Analysis of the Ghanaian housing deficit between 1991 and 2017: The potential household approach

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ABSTRACT

This paper sought to offer alternative estimates of the Ghanaian housing deficit using the potential household approach (PHA) and to compare the PHA results with existing empirical studies. The PHA is a demographic trend-based analysis that compares expected households with actual households formed to arrive at the housing deficit. The paper employed secondary data extracted from the Ghana Living Standards Survey (GLSS) and census reports of the Ghana Statistical Service (GSS). It covered five survey reports comprising GLSS 3 to 7. GLSS 1 and 2 reports were not available to the researchers. The survey data covered the period from September 1991 to October 2017. These surveys were based on a sample of 15,000 households proportionally selected nationwide. In addition, the Ghana Housing Profile (GHP) (2011) report provided additional data for comparative analysis. The PHA results suggest that the Ghanaian housing deficit never reached two million within the period under consideration. Contrary to popular estimates and projections, the PHA further suggests a declining housing backlog since 2014, after the highest backlog of 1,346,674 was recorded. The declining deficit is partly explained by substantial net additions to the total housing stock from 1960 to 2021. This paper makes a methodological contribution to the estimation of housing deficits in Ghana and offers alternative housing deficit estimates. The study recommends a rigorous statistical analysis of the GSS data to confirm the PHA results, and further examination of the different forms and levels of the Ghanaian housing deficit for a better appreciation and policy response.

Keywords: Deficit Estimation, Ghana, Housing Deficit, Household Formation

I. INTRODUCTION

Housing deficit has become a common term in the socio-political landscape of Ghana (Addo & Mba, 2022), as well as other economies in both the global north and south (Airgood-Obrycki & McCue, 2024; Galster, 2024). However, there is some confusion in the literature as to what the Ghanaian housing deficit is and how it should be interpreted. Its meaning and estimation are found to be problematic by some scholars and social commentators. Gyamfi-Yeboah (2017) observed inaccuracies in the Ghanaian housing deficit estimation which includes fundamental misstatement of facts. Kavaarpuo (2020) also observed inconsistent application of related housing concepts that affect the estimation of housing deficit, namely; *dwelling unit*, *housing unit*, *rooms*, and *house*. Monkkonen (2013) found the term problematic, at least, on two counts. The first is its ambiguity, relying heavily on often-unstated assumptions of its two major components – qualitative and quantitative deficits (See also Ibem & Amole, 2011; Obeng-Odoom & Amedzro, 2011). The second is the often-implied policy response of building more housing units, which need not be the case since housing deficit can be caused by factors other than inelastic supply (McClure & Schwartz, 2024; Orleans-Lindsay, 2019).

Media reports, policy documents, and scholarly articles reveal various estimates and projections of the Ghanaian housing deficit. Two popular scientific references are the Ghana Housing Profile (GHP) (2011) and Ghana Statistical Service's (GSS) census and survey reports. The GHP projected the deficit to reach 4,000,000 rooms in 2015 and 5, 700,000 rooms by 2020. The GHP estimates the deficit using 'room' as the basic unit. This is often mistaken to be a whole unit (Gyamfi-Yeboah, 2017). The GSS (2014) estimated the deficit to be 2,771,961 in the 2010 census, based on an occupancy threshold of two persons per room (i.e. 4-persons per household per 2-bedroom unit). On this same basis,

the 2021 census estimated the deficit at 1,845,115 units (GSS, 2021). Recent studies quote between 1.8 million and 2 million (Kavaarpuo et al., 2023, Addo & Mba, 2022).

Fundamentally, which of these estimates is a true reflection of the housing deficit in Ghana? How should these estimates be interpreted? Do these estimates require a physical supply of this number of houses? As noted by Airgood-Obrycki and McCue (2024), this wide range of estimates suggests that there is certainly a housing shortage. However, the indicators used in the estimation matter (Galster, 2024). This paper questions the approaches, and resulting estimates of the housing deficit in Ghana, and offers alternative estimates of the Ghanaian housing backlog from 1991 to 2017 using the Potential Household Approach (PHA). These are necessary for at least two reasons. First, the PHA is expected to provide a relatively better basis for, and estimate of, the housing backlog. Second, knowing the basis and the right levels of the deficit will provide better interpretation and practical policy responses.

1.1 Statement of the problem

The Ghanaian housing literature is flooded with lamentations of high housing deficit (Kavaarpuo et al., 2024; Institute of Statistical, Social and Economic Research (ISSER), 2023; Addo & Mba, 2022; Wuni et al., 2018; Afrane et al., 2016; Boamah, 2010). Media reports, policy documents, and scholarly articles reveal various estimates and projections of the Ghanaian housing deficit (Kavaarpuo, 2020; Centre for Affordable Housing Finance (CAHF), 2021b; CAHF, 2019; citibusinessnews, 2019). The first scientific reference is the Ghana Statistical Service's (GSS) census and survey reports. While housing studies are quick to report the GSS estimates, just a handful of them offer a critique of these estimates. The basis of the GSS deficit estimates is the difference between *actual housing stock* and *estimated housing stock* using aggregate population. The approach assumes a two and four-bedroom unit for a household size of four and six, respectively. This is argued to be too simplistic and requires further analysis. The Ghana Housing Profile (GHP: 2011) questioned the GSS assumption of all households needing a two-bedroom unit since not all households can afford a unit. Since most households in Ghana occupy rooms instead of flats and bungalows, the GHP shifts the assessment of housing deficit to the number of rooms using room occupancy ratios (number of persons per room). However, household projections are still based on the aggregate population, assuming that any addition to the aggregate population will eventually form households. Once again, this approach puts everybody into an assumed household and room occupancy ratio. However, household formation is influenced by many factors, including income and house prices (Airgood-Obrycki & McCue, 2024; Galster, 2014). Therefore, the resulting total households and housing deficit from this assumption is likely to be over or underestimated. An assessment of the deficit from alternative approaches is necessary. This study uses the PHA to offer alternative estimates of the Ghanaian housing deficit.

1.2 Research Objectives

i. To offer alternative estimates of the Ghanaian housing deficit using the potential household approach (PHA).
ii. To compare the PHA results with existing empirical studies.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 The Potential Household Approach

A very simple definition of household by the GSS is "…a person or a group of persons, who live together in the same house or compound and share the same catering arrangements" (GSS, 2013: xxiii). The report explains further that a household generally "…consists of a man, his wife, children and some other relatives or a house help who may be living with them" (pp. xxiii). However, it also acknowledges that members of a household need not be related by blood or marriage. The main report of the GLSS 7 (2019:5) provided an expanded version of this definition as "…a person or group of related or unrelated persons who live together in the same housing unit, sharing the same housekeeping and cooking arrangements and are considered as one unit, who acknowledge an adult male or female as the head of the household." Although marriage is fundamental in household formation, it is not a requirement. Any self-reliant adult, or group of adults, may form a household. Thus, factors influencing household formation need not be the same for marriage, though they may overlap.

Every household needs to be housed (Ghana Housing Profile, 2011). Household formation drives the need for housing, holding other factors constant (McClure & Schwartz, 2024). Lack of housing may therefore curtail household formation. Access to housing then becomes a key determinant of household formation, which is a function of income and house prices (affordability). The literature suggests that the number of households and housing supply relationship has long been a major subject of debate and controversy in the planning system (Airgood-Obrycki & McCue, 2024; Galster, 2014; Bramley et al., 2010). According to Bramley et al. (2010), the traditional approach to forecasting household numbers in the UK has been essentially a demographic, trend-based projection. This has been in use for many years in determining future housing deficits (McClure & Schwartz, 2024). The difference between expected (potential)

household numbers and households that are formed for a specified period is attributed to a shortfall in housing supply (i.e. housing deficit). The approach has however been criticized as a circular or self-fulfilling prophecy by some housing experts because household formation is found to be endogenous to changes in the housing stock (Freemark, 2024; Galster, 2024; Airgood-Obrycki & McCue, 2024). This has led to alternative models such as (Freemark, 2024; Galster, 2024; Airgood-Obrycki, & McCue, 2024; Bramley et al (2010:80): time series econometric models applied to aggregate data; cross-sectional aggregate models (e.g. across local authorities); cross-sectional micro models to explain the household status of individuals; and longitudinal/panel micro models which use data on a sample of individuals over time and seek to predict key events (e.g. leaving home) or states (e.g. living separately).

Bramley et al (2010:31) critiqued a wholesale reliance on traditional demographic trend-based planning for housing, arguing that some demographic trends are the outcomes of economic factors. It is therefore necessary to inject economic and market factors into housing deficit assessment. Freemark (2024) further questioned the reliance on household formation as a measure of housing shortage and offered housing cost, demographic variation, local economics, and social conditions as key drivers of housing shortage.

Despite these criticisms, some studies still use demographic-based approaches in housing analysis (Quercia (2024; Congressional Research Services, 2023). For instance, Quercia (2024:3) argued that "the gap between single-family home construction and household formation is an important indicator of the adequacy of the supply". In the Ghanaian context, the lack of economic and market data makes it difficult to inject these factors into any meaningful housing deficit assessment. This paper therefore relies on a demographic-based assessment of the housing deficit using the Potential Household Approach.

2.2 Empirical Review

2.2.1 Demographic trend-based measure of housing deficit

Household formation is fundamental to the generation of housing deficits. Every household needs a dwelling (housing unit). The rate of household formation is expected to impact the demand for and supply of housing units. However, Bramley et al (2010) admitted that household formation and its relationship with the demand and supply of housing units has been a focus of debate and controversy in the planning system. This is evidenced by recent debates on the US housing shortage (McClure & Schwartz, 2024; Freemark, 2024; Galster, 2024; Airgood-Obrycki & McCue, 2024; Quercia, 2024). That notwithstanding, household projections remain fundamental to housing deficit estimation (McClure & Schwartz, 2024; Quercia, 2024; Congressional Research Services, 2023).

Monkkonen (2013) used changes in household formation trends in Indonesia to estimate a quantitative housing deficit. The study found decreasing rate of household formation being interpreted as a housing deficit and argued that easy access to housing is more likely to lead to more new households forming. Population growth and household formation patterns have also been found to directly shape the demand for housing (Lee, et al., 2022; Wuni et al., 2018). Similarly, labour market conditions and access to housing are found to influence the decision to leave the parental home and form a new household (Monkkonen, 2013; Haurin et al., 1993). Bramley et al (2010) noted that higher house prices reduced new household formation. Thus, the housing market itself is equally an important driver of the housing deficit, with a direct influence on household formation. Therefore, households formed from potential households are partly the outcome of the housing market.

The most important determinants of household formation have been identified by Bramley et al. (2010) as *the fundamental demographic characteristics – age, sex, and marital/partnership status.* But changes in household status are the result of demographic events, namely; entering a marriage/partnership, divorce/separation, and having children. In addition to these are income and house prices (Galster, 2014; Airgood-Obrycki & McCue, 2024). Whereas household formation is expected to rise with higher incomes, the same is expected to decline with rising house prices (Galster, 2014; Lewis, 2010). And since changes in house prices are strongly correlated with income, the effect of the two is found to be offsetting in household formation (Bramley et al., 2010). Other determinants include the availability of social housing, higher education and skill levels, the geographic distribution of skilled jobs, cultural preferences, policy factors, unemployment, and migration (Bramley et al., 2010). These suggest that household formation is the outcome socio-economic factors. The PHA therefore encompasses both social and economic factors that influence housing deficit.

2.2.2 A review of the Ghanaian housing deficit estimates

Admittedly, the Ghanaian housing literature is thick, but a few of them attempt to analyse the deficit beyond the GSS estimations. These studies mostly centre on housing policy, finance, affordability, delivery, development, interventions, and other related issues (Kavaarpuo et al., 2024; ISSER, 2023; Addo & Mba, 2022; Kavaarpuo, 2020; Wuni et al., 2018; Afrane et al., 2016; Boamah, 2010). The main sources of housing deficit estimates in Ghana are political and policy reports (Ministry of Works and Housing and Bank of Ghana), the media, the GSS, and a few independent studies. The methodology and basis for political and policy report estimates of the Ghanaian housing deficit

are often unclear (Gyamfi-Yeboah, 2017). The most scientific estimates are from the GSS and the Ghana Housing Profile (GHP). The literature on the Ghanaian housing deficit (deficit) estimation is very thin. Most housing studies therefore quote from the above sources (Kavaarpuo et al., 2023).

The GSS Census reports are the first scientific source of housing deficit estimates in Ghana. The GSS uses two main figures in estimating the housing deficit, namely; *actual housing stock* and *estimated housing stock* (Table 1). *Actual housing stock* refers to the total number of housing stock observed through the census. *Estimated housing stock* is determined by the GSS as the quotient of the total population and assumed household size of 4 or 6 persons per household (GSS, 2022). This is taken as the expected number of housing stock required to house the total population. The difference between *actual housing stock* and *estimated housing stock* is taken as the housing deficit (see Table 1). This is too simplistic for at least three reasons.

First, though the actual housing stock is estimated from the census, the sizes of the units in the existing stock is not considered in the deficit estimation. For instance, taking a typical traditional Ghanaian large compound house as just one unit underestimates the actual housing stock since such a building provides more space (3 to 4 times) than a simple two-bedroom unit assumed for all households. Although the GSS (2022) recognises this by distinguishing between housing units and dwelling units, housing units are used in estimating the housing deficit, instead of dwelling units (see Table 1).

Second, the estimated housing stock is based on the estimated number of households from the total population, assuming an average household size of 4 or 6. Thus, instead of observed or actual households formed, the entire population is divided by an assumed household size of 4 or 6, and the result is taken as the total number of households (estimated housing stock) who need at least a two-bedroom unit (GSS, 2022). This is taken as the estimated housing deficit (Table 1). Thus, everybody is put into a household, irrespective of demographic characteristics and economic status of the individual. This assumes that the households are formed. As discussed earlier, household formation is influenced by many factors, including income and house prices (Galster, 2014; Airgood-Obrycki & McCue, 2024). The resulting total households (hence, the housing deficit) from this assumption is likely to be overestimated.

Third, the approach assumes a standard housing unit of two bedrooms per household, irrespective of the space need and affordability threshold of the households. Whereas a one-bedroom unit may suffice for a newly formed and small household size of two, a large household size of six or more may require more than a two-bedroom unit. And, whereas a high-income household may afford a two-bedroom unit or more, a head porter household may not be able to afford a single room, though they may need more than two-bedroom units. As a result, estimating the housing deficit as the difference between actual housing stock and estimated housing stock is too simplistic. The approach underestimates actual housing stock and overestimates estimated housing stock. The resulting difference, taken as the housing deficit, is therefore overestimated. An alternative approach could offer a better estimate of the Ghanaian housing deficit.

Table 1

Ghana Cumulative Housing Stock and Deficit, 1960 - 2021

Year	Total Population	Actual Housing Stock	6-persons/Household per 2-bedroom unit		4-persons/Household per 2-bedroom unit	
			Estimated Housing Stock	Estimated Housing Deficit	Estimated Housing Stock	Estimated Housing Deficit
1960	6,726,800	636,189	1,121,133	484,944	1,681,700	1,045,511
1970	8,559,313	945,639	1,426,552	480,913	2,139,828	1,194,189
1984	12,205,574	1,204,395	2,034,262	829,867	3,051,394	1,846,999
2000	18,912,079	2,181,972	3,152,013	970,041	4,728,020	2,546,048
2010	24,658,823	3,392,745	4,109,804	717,059	6,164,706	2,771,961
2021	30,832,019	5,862,890	5,138,670	(724,220)	7,708,005	1,845,115

Source: *GSS* (1960 to 2021)

The GHP (2011) also provided scientific estimates of the housing deficit in Ghana, which has attracted much attention and citations. The GHP (2011) questioned the GSS assumption of all households needing a two-bedroom unit since not all households can afford a unit. Since most households in Ghana occupy rooms instead of flats and bungalows, the GHP shifted the assessment of housing deficit to the number of rooms using room occupancy ratios (number of persons per room). However, household projections were still based on the aggregate population, assuming that any addition to the aggregate population eventually formed households. Once again, this approach puts everybody into an assumed room occupancy of 2, 2.5, or 3, irrespective of demographic characteristics and economic status of the individual (see Table 2). Again, this assumes that the households are formed. As discussed earlier, household formation is influenced by many factors, including income and house prices (Airgood-Obrycki & McCue, 2024; Galster, 2014). Similarly, the resulting total households from this assumption is likely to be overestimated. Alternative estimates of the Ghanaian housing deficit are necessary.

Table 2

Number of Rooms Required Overall by 2020 in Urban Ghana less the Estimated Supply, 2000-2010 (Millions)

Year		Rooms Needed	
	2 ppr	2.5 ppr	3 ppr
2010	2,500,000	1,700,000	400,000
2015	4,000,000	3,000,000	1,400,000
2020	5,700,000	4,600,000	2,700,000

Source: *Ghana Housing Profile,* 2011:68

ISSER (2023) also questioned whether there is a real shortage of housing in Ghana. The authors described the reported surplus of housing by the 2021 census data as "false surplus" and "far from reality" "…because census data on residential dwellings include kiosks, metal containers, wooden structures, tents, uncompleted buildings, and other structures, which in many cases are not adequate as dwellings for household habitation" (ISSER, 2023:1). Whereas this raises concerns about the GSS estimates, it failed to offer alternative estimates beyond a comparative descriptive analysis of a three-decade GSS census estimates. This paper offers alternative estimates of the Ghanaian housing deficit using the PHA to fill this gap.

III. METHODOLOGY

The paper employs secondary data extracted from the Ghana Living Standards Survey (GLSS) and census reports of the GSS. It covers five survey reports comprising GLSS 3 to 7. GLSS 1 and 2 reports were not available to the researchers. The seven-year inter-survey periods span from September 1991 to October 2017. The survey data therefore covers the period from September 1991 to October 2017 (approximately 26 years). The reports for these surveys were however released between 1995 and 2019 (approximately 24 years). It also uses GSS census data from 1960 to 2020. The main survey and census reports were obtained from the GSS website. The data are therefore point estimates for the survey and census periods. These were however brought together to form a time series data of seven yearly intervals to allow trend analyses of the housing deficit. Relevant demographic and housing characteristics of the sampled households for the GLSSs formed the main secondary data for this study. In addition, the GHP (2011) report provided additional data for comparative analysis.

Given the average age at first marriage of 20 years (GSS, 2013), the proportion (household representative rate - HRR) of the population at this age and above (each age/sex/marital status group) is taken to 'represent' a separate household. This is calculated for all the several previous points in time, based primarily on survey data (projected from previous surveys) or estimated by the survey data. The projected HRRs are multiplied by the projected disaggregated population numbers to yield the potential (expected) household numbers, following the approach used by Bramley et al (2010). These potential household numbers are compared with the number of households that were formed within the specified period. The difference is taken as the deficit in household formation attributed to the housing deficit (Monkkonen, 2013). This is done for all the survey periods to provide a series of housing backlogs over the five survey periods (1991 to 2017; or 1995 to 2019). Descriptive statistics is used to analyse, present, and depict the levels and patterns in the data. The results are juxtaposed with the GHP projections and the 2021 GSS census results for comparative analysis. Grammarly was used in editing and checking grammar.

IV. FINDINGS & DISCUSSION

4.1 Estimated Housing Backlog from the PHA

Results from the application of the PHA to the GLSS data are presented in Table 3. The results suggest that the highest housing deficit recorded over the 25 years was 1,346,674 (in 2012/2013). This however reduced gradually to -138,563 (in 2017/2018), suggesting that the rising housing deficit started reducing from 2012/2013 and 2016/2017 than was projected by many observers. The negative value does not only suggest a decline in the backlog but also shows that more households were formed than the expected potential households. Within this period, housing experts and commentators, using other approaches, rather projected a further increase in the housing deficit.

Table 3

PHA Housing Backlog, 1991 to 2017

Period	Actual Households	Net Addition to Households	New Potential Household	Housing deficit
1991/92 (GLSS 3)	3,320,000			
1998/99 (GLSS 4)	4,210,000	890,000	1,393,393	503,393
2005/06 (GLSS 5)	5,538,000	1,328,000	2,239,342	911,342
2012/13 (GLSS 6)	6,601,500	1,063,500	2,410,174	1,346,674
2016/17 (GLSS 7)	7,299,925	698,425	559,862	-138,563

4.2 Comparative Analysis

Juxtaposing the PHA results with other estimates shows sharp contrasts and provides further insights into the efficacy of the approach to housing deficit estimation. First, from Table 4, the 2010 Population and Housing Census by the GSS estimated the deficit at 717,059 and 2,771,961 housing units, given a household size of 6 and 4 persons per two-bedroom unit, respectively. However, the PHA estimates the housing deficit in 2005/2006 at 911,342. This is greater than the 2010 Census' lower estimate of 717,059 using 6 persons per two-bedroom housing unit. It is however significantly less than the upper limit of 2,771,961 using 4 persons per two-bedroom unit.

Table 4

Comparative Analysis of PHA and Existing Data

Year	2010	2015	2021
6 persons per household per 2-bedroom unit			
GSS	717,059		-724, 220
GHP	200,000	700.000	1350000
PHA	911,342	1,346,674	-138,563
4 persons per household per 2-bedroom unit			
GSS	2,771,961		1,845,115
GHP	1,250,000	2,000,000	2,850,000
PHA	911,342	1,346,674	-138,563

The PHA estimate increased to 1,346,674 units in 2012/2013; which is still less than the 2010 Census' upper estimate of 2,771,961 using 4 persons per two-bedroom unit. The PHA results however suggest a reduction in the deficit to -138,563 in 2016/2017. This is less than the two estimates of the 2020 GSS census data for 6 and 4 persons per household for a two-bedroom unit. On the other hand, the GHP (2011) estimated the housing deficit in 2010 to be 1,250,000 units and projected it to reach 2,000,000 by 2015 and 2,850,000 by 2020 (converted from number of rooms to two-bedroom units for comparison). Again, the PHA estimated a lower value (1,346,674) in 2012/2013; which further declines to -138,563 in 2016/2017. Other observers provided even more contrasting estimates ranging between 1,500,000 and over 5,000,000 (Citibusinessnews, 2019; Kavaarpuo, 2020). The PHA estimates were relatively less than the GHP and GSS approaches and captured a declining trend in housing deficit over the period, generally reflecting the GSS results as depicted in Figures 1 and 2.

Although there were sharp contrasts in the housing deficit estimates, the apparent decline in housing deficits suggested by the PHA is confirmed by the 2021 Census data. It however contradicts popular opinion, expectations, and projections by housing pundits such as the ISSER (2023) and GHP (2011) who think the deficit should be higher than the GSS estimates. Despite the weakness of the PHA as being self-fulfilling, it appears to be a better approach than the others in estimating housing deficits. This notwithstanding, a numeric (point) estimate of the housing backlog alone does not provide enough insight into the nature of the backlog and housing conditions. In other words, numeric point estimates do not provide sufficient insights and direction for developing practical policy responses. As a result, there is a need to examine the forms and levels of Ghanaian housing deficits using the GLSS data for the same period. Knowing the type and levels of the need will help develop a practical policy response.

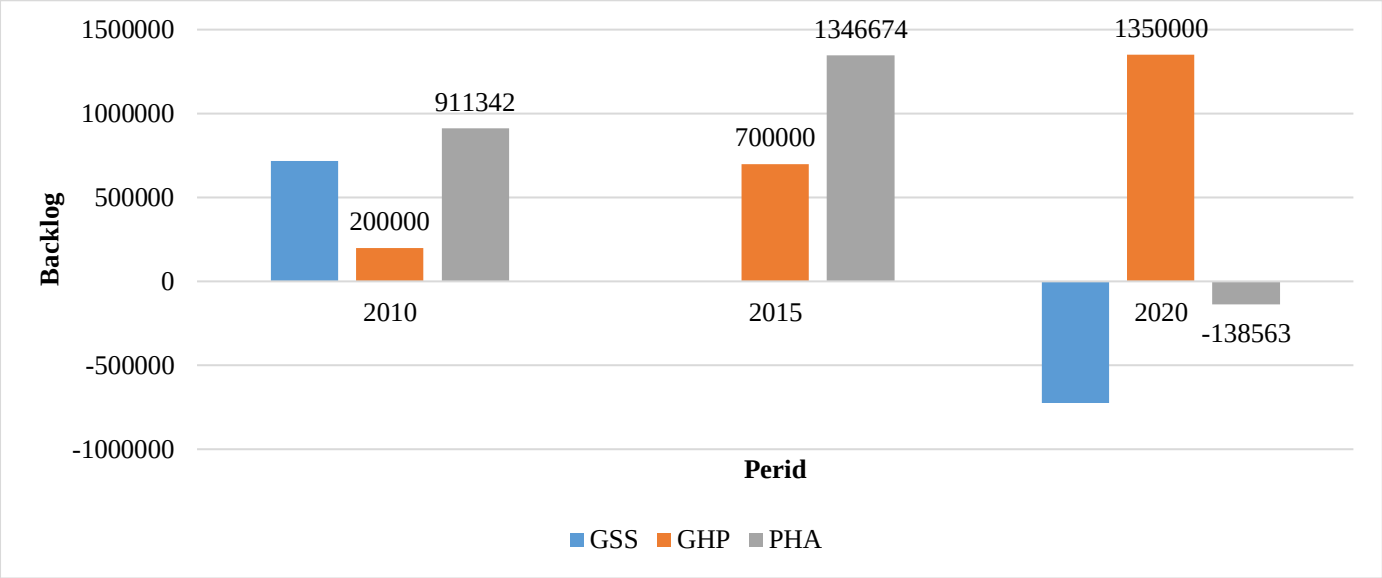

Figure 1
Backlog for Six Persons per Household per Two-bedroom Unit

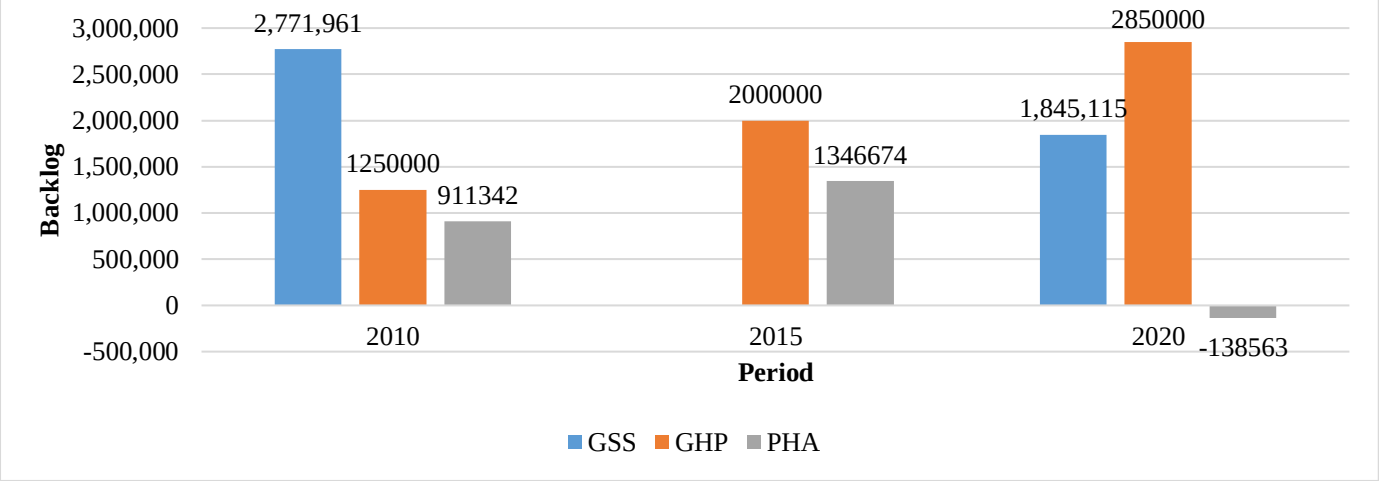

Figure 2
Backlog for 4 Persons per Household per Two-bedroom Unit

4.3 Explaining the Decline in Housing Deficit

Both the GSS and PHA results suggest a decline in the Ghanaian housing backlog. The GSS data suggest that the decline started in 2000, using six persons per household, and became more apparent in 2021. On the other hand, using four persons per household, the GSS data suggest that the decline started in 2010, and reached negatives in 2021 (Fig. 3). Consistent with the GSS data, the PHA results however captured the decline in 2012/2013 and reached negatives earlier in 2016/2017.

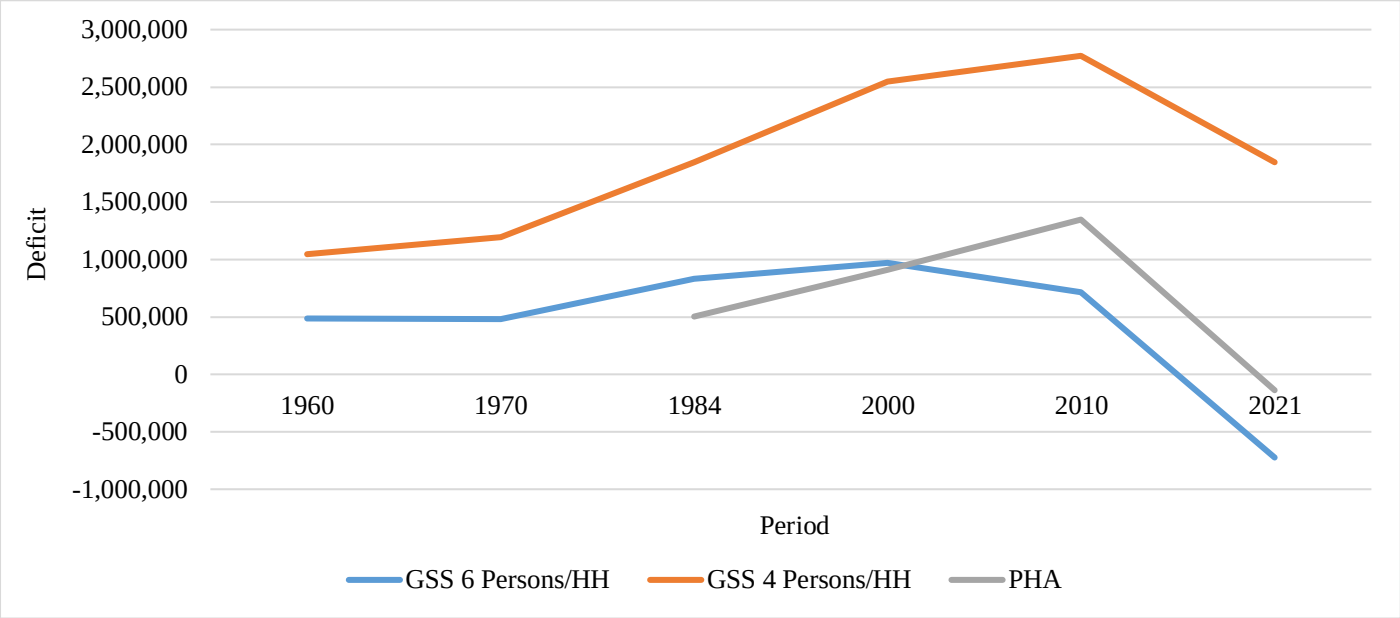

Figure 3
Comparative Analysis of Deficit Estimates (GSS and PHA)

Analysis of the GSS census data (Table 5) shows a significant growth in housing development since 1984. Despite a decline from 1970 to 1984, net addition to total housing stock has been well over 50% thereafter, with a record high of about 81% from 1984 to 2000; followed by 73% growth from 2010 to 2021. As a percent of the previous net addition, inter-census housing development has grown over 100% since 1984; almost quadrupling (378%) from 1984 to 2000 and doubling (204%) from 2010 to 2021. The decline is partly explained by this growth in housing development. This growth is mostly attributed to informal housing supply outlets rather than the formal (Kavaarpuo *et al.*, 2023; CAHF, 2021b; CAHF, 2019; Acheampong & Anokye, 2013). Unfortunately, this massive expansion in the housing stock has not been adequately highlighted in discussions about the housing deficit situation in Ghana. This may be partly attributed to the difficulties in tracking developments in the informal housing supply channels, and the tendency to overly concentrate on the struggling formal housing outlets (Kavaarpuo *et al.*, 2023; CAHF, 2021b; CAHF, 2019; Amoako & Boamah, 2016). As noted by ISSER (2023), the qualitative adequacy of the stock however needs further examination to understand the forms of housing deficits in Ghana, in addition to the quantitative estimates.

Table 5
Growth in Housing Stock

Year	Actual Housing Stock	Net addition	% of net addition	% of previous net addition
1960	636189			
1970	945639	309450	49	
1984	1204395	258756	27	84
2000	2181972	977577	81	378
2010	3392745	1210773	55	124
2020	5862890	2470145	73	204

Source: Extracted from GSS census data, 1960 to 2021

V. CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

This paper presents a quantitative analysis of the Ghanaian housing deficit from secondary data. It questions the traditional housing deficit estimation approaches and offers the Potential Household Approach (PHA) as an alternative. The PHA provides relatively lower estimates of the housing backlog than the GHP and GSS approaches, showing generally lower estimates of the housing deficit in Ghana than what is often reported. Contrary to most estimates and projections, it suggests a declining housing backlog since the 2012/13 GSS survey period. This is confirmed by the 2021 GSS census data, showing that the PHA is a better alternative for estimating the Ghanaian housing deficit. The highest backlog recorded over the 25 years was 1,346,674 in 2012/13. The PHA results further suggest that the backlog never reached two million within the period as reported in the literature and the press. Analysis of the GSS inter-census data also indicates substantial expansion in the housing stock since 2000. This massive expansion appears not to have

caught the attention of scholars and commentators in the Ghanaian housing discourse. Admittedly, this supply-side activity largely happens in the informal, instead of formal, housing outlets.

5.2 Recommendations

The GSS data needs to be subjected to other rigorous housing deficit estimation models to confirm the PHA results. The quantitative estimate of the Ghanaian housing deficit alone does not offer enough insights for a practical policy response. Therefore, further examination of the different forms and levels of the Ghanaian housing deficit is necessary. Policymakers and other stakeholders must begin to give attention to the informal housing supply outlets since they remain the main channel of housing delivery in Ghana.

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