinion of Bugis community of Makassar city regarding the current housing needs generally exhibit the following characteristics:

- a. The vast condition of the Main Bedroom and Living Room

In the table below shows that the public demand for Main Bedroom (MB) in general (98.5%) expect at least 9 m square. Facts show that there is still 55,5% of the vast existing conditions which is under 9 m square, but there have been as many as 44.5%, which was in line with expectations of society. In the table below also shows that the need for extensive Guest Room (GR) has generally been met (64.5%), although there is also a tendency to enlarge GR above 16 m square (34%). To detail can be seen in the following table.

Table 1. Fulfillment Expectations Broad of Main Bedroom and Living Room

No	Broad (m ²)	Existing Broad of Main Bedroom		Expected Broad of Main Bedroom		Existing Broad of Guest Room		Expected Broad of Guest Room	
		N	%	N	%	N	%	N	%
1	>16	4	2,0	55	27,5	4	2,0	68	34,0
2	9-16	85	42,5	139	69,5	130	65,0	129	64,5
3	< 9	111	55,5	6	3,0	66	33,0	3	1,5
	Total	200	100	200	100	200	100	200	100

Sources: Analysis of Researcher, 2015

- b. Privacy Conditions of Main Bedroom and Home Comfort

In the table below shows that the community needs to privacy main bedroom (MB) has generally been met and that there is as much as 66.5%, although there are still classified as not meet as many as 6.5%. In the table below also shows that the demand of both home comfort conditioning and lighting in general have been met and that as much as 68%. However, there are also people who do not meet as many as 4.5%. To detail can be seen in the following table.

Table 2. Fulfillment Expectations of Privacy Main Bedroom and Home Comfort

No	Society Opinion	Privacy Main Bedroom Condition		Home Comfort Condition	
		N	%	N	%
1	Not fulfilled	13	6,5	9	4,5
2	Less fulfilled	25	12,5	28	14
3	Fulfilled	133	66,5	136	68
4	Very fulfilled	29	14,5	27	13,5
	Total	200	100	200	100

Sources: Analysis Researchers, 2015

c. Security Conditions of Home and Housing

In the table below shows that the security conditions of home and housing either from catastrophic fires, floods, and environmental security (theft) at this time has generally been met and that is safe from fire (72.5%), safe from flooding (78%), and safe from the social environment (76.5%). However, there are also respondents who answered not meet that condition of the fire as much as 4.5%, 3.5% flood conditions, and conditions of environmental security (theft) of 1.5%. To detail can be seen in the following table.

Table 3. Condition Home Security and Housing

No	Society Opinion	Fire Conditions		Flood Conditions		Theft Conditions	
		N	%	N	%	N	%
1	Not fulfilled	9	4,5	7	3,5	3	1,5
2	Less fulfilled	26	13,0	13	6,5	22	11,0
3	fulfilled	145	72,5	156	78,0	153	76,5
4	Very fulfilled	20	10,0	24	12,0	22	11,0
	Total	200	100	200	100	200	100

Sources: Analysis Researchers, 2015

d. Guest Room and Living Room Conditions as Social Interaction

In the table below shows conditions of guests room as a space for social interaction, generally met and that as much as 69%, but so also there are respondents who answered not been met as many as 6.5% and 19% less fulfilled. In the table below also shows the conditions of the Living Room as a space for social interaction, generally have been met, as many as 67.5%, but so also there are who do not meet, as many as 6% and 21% less fulfilled. To detail can be seen in the following table.

Table 4. Conditions Guest Room and Living Room as Social Interaction Space

No	Society Opinion	Guest Room Conditions		Living Room Conditions	
		N	%	N	%
1	Not fulfilled	13	6,5	12	6,0
2	Less fulfilled	38	19,0	42	21,0
3	fulfilled	138	69,0	135	67,5
4	Very fulfilled	11	5,5	11	5,5
	Total	200	100	200	100

Sources: Analysis Researchers, 2015

e. Broad and Impression Condition of Home as Symbol of Pride

In the table below shows that the communities view of living Room broad of home as a symbol of the inhabitants pride are generally classified as inadequate as many as 58.5%, but so also there are insufficient as many as 30%. It is strongly associated with the level of income occupants, especially in communities with income below IDR 3 million. The results of *chi squares analysis* showed that there was a significant correlation (value 0.000) between the level of income and the level of adequacy home broad. Furthermore, in the table below also shows the communities view of the impression of his home, in general found quite interesting home as many as 78.5%, however, there are also still assessing the impression that the house had not boast as many as 1%. To detail can be seen in the following table.

Table 5. Conditions of Broad and Impression of Home

No	Society Opinion	Home Broad Conditions		Impression of Home Conditions	
		N	%	N	%
1	Not fulfilled	12	6,0	2	1,0
2	Less fulfilled	60	30,0	35	17,5
3	fulfilled	117	58,5	157	78,5
4	Very fulfilled	11	5,5	6	3,0
	Total	200	100	200	100

Sources: Analysis Researchers, 2015

3.4. Development Idea of Home Based On Occupants Expectation

Bugis community opinion in Makassar city in terms regarding the future development ideas of homes generally show the characteristics of home form in sequence as follows: traditional-modern house form, pure traditional form, and modern form. In the table below shows that the idea of developing future home generally expect form a modern home with a traditional appearance (stage form, gable roof, and ornament application) is as much as 89.5%, then followed the home forms of pure traditional as much as 9%, and the rest expect form a modern house in accordance with the current developments as much as 1.5%. To detail can be seen in the following table.

Table 6. Development Ideas of Home Based Occupants Expectation

Ideas of Home Form	Type of House			Total	%
	Big	Middle	Little		
Modern style (Free form)	1	0	2	3	1,5
Traditional Modern style, Storey 1	10	19	10	39	19,5
Traditional Modern style, Storey 2 without saddle roof	27	49	14	90	45,0
Traditional Modern style, Storey 2 without <i>Lego-Lego</i>	22	25	3	50	25,0
Traditional style, Storey 1	13	1	0	14	7,0
Pure traditional style (wood materials)	3	1	0	4	2,0
Total	76	95	29	200	100

Sources: Analysis Researchers, 2015



Fig. 2. Form of Traditional Houses in Mampu Village and Rappokalling Village

Fig. 3. Form of Traditional Houses 1 storey in Buloa Village



Fig. 4. Form of Modern Hause in Buloa Village and Rappokalling Village



Fig. 5. Form of Modern Traditional House in Malimongan Village

3.5. Referrals Recommendations of Housing Form

The concept of housing form that can be recommended in the future is the necessity of the space fulfillment for social interaction such as (besides) Living Room as well as the discourse of the importance of the embodiment modern house form but keep the Bugis Traditional Architecture remains like stage form, application of gable (*timpa laja'*) and *lego-lego*, which also can show the identity of Makassar city. In general it can be concluded that the order of the home and housing suitable to be applied should be linked to the cultural values of the community and the development of science and technology.

3.6. Urban Development Innovation Based on Lifestyle Transformation

Based on the condition of lifestyle as the implications of the Bugis community understanding of the cultural values are understood and responses from the influence of the dynamics of the development of science and technology, will further affect the needs and desires of the community of life and livelihood in Makassar. Smart city/housing, should be able to meet the various needs and desires, so that people can enjoy the security, comfort, and ease of life in the city. It can be expressed in the following schemes:

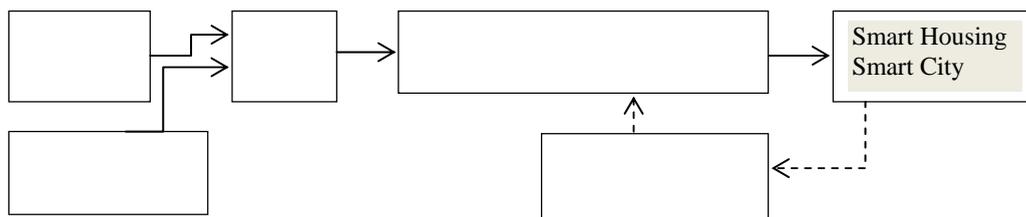


Fig 6. Schematic of Lifestyle Transformation towards Realization Housing and City

Based on the above, it can be argued Bugis community lifestyle transformation towards a form of housing / municipalities in meeting their needs.

1. Lifestyle community in terms of shopping still need traditional facilities in addition to modern facilities. Example: traditional market or eating houses, in addition to the presence of modern shopping. Maximizing resources for the economy, such as the informal sector organized.
2. A healthy lifestyle has been done in a modern way, but the public remains less exercise and rest, because the lack of availability of social facilities in an efficient, convenient, and accessible. It is therefore necessary supporting facilities such as open spaces or park for each residential neighborhood and developing the border river / canal of Makassar city as a means of efficient and safe sport.
3. Lifestyle people's daily trips tend to start disrupted by the impact of traffic congestion as a result of urban development is not balanced. Because it required the development of road infrastructure development and management of the city or the efficient and secure environment, including through the city of Makassar settlement planning by applying the principles of Transit-oriented development (TOD).
4. Lifestyle is familiar social interaction pertained activity is still maintained, so as to be supported by the provision of public spaces for each residential neighborhood, retaining spaces receiver in every home residents, as well as the development of digital social interaction in internal housing or city.
5. Lifestyle achievement of quality of life as a self-esteem and actualization of living need through the success of individual life / family. Types of these needs will be supported by various city facilities such as socio-economic facilities that can improve the quality and welfare such as educational, religious, health, and workplace facilities. In addition, it is also necessary fulfillment of city environment healthy and comfortable.

4. Conclusions

Most of understanding people's culture has shifted as a result of modernization and development of science and technology, such as shopping habits, eating habits, transportation, health behavior, aspects of home security and efforts to achieve self-esteem, which have an impact on fulfilling of the home and housing needs. Bugis community opinion on the home fulfillment relatively large space behind the limited land, opinion of anticipatory against home security conditions including floods, as well as opinions of traditional home form application, so the application of the Bugis house in Makassar city suggested using vertical form with modern elements construction.

Fulfillment opinion of the Bugis community house and housing condition in Makassar today shows the following characteristics: 1) The average area of Main Bedroom was 9 m square, average area Guest Room was 9-16 m square, the privacy Main Bad room and home comfort has been according to expectations; 2) In general, the housing security can be overcome relatively; 3) Function space for social interaction has not been classified as required in the activities of receiving guests; 4) Some communities assess the house size was still limited; 5) Impression of the house appearance has met expectations of self-actualization. Generally fulfillment of expectations were fulfilled, except to the widespread need for comfort and social interaction. It was closely related to the limited incomes; 6) The idea of community expectations to the future home development choose dominantly a modern house with traditional style. However, there also some people who choose the pure traditional form with wood materials, and some chose modern form with use new materials.

Several factors need to be considered innovative in fulfillment of housing or Makassar city as smart cities, was the fulfillment of facilities in the social, economic, and environmental healthy, so that people can enjoy the security, comfort, and convenience. The fulfillment of these aspects can be identified through lifestyle (culture) and actual needs of the Bugis community. Fulfillment of economic resources in the procurement form of shopping space both modern and traditional facilities including informal sector, the development of infrastructure, as well as the efficient planning of settlements with the principles of Transit Oriented Development (TOD). Fulfillment of social resources in the social interaction space as open space/park, provision of public spaces and social facilities, utilizing the space border river/canal city as a means of sport recreational, development of digital social interaction, as well as the application of the modern home-style Bugis traditional architecture as symbols of the city identity. Fulfillment of environmental resources such as environmental fulfillment cities healthy, natural, and sustainable.

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