

Izvorni naučni članak

Original Scientific Paper

UDC: 332.85:519.2:1e(680)

DOI : dx.doi.org/10.12803/SJSECO.369314

JEL: R2

AN ASSESSMENT OF THE CRITICAL FACTORS IMPEDING THE DELIVERY OF LOW-INCOME HOUSING IN SOUTH AFRICA

*Određivanje kritičnih faktora koji otežavaju pružanje
stanovanja stanovništvu sa niskim primanjima u Južnoj Africi[§]*

Aigbavboa O. Clinton[§]
University of Johannesburg

Abstract

This paper presents findings on the critical factors which affect the delivery of low-income housing in South Africa and the effect of these factors on the residents' satisfaction with their housing units. Data used in the study was obtained through a Delphi Study, where the views of housing experts were solicited on the critical factors which affect low-income housing delivery in South Africa. Since panellists form the cornerstone of the Delphi Technique, clear inclusion criteria were applied and also as a means of evaluating the results and establishing the study's potential relevance to other settings and populations. Hence, each expert was required to meet at least five benchmarks. These include the length of residency in South Africa, educational background amongst others. Results emanating from the study revealed that seven factors were considered critical by the experts after consensus was achieved. Amongst these include: limited budget (dwindling tax base) and the lack of appropriate policy to handle informal settlement upgrading, etc. The study contributes to the body of knowledge on the subject where no consensus has been reached pertaining to the critical factors affecting the delivery of low-income housing in South Africa. A limitation of the study was the reliance on a structured questionnaire survey in the three iterative rounds of Delphi technique to reach consensus and experts were not allowed to add any more indicators.

Keywords: *Delphi technique, Low-income, Residents' satisfaction, Subsidised housing, South Africa*

[§] Kontakt autora: caigbavboa@uj.ac.za. Autori izjavljaju da nemaju značajne materijalne ili finansijske interese koji se odnose na istraživanje opisano u ovom radu. Takođe, autori izjavljaju da je podneti članak njihov originalan rad i da nakon izdavanja ništa od sadržine neće predstavljati povredu autorskog prava. Rad primljen 04.07.2014. godine. Odobren za objavljivanje 30.12.2014. godine. *The authors declare that they have no relevant or material financial interests that relate to the research described in this paper. Also, the authors declare that the submitted paper is their original work and that, upon publication, nothing contained in it will not constitute an infringement of any copyright. Paper received 04.07.2014. Approved 30.12.2014.*

1. Introduction

The housing environment in South Africa (SA) is complex, in large part due to the deliberate policy and legislative framework of socio-economic and spatial exclusion and marginalization created during the Apartheid Era. Also, the complexity of the housing process in SA is due to many failures and a full understanding of the problems by the Apartheid Government and the inability of the Post-Apartheid State Government to satisfactorily redress these problems since 1994. However, it must be genuinely acknowledged that the Post-Apartheid State Governance has been actively involved in trying to create a level playing ground field for the previously disadvantaged and also trying to repair the disadvantaged condition created by almost 42 years of the Apartheid Government. Simply put, it is easier to destroy than to create - so much so that the Post-Apartheid Government has been faced with a situation that is not irreparable and manageable, but a situation that needs patience and a little firmness to address. Hence, as with other socio-economic rights, the legislative and policy framework created by the national government around housing is progressive in addressing the situation on the ground.

However, implementation to date has been skewed and unable to address the land, housing and basic services needs of millions of poor South Africans, who still lack adequate housing and access to water, sanitation and electricity (Tissington, 2011). Whilst the urban and rural spatial divide still remains pronounced in respect of access to socio-economic goods and services, the phenomenon of the inadequately housed urban poor is increasing. Redressing the inherited inequalities of the Apartheid State has established a complex and challenging context for meeting basic needs in contemporary South Africa. Given the physical and political segregation of Apartheid, meeting the demand for housing has been a central development challenge since 1994 (Pottie, 2004). Nevertheless, apartheid alone cannot be held responsible for the housing conditions in South Africa but equally no account of housing policy and conditions can be credible if it does not take into account the history of South Africa and the colonial legacy of the African continent (Goodlad, 1996).

The fundamental philosophy underpinning housing development goals in South Africa is the existing South Africa Constitution of 1996. The Constitution of the Republic of South Africa of 1996 is the supreme law of the country. The Constitution also contains justifiable socio-economic rights and enshrines everyone's right to access to adequate housing. For instance, in the Bill of Rights in Chapter 2 of the Constitution, section 26(1-3) outlines: "Everyone has the right to have access to adequate housing. The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right..." The Bill of Rights also includes a number of other rights, which relate either directly or indirectly to the enjoyment of the right to housing. While Section 26(1) of the Constitution enshrines that everyone has the right to access to adequate housing and that it is the government's responsibility to take reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right.

In terms of Section 26 of the South Africa Constitution, the government should endeavour to ensure that all people living in South Africa are able to satisfy all the requirements with regard to access to adequate housing as engraved in the constitution. In responding to the constitutional right to 'access to adequate housing' for all South Africans, government is under an obligation to not only pass enabling legislation, but also to apply other measures of an administrative, a financial, educational or a social

nature to fulfil its housing obligations. This commitment according to Tissington (2011) would characterize the move to transformation, equality and socio-economic well-being for all citizens (and non-citizens). Since the foundation to housing provision is enshrined in the new South Africa Constitution, individuals unable to access housing through the 'normal' residential market should be further assisted with new schemes that will make that right a realization. Thus, state prioritization should be people-centred, so as to ensure their access to livelihoods as contained in the constitution.

Housing the poor is one of the major challenges that have besieged the government of nations since the last decade of the twentieth century. The challenges are particularly acute in global urban areas where populations are projected to grow from less than 300 million in 1950 to almost 2 billion by the turn of the last century with an increase of more than 50 million every year throughout the 1990s and an average growth rate of 3.4 percent per annum. Presently, the major housing problem in South Africa, is the shortage of affordable accommodation for the urban poor; the low-income majority through the low-income housing schemes.

Low income housing is a perpetual topic of debate among housing scholars, the citizens, municipal and state officials in South Africa. Low income housing refers to residences for individuals or families with low annual household income. There are many such housing programs that are privately or state operated and funded in South Africa (to be discussed elaborate in the next section). The purpose however, is to provide places for people to live at a reasonable cost for them to afford.

In South Africa, the challenge is that there has been an average population growth of 2.1 percent per annum resulting in the population increasing by 10.4 percent or over 4.2 million people in the last decade. Over the past 20 years South Africa's population has grown rapidly: 1990 - 36.1 million, 2010 - 49.1 million and 2011 – 50.59 million (Statistics South Africa, 2011), as a result of high fertility and in-migration rates. However, although the population is projected to continual growth in absolute numbers over the next 20 years, reaching 52.2 million by 2030, the growth will be significantly slower than the past two decades. Although the South African population is projected to continue to increase in size, at least until 2030, the annual population growth rate has been declining since the early 1990s, and is projected to continue declining at the rates of -0.412% due to the high HIV and AIDS infection rate. In the absence of HIV and AIDS, the population growth rate is projected to be significantly higher, but nevertheless also declining. AIDS thus slows down population growth in South Africa.

However, this does not necessary lessen the burden of housing development for the low-income, because they dynamics of housing life cycle is continues as the population gets older. Correspondingly, the housing backlog has increased and current figures indicate that there is a shortfall of over 2.1 million dwellings. Although the housing institutions and markets in South Africa have developed over the years, the country still faces a huge backlog of housing needs. Likewise, the strong policy response has failed to adequately provide housing for the low-income groups who are unable to access housing by themselves. Therefore, based on the above, the study objective was modelled to investigate from the experts who deal with housing in the country (with a specific emphasis on the Gauteng Province) to highlight the factors affecting the delivery of low-income housing in the country and their effect on the satisfaction of the beneficiaries of the housing stock. The paper starts with an overview of the literature on this topic (subsidised low-income housing in South Africa), followed by the measurement of residential satisfaction being a sub-set of the research objective.

Then, the methodology adopted for the study is presented followed by the results of the Delphi Survey for the research. Finally, the paper draws some conclusions. The paper makes a significant contribution towards understanding the critical factors affecting the delivery of low-income housing in South Africa. This study provide significant insight into the hindrances affecting the effective delivery of low-income housing in South Africa and their effect on the residents' satisfaction.

2. State subsidised housing in South Africa

The delivery of housing in Post-Apartheid South Africa is characterised by three streams of provision and allocation that are running parallel and often overlapping to some extent. These three streams are public sector built; private sector provided and self-provided housing. However, the public sector built is only delivered through the housing subsidy schemes, thus the name state subsidised housing. State subsidised housing in South Africa is a form of housing delivery system in which the property and associated infrastructure is financed by the government and transferred to either a group of qualified low-income families, elderly and handicapped individuals with little or no contribution coming from them. However, it has never proved easy to help the poor through housing subsidies, particularly in developing countries (Gilbert, 2004) such as South Africa with numerous social-economic issues and racial divides. Today, very few governments are prepared to offer housing subsidies to the poor unless they are delivered as up-front or as, targeted capital subsidies. Also, the lack of resources has forced most governments into making difficult decisions about the size and the number of subsidies to be offered.

In order to address the housing shortage and the urban and rural housing backlog in the Post-Apartheid South Africa State, the government instituted a number of programmes and mechanism to assist lower income households. Foremost amongst these include the housing subsidy system, as well as other innovative mechanisms to encourage the increase of affordable housing to the poor (Landman & Napier, 2010). Also dependent on these decisions, has come a series of implementation problems relating to the quality of construction, the location of the new housing solutions, the use of credit and how to allocate subsidies between so many beneficiaries. While there have certainly been positive experiences from the South Africa housing delivery mechanism, there is also a very long list of failures particularly with the process of delivery and the product that was and is still being delivered. However, housing delivery for the low income groups in South Africa is reliant on the Housing Subsidy process. The subsidy scheme facilitates the provision of a range of housing types.

Despite the impressive delivery of houses, the housing backlog has increased from 1.5-million in 1994 and has continued to grow and is currently estimated at between 2.1-million and 2.5-million. This, according to the Department of Human Settlement translates into approximately 12.5 million people still needing houses in the country. South Africa has spent billions of rand to provide housing to the poor, but the government's 2009 General Household Survey showed that the portion of households still living in shacks has remained steady at about 13 percent since 2002. Also, despite the housing budget which was increased in 2011 by 38 percent of 22.5 billion rand (\$3.3 billion, 2.3 billion euros) the authorities still regularly battle protests in shantytowns by destitute black residents angered by rampant joblessness and poor amenities like water, toilets and electricity. However, some housing scholars argues that there may be many more people still needing housing, as the number of those living in informal settlement

are not adequately captured and the number most times do not include foreign nationals. Currently, the delivery of these house is not in line with the government housing strategy as contained in the National Housing Policy Framework, which is to provide subsidy assistance to the low-income groups, thus enabling them to become home owners and to improve their quality of life. This is because of the many factors which has hindered the effective delivery of the houses as originally proposed.

Government-subsidised homes or low income housing, usually includes a stand-alone house of about 30-40 m² on a 250 m² plot. However, lately, government, developers and designers have started to experiment with alternative housing types where low-income units are semi-detached and located on smaller sites to accommodate densification. According to Landman and Napier (2010), these newly experimented houses are significantly larger (46 square meters) than the previous models of 40 square meters. This shows some flexibility being adopted regarding the implementation of subsidy housing for ownership in South Africa.

Despite the efforts of the National Housing Subsidy Scheme to deliver low-income housing to the poor, there have been problems with both the quantity and quality of housing delivered since 1994. Prime amongst these, as noted by the National Department of Housing, indicates that housing delivery has had a limited impact on poverty alleviation and houses have not become the financial, social and economic assets as envisioned in the early 1990s and as stated in the Housing White Paper. This was supported in a study by Aigbavboa (2010) study on the housing subsidy post-occupancy evaluation, which found that a majority of the beneficiaries do not consider their houses an asset for wealth creation. This is because most of the previously built houses were often located on the periphery of existing townships; land previously acquired or zoned for township development under apartheid (Charlton & Kihato, 2006). This system maintains the marginalization of the poor and does not contribute to the compaction, integration and restructuring of the Apartheid City (Charlton & Kihato, 2006). This trend has thus reinforced the spatial segregation of cities, which isolates the poor from livelihood opportunities and social services, as well as the tendency towards urban sprawl. This problem has often been exacerbated by the fact that there has also been little co-ordination between government departments to ensure that public transport, schools, clinics, libraries and police stations are provided for the new community. However, with the modification and enhancement of the National Housing Programme and with particular emphasis on the Social Housing Programme design to bring about restructuring of the urban divide, this has greatly been attended.

3. Research Methodology

The Delphi technique was adopted as the method for the collection of data for the study. The technique is a qualitative methodology seeking to produce a consensus of a group of experts on an issue of concern (Miller, 1993) through a survey consisting of rounds. The technique is based on structural surveys and makes use of intuitively available information of the participants, who are mainly experts in their various fields. The method provides qualitative as well as quantitative results, and has beneath its explorative, predictive even normative elements (Cuhls, 2003).

The technique was originally developed in the 1950s as a tool for forecasting and problem solving of complex topics at the Rand Corporation by Helmer and Dalkey (Buckley, 1995). The method attempt to 'align' the sometimes conflicting positions of experts into a coherent and unified perspective. The technique is relatively simple, as it

consists of a structured process for collecting and synthesising knowledge from a group of pre-selected experts by means of a series of questionnaires accompanied by controlled opinion feedback (Adler and Ziglio, 1996). The reasoning behind the Delphi method is to address and overcome the disadvantages of traditional forms of discussion by group, particularly those related to group dynamics. This method is predominantly used to facilitate the formation of a group consensus (Helmer, 1977) as it was developed in response to the problems associated with conventional group opinion assessment techniques, such as Focus Groups, which can create problems of response bias due to the dominance of powerful opinion-leaders (Wissema, 1982). Fundamentally, the method serves to shed light on the evolution of a situation, to identify priorities or to draw up prospective scenarios as found in the present research paper.

After a comprehensive methodical literature review which was conducted in journal articles, conference proceedings and relevant housing books, the questionnaire used for the study was designed. The questionnaire was presented in the form of an anonymous and iterative consultation procedure by means of surveys (via e-mail). The questionnaire was designed to elicit and develop individual expert responses to the subject matter and to enable the experts to reconsider views as the group's work progresses in agreement with the objective of the study. Already existing and validated questionnaire instrument was not adopted as none was found to have existed due to the no adoption of the technique in housing study. A panel of experts were selected and participated in a three round of Delphi process. The experts' rating was based on a 10-point Likert scale of impact significance, where 1-2=No impact (NI); 3-4=Low impact (LI); 5-6=Medium impact (MI); 7-8=High impact and 9-10= very high impact (VHI).

Since panellists form the cornerstone of the Delphi technique, clear inclusion criteria was applied and outlined as a means of evaluating the results and establishing the study's potential relevance to other settings and populations (Igbal and Pison-Young, 2009). The selection of panellists for the study was based on criterion sampling. Panellists were selected for a purpose to apply their knowledge to the concept raised in the objective based on the criteria that was developed. This was necessitated because the technique does not depend on a statistical sample that attempts to be representative of any population. It is a group decision mechanism requiring qualified experts who have deep understanding of the issues (Okoli and Pawlowski, 2004). Hence, one of the most critical requirements when using the technique is the selection of qualified experts as it is the most important step in the entire Delphi process because it directly relates to the quality of the results generated (Hsu and Sandford, 2007). The careful selection of the panel of experts is a keystone to a successful Delphi study.

In choosing panellists for this study, each expert was required to meet at least five of the following minimum criteria of:

- *residency- have lived or is living in one of the South Africa Metropolitan or District Municipalities cities;*
- *has knowledge of the low-income housing situation in South Africa;*
- *academic Qualification, has been presented an earned degree;*
- *experience related to the low-income or other sustainable development or human settlement context;*
- *employment in a professional or voluntary capacity;*
- *influence and Recognition;*
- *authorship of peer-reviewed publications in the field of housing with emphasis on South Africa;*

- *research, has received research funds that support housing development studies for the low-income group or other human settlement related issues;*
- *teaching, has served as an individual or as a collaborative instructor in the teaching of one or more college or university courses focusing on the sustainable development or related field;*
- *membership of a professional body so that their opinions may be adaptable or transferable to the population and*
- *willingness to fully participate in the entire Delphi studies.*

The adoption of a minimum of five criteria was considered more robust than the suggested number of at least two criteria as recommended by Rodgers and Lopez (2002). The five minimum criteria were framed after the four recommendations made by Adler and Ziglio (1996), with the inclusion of experts' residency status, which was considered to be compulsory for all selected experts. This was considered significant because experts were required to have a wide-ranging understanding of the low-income housing context in South Africa. Also, a minimum number of five criteria were set because the technique may be undermined if panellists are recruited who lack specialist knowledge, qualifications and proven track records in their respective field (Keeney et al., 2001), and much more, without an understanding of the low-income housing discus in South Africa.

Panel members were identified from four sources. The first source was from the South Africa institutions of higher learning faculties, departments, research institutes amongst others. The second source was the Department of Human Settlement. This is because they are the ones who are vested with the responsibility for the initiation and development of subsidised low-income housing in the country. Hence their involvement in the Delphi process was a key consideration. The third source was from various conference proceedings such as the annually held Built Environment Research Conference hosted by the Association of Construction Schools of Southern African, Construction Industry Development Board biannual post graduate research conference amongst others. Individuals who had frequently appeared as authors or key speakers related to housing and human settlement issues in these proceedings were identified as potential experts on the study. The fourth source was the references of individuals who had committed their lives working in the area of sustainable human settlement and housing related issues in Southern Africa.

With regard to the recruitment process, panellists were recruited via e-mail, with a brief overview of the study objective. Thereafter, those that consented to the preliminary invitation were sent a detailed description of the Delphi study; and were requested to send their curriculum vitae in order to confirm their areas of expertise and to ascertain whether they met the qualifying criteria. Hence all experts selected for the current study met a minimum of five criteria's set for the study.

From all the sources mentioned above, 55 invitations were sent out. Out of 55 invitations, 17 responded to the invitation; 17 completed the first round and 15 were retained throughout the study as one panellist could not meet with the demand of the study while the other was deceased during the course of the study, but had sent through his opinions for the first round before he passed away. Hence, the Delphi study retained 15 active members during the iterative round. This number of panellists was considered adequate based on literature recommendations from scholars which have employed the technique previously (Hallowell and Gambatese, 2010; Okoli and Pawlowski, 2004).

Based on the above and the fact that the Delphi method does not depend on the statistical power, but rather on group dynamics for arriving at consensus among experts, the panel of 15 experts was considered adequate.

In the first round the experts were asked to list the critical issues affecting the delivery of low income housing in South Africa; also, the experts were asked to rate the extent to which the failure to delivery houses to the low-income group is hinged on the listed factors the effect on the eventual residents' satisfaction. Lastly, they were further asked to ascertain to what extent the beneficiaries waiting time on the housing database has an impact on the housing satisfaction of the low-income group?

The second and third (last) round of the Delphi questionnaire offered the experts the opportunity to provide additional feedback in the form of written comments. After round II and round III, the degree of consensus achieved in the Delphi process was assessed by calculating the group median, mean, standard deviation and inter-quartile deviation. While the last two questions were computed based on the percentages of agreement. The group median was used as a feedback to the experts in the successive rounds. Each round built on responses to the former round. Experts were provided with a summary of the series of rounds. This summary included the feedback to each expert: his or her own score on each item, the group median ratings, and an abstract of written comments. The experts were then asked to reflect on the feedback and re-rate each factor in light of the new information. This process was in line with the Delphi characteristics of: 1) anonymity which encourages honest opinion free from bandwagon effect; 2) iteration, which allows experts to change their views in subsequent rounds; 3) controlled feedback which illustrates the dissemination of the group's response, in addition to individual's previous response and 4) the effective engagement of participants who are separated by large distances because it can be distributed by mail or online (Hasson et al., 2000).

This method was therefore appropriate in assessing the critical attributes which affect the delivery of low income housing in South Africa, and their effect on the occupants' satisfaction. The limitation to this Delphi study was that experts were not allowed to add any other core factors or indicators. The scales adapted for consensus were: strong consensus, median 9-10, mean 8-10, inter quartile deviation (IQD) ≤ 1 and $\geq 80\%$ (8-10); good consensus, median 7-8.99, mean 6-7.99, $IQD \geq 1.1 \leq 2$ and $\geq 60\% \leq 79\%$ (8-10); weak consensus, median ≤ 6.99 , mean ≤ 5.99 and $IQD \geq 2.1 \leq 3$ and $\leq 59\%$ (8-10).

4. Findings

Findings emanating from the Delphi survey revealed that, all panel members who participated in the Delphi process were from South Africa, which was concurred with one of the study criteria in the selection of the experts. It was found that two are currently residing at the Nelson Mandela Bay metropolitan municipality; seven in the City of Johannesburg, four in Ekurhuleni, one in Tshwane and another in the City of Cape Town. Also, 80% of the experts were male, while 20% were female. A majority of the female experts who were invited to participate in the study declined the invitation hence the dominance of male in the study. From the 15 experts who completed the three rounds of Delphi, 3 had a Doctor of Philosophy (PhD) degree, 10 had a Master of Science (MSc) or equivalent degree and 2 others had a Bachelor of Science or an equivalent degree. All experts were from various fields, ranging from urban and spatial planning, housing studies, urban and social policy amongst others. From their

curriculum vitae analysis, it was found that, they are all involved with low-income housing issues.

In terms of their current occupation, 8 of the experts were employed by Universities of higher learning, 1 work as a housing practitioner with the City of Johannesburg, 4 are employed by various Government Departments, 1 in an NGO and another in a research institution. All expert panellists held various senior positions in their organizations and were involved in low-income and other housing issues at different levels. The expert panellist had a cumulative of 284 years of experience. The minimum was four while the maximum was 32 years with a mean of 18.93 years. The experts especially the academics have extensively contributed to the body of knowledge in Sustainable Human Development with vast publications in peer reviewed conferences, journals, book chapters and books. The experts were professionally registered in various professional bodies in South Africa and international. Further result relating to the critical factors affecting the delivery of low income housing in Africa revealed that the following seven factors were considered critical by the experts, which hinders the delivery of low-income housing in South Africa and eventually effect their residential satisfaction with the houses. These factors are outline in Table – 1.

From the impact ratings of the factors as evident in Table – 1, it was revealed that 3 of the factors have a very high impact (VHI: 9.00-10.00), of which the notable ones with a high consensus rating are: limited budget, i.e. dwindling tax base and poor planning and coordination of the housing delivery form the national to government levels. However, despite the experts rating the issue of appropriate policy to handle informal settlement as a very high impact factor, albeit, there was no consensus amongst them. This suggests that the policy that have been developed over time to handle the delivery of low income housing in South Africa have all been described in the literature to be at par with international standard. However, the main issue is the lack of poor planning and coordination amongst the various stakeholders responsible for delivery.

Table – 1. Critical factors affecting the delivery of low income housing in South Africa

Critical factor	Level of Impact	Impact on Residents' satisfaction	Consensus IQD ≤ 1
<i>Limited budget (dwindling tax base)</i>	VHI: 9.00-10.00	1	0.00
<i>Appropriate policy to handle informal settlement</i>	VHI: 9.00-10.00	1	0.85
<i>Poor planning and coordination from national to local government levels</i>	VHI: 9.00-10.00	1	0.00
<i>Housing delivery mechanisms</i>	HI: 7.00-8.99	2	0.50
<i>Lack of active participation of beneficiaries in the development of housing</i>	HI: 7.00-8.99	1	0.00
<i>The inability of relevant state authorities to consult adequately with affected local communities to seek joint solutions to the housing crisis</i>	HI: 7.00-8.99	1	0.0
<i>Enabling the poor to solve their own housing problem</i>	MI: 5.00-6.99	2	1.00

Legend: VHI = very high impact; HI = high impact; MI: = medium impact; IQD = interquartile deviation

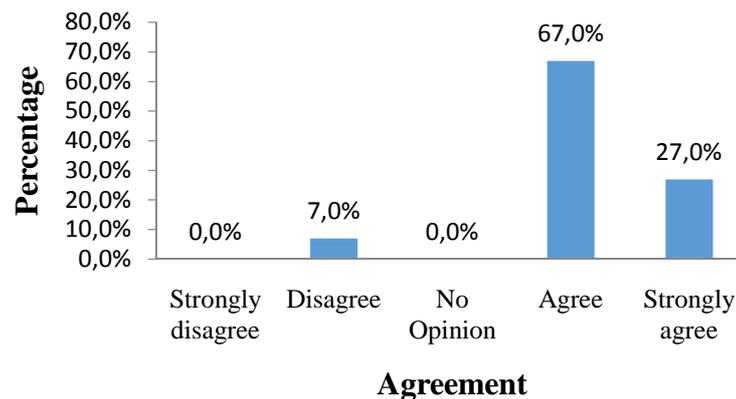
Also, 3 other factors were correspondingly considered to have a high impact (HI: 7.00-8.99), which also achieved consensus amongst the experts. Amongst these are the lack of active participation of beneficiaries in the housing development which is a result

of the inability of the relevant state authorities to consult adequately with the affected local communities to seek joint solutions to the housing crisis. One factor was rated to have a medium impact (5.00-6.99) whilst none were rated to have either low or no impact as revealed in Table – 1. Some of the experts informed that the factor with the medium should the transition of the current housing mechanism in South Africa, as the low-income groups should be enabled (aided) to solve their housing problems.

Likewise, the IQD scores revealed that a good consensus rating was achieved for all the listed factors; the IQD cut-off ($IQD \leq 1$) score set to achieve consensus was achieved. When the impact significance of these factors on the residents' housing satisfaction were further assessed on a scale of 1-5 (1 being most significance and 5 being least significance), it was found that all the listed factors significantly (negatively) impact on the residents' housing satisfaction of the beneficiaries. These factors were all rated to have an impact significance of 1-2 as shown on Table – 1.

Furthermore, when they were asked if the waiting time on the housing database has an impact on the housing delivery and satisfaction of the low-income groups; findings revealed that 67.0% of the experts agree with this statement, while 27.0% strongly agree and only 7.0% disagreed as detailed in Figure – 1.

Figure – 1. Waiting Time on Housing Database



5. Discussion and Conclusion

The objective of the Delphi Study was to identify the critical factors affecting the delivery of low-income housing and their effects on beneficiaries' residential satisfaction. The logic behind this question was to assess the hindrances that the Department of Human Settlement (DHS) in South Africa is facing in the delivery of low-income housing, when fulfilling the constitutional mandate of adequate housing provision. This is because access to adequate shelter is defined as a basic right for all citizens in South Africa, as set in the country's constitution. For instance, Section 26 (1) of the constitution states that everyone has the right to access adequate housing; Section 26(2) also states that the state must make reasonable legislative and other measures, within its available resources, to achieve the progressive realisation of this right. Hence, the provision of adequate housing is a qualified right, but is subject to available public resources of which the extent to which the state supports the provision of good quality low cost housing is consequently a matter of an on-going debate in South Africa.

The Delphi Survey findings for this objective revealed that limited budget allocation, appropriate policy to handle informal settlement and poor planning and coordination from national to local government levels were found to be the most critical factors affecting the delivery of low-income housing in the country with a very high impact factor. With particular emphasis on the limited budget allocation, the government initially suggested in 1994 that 5% of the budget would go to housing, but the actual budget allocation has never achieved this figure. Hence, the housing budget has drifted between R3-5 billion when it could have been within R10-11 billion in terms of the budget allocation (Ogunfiditimi, 2008; South Africa Yearbook, 2011). This thus suggests that the declining budget has contributed to the limited provision of low-income housing for the poor, which has caused the housing backlog to increase, which has resulted in a compromise on the quality of the produced houses. Also, the dwindling budget can be recognized as the cause of the other critical factors of poor planning and coordination from the national to local government and the implementation of appropriate policy to handle informal settlements. This is because the limited budget allocation of the DHS is not sufficient to satisfactorily train its workers or to engage housing development consultants in work that the DHS does not have capacity for. Though, this can be argued because when the appropriate policy to handle the development of the settlements is in place, regardless of the limitation from budget constraints, adequate housing can still be provided, but will only be lacking in quantity and not in quality. Other factors deemed to be critical in affecting housing delivery, which are also related to the problem of a dwindling tax base, include beneficiary's active participation and lack of capacity to enable the poor to build their own houses.

Furthermore, the experts' consensus that the waiting time on the housing database has an impact on the housing delivery and thus, affects beneficiaries' residential satisfaction further suggests that the listed critical factors should be considered and a remedy of sorts for improvement by the DHS be included. The DHS created the housing database because of the high demand for housing in South Africa. The housing waiting list was created for the poor and low-income groups with an income of R0 – R3 500 (\$0 - \$407.22) as specified on the qualifying criteria's for people applying for housing (Aigbavboa, 2010; Ogunfiditimi, 2008). The housing database is used to allocate low income houses to beneficiaries' according to their areas of registration when the development is completed. Because it is considered in South Africa as the primary source of selections of names of persons to apply for low income housing (Gauteng Department of Housing, 2009; National Department of Human Settlements, 2010). The waiting list (now called Housing Demand Database) is usually divided into categories, with applications placed into the category, which best reflect the urgency of the housing need, (National Housing Code, 2000, revised in 2009) such as:

- *Category 1: applicants in urgent need of housing (such as the homeless) and are unable to access private rental housing options;*
- *Category 2: applicants who have high housing needs and who face long term barriers to accessing other housing options; and*
- *Category 3: applicants who pass the income and assets test but do not have a high housing need (as per Categories 1 or 2).*

Despite the categorization, there has been complaint from the housing beneficiaries' and NGO's alike that the housing waiting lists are not followed as a result of inadequacies from the local authority personnel's (Charlton, 2009; Charlton and

Kihato, 2006). This has resulted in beneficiaries' having to wait for housing for longer periods than necessary and some not receiving any housing until they pass away. Hence the experts' consensus revealed that the waiting period on the housing database have a negative impact on the housing delivery and the eventual satisfaction of the houses to the low-income group. In conclusion, the findings revealed that the daunting critical factor, which affects low-income housing provision in South Africa, is financial limitations caused by the dwindling tax base. This suggests that when this barrier is overcome other factors listed as critical would also be overcome. It was further revealed that the waiting period on the housing database impacts on the delivery of housing and in turn affects the housing satisfaction of the low-income groups.

References

1. Adler, M., Ziglio, E. (1996) *Gazing into the Oracle: The Delphi method and its application to social policy and public health*. London: Kingsley Publishers.
2. Aigbavboa, C.O. (2010) *An evaluation of the post occupancy experience of housing subsidy beneficiaries in South Africa: A case study of Gauteng*. Johannesburg: University of Johannesburg.
3. Buckley, C. (1995) "Delphi: A methodology for preferences more than predictions". *Library management*, 16(7), p.16-19.
4. Charlton, S. (2009) "Housing for the nation, the city and the household competing rationalities as a constraint to reform". *Development Southern Africa*, 26(2), p.301-315.
5. Charlton, S., Kihato, C. (2006) "Reaching the Poor: An analysis of the influences on the evolution of South Africa's housing programme". *Democracy and Delivery: Urban Policy in South Africa*, eds. U. Pillay, R. Tomlinson & J. du Toit, HSRC Press, Cape Town, South Africa, p. 263.
6. Cuhls, K. (2003) Delphi method. Available from: http://www.unido.org/fileadmin/import/16959_DelphiMethod.pdf. (Accessed 26 October 2011).
7. Gauteng Department of Housing (2009) Housing Demand Database and Allocation Policy. Available from: http://www.corruptionwatch.org.za/sites/default/files/SKMBT_42010060108370.pdf%20Housing%20Demand%20Database%20and%20Allocation%20Policy.pdf. (Accessed 23 March 2013)
8. Gilbert, A. (2004) "Helping the poor through housing subsidies: Lessons from Chile, Colombia and South Africa". *Habitat international*, 28(1), p.13-40.
9. Goodlad, R. (1996) "The housing challenge in South Africa". *Urban Studies*, 33(9), p.1629-1645.
10. Hallowell, M., J. Gambatese (2010) "Qualitative Research: Application of the Delphi Method to CEM Research", *Journal of Construction Engineering and Management*, 136(Special Issue: Research Methodologies in Construction Engineering and Management), p.99-107.
11. Hasson, F., Keeney, S., McKenna, H. (2000) "Research guidelines for the Delphi survey technique". *Journal of advanced nursing*, 32(4), p.1008-15.
12. Helmer, O. (1977) "Problems in futures research: Delphi and causal cross-impact analysis". *Future*, 9(1), p.25-52.

13. Hsu, C.-C., Sandford, B. A. (2007) "The Delphi Technique: Making Sense of Consensus, Practical Assessment". *Research and Evaluation*, 12(10), p.1-8.
14. Iqbal, S., Pison-Young, L. (2009) "The Delphi method". *The Psychologist*, 22(7), p.598-600.
15. Kearney, A., R. (2006) "Residential development patterns and neighbourhood satisfaction: Impacts of density and nearby nature". *Environment and Behavior*, 38(1), p.112-139.
16. Landman, K., Napier, M. (2010) "Waiting for a house or building your own? Reconsidering state provision, aided and unaided self-help in South Africa". *Habitat international*, 34(3), p.299-305.
17. Miller, M., M. (1993) "Enhancing regional analysis with the Delphi method". *Review of regional studies*, 23(2), p.191-212.
18. National Department of Human Settlement (2010) Strategy for the allocation of housing opportunities created through the national housing programmes. Available from: http://d2zmx6mlqh7g3a.cloudfront.net/cdn/farfuture/_QoO-umoGt5IedQ14wL2WXhLc7mbOHWqJe-zy-RjSnU/mtime:1281689359/files/docs/100811strategy.doc. (Accessed 23 April, 2013)
19. Okoli, C., Pawlowski, S. (2004) "The Delphi method as a research tool: An example, design considerations and applications". *Information Management*, 42, p.15-29.
20. Rogers, M. R., E. C. Lopez (2002) "Identifying critical cross-cultural school psychology competencies". *Journal of school psychology*, 40(2), p.115-141.
21. South Africa Yearbook 2010/2011 (2011) Human Settlements. Available from: <http://www.gcis.gov.za/sites/default/files/docs/resourcecentre/yearbook/chapter13.pdf>. (Accessed 9 August 2012).
22. Statistics South Africa (2011) General Household Survey. Available from: http://uscdn.creamermedia.co.za/assets/articles/attachments/34446_ghs_2010_p0318june2010.pdf. (Accessed 16 June 2011).
23. Tissington, K. (2011) *A Resource Guide to Housing in South Africa 1994-2010 Legislation, Policy, Programmes and Practice*. Socio-Economic Rights Institute of South Africa (SERI): Johannesburg.
24. Pottie, D. (2003) *Challenges to Local Government in Low-income Housing Delivery*. In: Kahn, F. & Thring, P. *Housing Policy and Practice in Post-Apartheid South Africa*. Heinemann.
25. Wissema, J., G. (1982) "Trends in technology forecasting". *R&D Management*, 12(2), p.27-36.

* * * * *

Apstrakt

Ovaj rad predstavlja nalaze ključnih faktora koji utiču na obezbeđivanje stanovanja domaćinstvima sa niskim primanjima u Južnoj Africi i efekata tih faktora na zadovoljstvo stanovništva svojim stambenim jedinicama. Podaci korišćeni u ovom radu pribavljeni su preko Delfi studije gde su ispitivala stanovišta stambenih stručnjaka i kritičara o kritičnim faktorima koji utiču na stanovanje stanovništva sa niskim primanjima u Južnoj Africi. Rezultati su pokazali da postoje sedam ključnih faktora. Takođe, studija doprinosi znanju o temi o kojoj nije postignut konsenzus a odnosi se na kritične faktore koji obezbeđuju stanovanje stanovništva sa niskim primanjima u Južnoj Africi.

Ključne reči: Delfi tehnika, niska primanja, zadovoljstvo stanovništva, subvencionisano stanovanje, Južna Afrika.

- BLANK PAGE -