

Defining Affordable Housing: A study of secondary and tertiary impacts to housing affordability
in Habitat for Humanity clients.

by

Andrew Charles Isola IV

B.S., Central Michigan University, 2019

A THESIS

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

Department of Landscape Architecture and Regional Community Planning
College of Architecture, Planning and Design

KANSAS STATE UNIVERSITY
Manhattan, Kansas

2025

Approved by:

Major Professor
Huston Gibson

Copyright

© Andrew Isola IV 2025.

Abstract

Housing affordability is an important topic in the United States. Many communities currently have both a shortage in housing stock and, more importantly, a shortage in affordable housing stock. Many proposed policy and practice solutions exist to ease the strain on communities caused by the lack of affordable housing. Many of the proposed solutions are economic in nature, either supply side or demand side. However, research suggests that factors that impact housing affordability are more than just economic in nature but are also social and environmental in nature. By studying Habitat for Humanity clients in the state of North Carolina, this paper defines the myriad social, environmental, and economic factors that impact housing affordability and models the interactions between these factors, residents, and communities. These factors can be ranked as primary, secondary, or tertiary impacts to housing affordability.

Table of Contents

List of Figures	v
List of Tables	vi
Chapter 1 - Introduction.....	1
Chapter 2 - Background.....	5
Chapter 3 - Methods.....	17
Chapter 4 - Findings.....	20
Chapter 5 - Discussion	36
References	48
Appendix A - Thesis Survey.....	50
Appendix B - Appendix of Factors	54

List of Figures

Figure 1: Map of NC counties served by responding Habitat affiliates	20
Figure 2: NC counties served by responding Habitat affiliates – Rural vs. Urban.....	24
Figure 3: NC counties served by responding Habitat affiliates - above and below the NC state mobility rate	25
Figure 4: NC counties served by responding Habitat affiliates – above and below the NC state vacancy rate	26
Figure 5: NC counties served by responding Habitat affiliates – above and below the NC state foreign born population rate.....	27
Figure 6: NC counties served by responding Habitat affiliates – above and below the NC state poverty rate	28

List of Tables

Table 1	22
Table 2	23
Table 3	33
Table 4	34
Table 5	35

Chapter 1 - Introduction

Habitat for Humanity, Inc. (HFHI) is an international nonprofit organization headquartered in Americus, GA. The organization was founded in 1976 by Millard and Linda Fuller. The organization operates in the United States and more than 70 countries worldwide. Habitat for Humanity traces its roots to Koinonia Farm in Sumter County, Georgia. The farm is an intentional Christian community founded in 1942 which began as a multiracial, working community in Jim Crow Georgia. The Fullers were one of the families that joined the farm and Habitat for Humanity was born out of its philosophy. Habitat for Humanity's mission statement is "Seeking to put God's love into action, Habitat for Humanity brings people together to build homes, communities, and hope."

HFHI in the United States operates through a collection of local affiliates. HFHI has more than 1,500 U.S. affiliates operating in all 50 states, Guam, Puerto Rico, and Washington D.C. All affiliates have a defined geographic service area allowing affiliates to operate without getting in the way of another affiliate's operations. These affiliates operate relatively independently but rely on HFHI for technical assistance and funding opportunities. Habitat for Humanity affiliates (Habitat) focus on building and repairing affordable housing in the community in which they operate. Many affiliates also conduct housing advocacy work and community development work. In many communities, Habitat is the largest and/or sole provider of affordable housing to residents.

Habitat for Humanity of Catawba Valley (HFHCV) is the HFHI affiliate located Hickory, NC and serves Catawba County, NC. HFHCV was founded in 1985 and has built over 200 homes in Catawba County. HFHCV also operates a repairs program, helping to maintain the affordable housing stock in the county. Habitat Catawba Valley's homeownership program

builds new construction homes and sells the homes to individuals who apply and are accepted. Staff at Habitat Catawba Valley recruit individuals who might qualify to purchase a home through Habitat and find a way to sell them the home at an affordable price. Currently, Habitat follows a price to income ratio model to define affordability.

Habitat works with three important partners to help provide the funding necessary to build and sell its houses. A local bank provides the first mortgage on the homes. A local council of governments administers the down payment assistance program. The state affordable housing trust fund provides funding to supplement the cost of home construction. The local bank does not consider an affordable housing definition as it does not need to do so. Most commercial and retail banks do not consider whether a mortgage being sold to a buyer is ‘affordable’. They simply consider whether the buyer in question will be able to repay the mortgage. Both the local council of governments and the state affordable housing trust fund use a price to income ratio model to define ‘affordable’. Specifically, these organizations define ‘affordable’ as 30% of the buyer’s gross monthly income. This 30% target is known as the 30% rule. What’s more, it appears that the majority of affordable housing providers, nonprofits, and lenders targeting low-income buyers use the 30% rule as their definition of ‘affordable’. This means the infrastructure of the entire affordable housing sector uses the 30% rule as a foundational definition for their work. In addition, a host of granting organizations and foundations also use the 30% rule to define ‘affordable housing’.

For Habitat, this means that it needs to prove each client and each client’s purchase meets this definition of ‘affordable’ before it can get funding to build a home or funding to assist the buyer with the purchase of a home. Habitat’s marketing and fundraising structure is built on this definition. Habitat’s data reporting structure uses the 30% rule as an indicator of the need for

affordable housing in the community and to indicate the impact Habitat is having on the community.

In an effort to meet this goal, Habitat has many guidelines in place to define how a home should be considered affordable for a given buyer. Habitat sells the home to the buyer at the appraised value and builds a mortgage package for the buyer that totals up to the appraised value of the home. The first mortgage is a 30-year fixed interest mortgage, set at 3% interest. This mortgage amount is determined based on the buyer's income. Habitat sets the payment on the first mortgage to be 24% of the buyer's gross monthly income. This mortgage payment includes the buyer's homeowner's insurance and property taxes (which are held in escrow). A second mortgage is a down payment assistance lien with no payment and 0% interest. A third mortgage holds the remaining equity in the home. This lien is held by Habitat and has no payment and 0% interest.

Habitat staff see many clients struggle to comprehend how they can fit a house payment equal to 24% of their income into their budgets. Some clients choose to withdraw from the process of buying a home because they feel the 24% payment is more than they can afford. In reviewing clients' financial situations since the start of the COVID pandemic, Habitat has seen many clients choose to pay less than 24% to rent housing because that dollar amount is what they can afford. Anecdotally, since the beginning of the COVID pandemic, Habitat staff have not seen a large increase in clients paying more for their housing (as has been reported in a variety of places). Instead, clients are paying the same or similar to what they paid pre-pandemic, but these clients have settled for living in lower quality housing. In other words, in response to the increase in housing costs since the pandemic, individuals seem to be sacrificing their housing quality standards rather than sacrificing their budget.

Because HFHCV's clients appear to struggle to afford their housing at 24% of their income, it is appropriate to ask if the 30% rule is an accurate measurement of housing affordability. Anecdotal experience seems to indicate that 30% is likely too high of a ratio. The researcher, an HFHCV staff member, inquired if a more appropriate ratio is closer to 20% of income. The researcher believed it was likely that the ratio should be on a sliding scale. The assumption is that individuals with higher incomes can afford to pay a higher percentage of their income towards housing. So, for people at lower incomes, 20% might be affordable while those at higher incomes can afford 30%.

In thinking about pursuing the accuracy of the 30% rule, it was natural to question, what counts as a housing cost? Said another way, what aspects related to an individual's housing should add up to 30% of their income? Habitat for Humanity of Catawba Valley defines housing cost as the cost of principal and interest on the mortgage loan, homeowners' insurance, and property taxes. These three items are included in Habitat Catawba Valley's definition of affordable at 24% of income. While this is the case for Habitat Catawba Valley, it is likely not the case across the board for organizations that follow the 30% rule. For example, HUD's Section 8 homeownership program includes a designated amount for ongoing home maintenance in its definition of 'housing cost' and follows the 30% rule. Given all of this ambiguity in defining housing costs and more generally housing affordability it is natural to ask, "What is an appropriate definition of housing affordability?"

Chapter 2 - Background

Literature Review:

Ezennia & Hoskara reviewed the existing research on housing affordability (HA) and housing affordability measurement approaches (HAMA). “HA has become a multi-faceted phrase due to its heuristic nature. It has been perceived differently by several researchers who have used various definitions and methodological approaches in measuring it. However, HA is generally described as households’ ability to access and obtain decent housing without experiencing unwarranted financial hardship. Such a broad description refers to two aspects: 1) Attainability – access to a house at a certain period, and 2) Sustainability – the possibility of the household to continue maintaining the house. This implies the ability (or inability) to sustain economic commitments with regard to the housing already obtained.” (Ezennia & Hoskara, 2019)

Ideas about the concept of housing affordability often reflect the assumptions and priorities of the researchers. “International housing policy documents of most countries adopt the ‘rule of thumb’, advocating that 30 percent or more of a household income should be spent on housing for it to be considered affordable.” This 30% ‘rule of thumb’ is widely used by practitioners (following established policy norms) to determine hard housing cost numbers when providing affordable housing services to clients. The practitioner often uses the 30% ‘rule of thumb’ “without any recourse to household composition, size, housing quality or neighborhood characteristics, income levels, age groups, and location. Therefore, the 30% affordability standard as a qualifying ratio is flawed. But it has remained the reference point for housing policy purposes...” In response to the recognized flaws in the 30% ‘rule of thumb’ “Recent studies are starting to consider wider dimensions of the criteria that induce HA problems and

have advocated that HA assessments should address more sustainable and wide-ranging criteria such as economic, environmental, and social aspects that affect households.” (Ezennia & Hoskara, 2019)

Housing Affordability Management Approaches (HAMA) can be broken down into three categories: conventional approaches, scarcely used approaches, and emerging novel approaches. Conventional approaches include the Income Ratio method, the residual income method, and the composite method. The Income Ratio method designates a percentile level of housing cost to income ratio as affordable. It is an easy-to-use method and is widely used in the housing industry to determine housing affordability. An example of this is the 30% ‘rule of thumb’. This method has many weaknesses. It does not take into account changes to housing quality over time, the influence of housing cost appreciation, other household expenditures, and changes in household makeup. “Most prominently, the ratio measures generally do not consider the spatial dimensions of transport cost, irrespective of the enormous effect housing location exerts on household commuting expenditure.” (Ezennia & Hoskara, 2019)

The residual income method calculates the ability of households to retain the ability to meet non-housing expenditures. In other words, it looks at housing costs from the perspective of non-housing costs. Ezennia and Hoskara state, “It is the belief of the protagonists of this method that it makes more sense to evaluate if households possess enough income to meet other non-housing expenses after offsetting housing cost, instead of assessing an arbitrary percentage of income consumed by housing.” This method is also used within the housing industry and residual income can be easily calculated. However, it “is economically focused, and as a result do[es] not assess the non-monetary and qualitative aspects of housing. It problematizes affordability in the sense that it relies on the minimum housing and non-housing consumption,

which is considered subjective and differs among different classes of income, regions and cities, and therefore, should not be used in the analysis of HA on a macro level.” (Ezennia & Hoskara, 2019)

The composite method combines elements of the Income Ratio, Residual Income, and quality-based measurements into a measurable set of indicators. This method provides additional strengths to the residual income method and income ratio method. Unfortunately, this method neglects certain household financial metrics. It “produces misleading results when presented as an independent measurement unit since it identifies good or bad policy but fails to provide how the policy can be improved.” (Ezennia & Hoskara, 2019)

The subjective approach, a scarcely used approach, evaluates a household’s “perception of their housing need in relation to housing quality and condition, affordability dilemma, and overcrowding.” These measurements are used with other quantitative data. This approach is based on the philosophy that households are in the best place to assess their own housing situation. Because subjective assessments can fluctuate over time and based on personal circumstance, it is hard to develop a baseline for ‘living costs’ with this approach. (Ezennia & Hoskara, 2019)

The Gini coefficient, an emerging novel approach, measures inequality within a given population. The Gini coefficient can be used to measure housing affordability inequality. While the results of this model can be helpful, the results should be considered relative. Housing affordability inequality is not the same measurement as housing affordability. A high-income country and a low-income country can have the same levels of inequality while having very different levels of housing affordability. (Ezennia & Hoskara, 2019)

Definitions and measurements of housing affordability can be complex or common sense, can vary depending on the researcher's interest, and can require a variety of data or qualitative research. "It is notable that, except for the emerging innovative approaches, many of the other measures do not consider household size, transportation cost, housing choice, and household preference. They erroneously assume that there are no distinctions between household and household characteristics." "Therefore, an ideal HA metric must take into consideration a range of social, environmental, and economic criteria; which borders on [a] broader concept of housing appropriateness covering accessibility, affordability, amenity and adequacy, that impact on residents' quality of life. This will ensure that both sustainability and affordability concerns are tackled concurrently in any HA analysis." (Ezennia & Hoskara, 2019)

Leishman and Rowley note that "At a simple level, the housing affordability problem relates partly to the ongoing cost of housing, and partly to household income levels." However, there are complicating factors to this definition. Maintenance costs, housing quality, housing stock, household composition, and spatial placement all play a role. "There is an inherently spatial dimension to the concept of housing affordability. Given that housing units are spatially fixed, occupancy of a given unit implies consumption of neighbourhood-level attributes and services at a level and quality available in the particular neighbourhood in which that housing unit is located." Surely neighborhood services and amenities play a role in a household's housing costs. And given that amenities vary by neighborhood, some housing should be considered more affordable based on those neighborhood services and amenities. A related definition of housing affordability states, "'an expression of the social and material experiences of people, constituted as households, in relation to their individual housing situations.' This definition succinctly moves the focus from the simple level of house prices or rents given income and suggests the roles of

housing size, quality, location, neighbourhood effects, and household size in determining affordability.” With the myriad factors that should go into defining housing affordability and a household’s rational decision-making process to overconsume or under-consume housing based on its needs, a normative definition of housing affordability, such as a price to income ratio, seems meaningless. The 30% rule, as discussed earlier, is not only an incorrect definition of housing affordability but the very concept of using a price to income ratio to define housing affordability is useless. “It is now widely accepted that ‘affordability’ describes a collection of related housing, social, and economic issues and that the issue of housing affordability is not readily separable from related problems such as housing quality minima and overcrowding.” (Leishman & Rowley, 2012)

Baker, et al show that housing affordability and unaffordability in Australia has resulted in a shaping of the population distribution into areas with more or less advantage. According to their research, certain factors indicate whether an individual is more or less likely to live in an area with more or less advantage. Some examples are:

- Individuals with disabilities are more likely to relocate to places with lower advantages
- People with higher incomes are more likely to relocate to places with higher advantages
- Individuals with full-time employment are more likely to live in places with higher advantage than individuals with part-time employment

“When family households (defined as having two parents and child/ children) moved, they were much more likely to improve their locational advantage level than decrease it. Public renters who moved from affordable housing still tended to experience a decline in the locational advantage of their post-move housing.” “Older people were also likely to move to areas with lower relative advantage.” “Those who move from unaffordable housing situations were

vulnerable to significant declines in their level of locational advantage post-move if their moves were motivated by marital or relationship breakdown, the desire to secure a home of their own, or eviction.” “This suggests that a two-speed process is occurring: the relatively well off and the upwardly mobile improve the areas in which they live over an extended period, while the vulnerable make more frequent, multiple moves – living in less advantaged areas each time.” (Baker, et al., 2016)

“Over the past few decades, housing affordability at the household level and the affordable housing stock more broadly have gradually declined for most low-, very low-, and extremely low-income renters and for some low-income homeowners in many countries, including the United States, Australia, Germany, and Sweden.” The problem of housing affordability is due to a complex mix of land costs, the unavailability of land, construction costs, planning regulations, lack of housing stock, lagging household incomes, and reduced government funding for affordable housing programs. “Households have little room to decrease somewhat fixed expenditures.” “Over the past few years there has been a bifurcation of expenditures. On the one hand, somewhat fixed expenditures, such as health care premia and rent payments, and less flexible expenditures, such as transportation to work, health care expenditures, child care, and utility expenditures, have increased. On the other hand, more flexible expenditures, such as food and clothing, have decreased. Indeed, somewhat fixed expenditures are more difficult to decrease than less flexible expenditures.” (Anacker, 2019)

Definitions of ‘affordable housing’ cannot be considered only in terms of economic viability. It must also take into consideration the environmental and social sustainability of any given housing unit. By taking these additional factors into account, quality of life and community sustainability will be increased for residents. Mulliner, et al use a Multiple Criteria Decision

Making (MCDM) method to assess the affordability of different housing locations within the city of Liverpool, UK. The methodology takes into account a range of economic, environmental, and social criteria. This methodology developed a number of sustainable housing affordability criteria first by conducting a literature review and through interviews with affordable housing professionals. In all, 20 criteria were identified. These 20 criteria were weighted in order of importance to sustainable housing affordability. The weighting process was done via surveys sent to affordable housing professionals. These weighted criteria were used to assess the conditions in three separate areas of the city of Liverpool. By running the criteria in the three areas through a series of formulas researchers were able to determine which of the three areas offered the most sustainably affordable housing. The results of this research showed that the most sustainably affordable area of Liverpool was not the area with the lowest housing costs, however it was the optimal alternative for sustainably affordable housing. “Assessments of housing affordability must take a broader and more sustainable view of the wide ranging criteria that affect households, including economic, environmental, and social aspects.” (Mulliner, et al., 2012)

Housing affordability has traditionally been linked to a socio-political understanding of poverty. Definitions of housing affordability still carry a political dimension. Both the financialization of housing and the gentrification of formerly affordable locations have increased housing inequity. Today, housing inequity is both a function of cost in terms of actual dollars and of spatial inequity. An individual’s inability to ‘afford’ housing in a core location has led to that individual being forced to find housing outside of a core location. A core location is considered an area with jobs, government services, and amenities. These spatial inequities increase ‘housing affordability’ by increasing the cost of transport and energy into a core location. (Haffner &

Hulse, 2019) Ben-Shahar & Warszawski support this by applying the Gini coefficient to measure housing affordability inequality. They found that housing inequality is positively correlated with average housing prices. (Ben-Shahar & Warszawski, 2016) Haffner et al state, “The financial side of the equation needs to be coupled with a ‘Quality-based’ measure for a societal-determined necessity such as housing. Such a measure enables a distinction between households for which income is ‘too low’ and therefore functions as a limit/ constraint to finance the necessities (decent consumption) from those for which housing consumption is considered as ‘too’ high because of their preferences.” Regarding the shift from housing need to housing affordability the researchers argue, “Although the shift is rhetorical,... housing became seen more as a private good in a market system rather than a merit good. A standard of decent quality is needed to reflect the social aspects of housing.” Regarding housing affordability definitions “the essence of the concept of affordability is the opportunity cost of housing expenditures – ‘what income is to be foregone in order to obtain housing and whether that which is foregone is reasonable or excessive in some sense.’ This draws attention to two points. First, to the trade-offs that people make; i.e. they may prefer more housing consumption or more non-housing consumption, which leaves them below the norm for one or the other. Second,... ‘definitions of affordability must distinguish between the individual’s conception of what is and is not affordable and society’s judgement.’” Regarding spatial inequity in housing, “For lower-income households, the implications can be severe if the result is the concentration of poor households and commuting disadvantage on the urban periphery far from jobs and services.” “Commuting poverty must be considered an urban problem, if it is a trade-off between expensive housing versus low commuting costs or the other way around; but it is considered a broader type of poverty than housing expenditure only.” The Location Affordability Index of HUD is a tool

which takes transportation costs into account when determining housing costs. (Haffner, & Hulse, 2019)

In New Zealand, rational housing policy development is the order of the day. Demographia's analysis and data from other sources creates several housing affordability measurements. These measurements are being used by policy makers as an indication of housing affordability in New Zealand. Significant housing policy is being created using these measurements as boundaries and/or triggers for government action in the affordable housing arena. Murphy states, "At a wider level, research on housing policy transfer and global policy networks would benefit from an ongoing analysis of the role of agents in constructing policy knowledge and the manner in which governments appropriate, interpret and implement certain knowledge and policies." (Murphy, 2014)

Bao examines 'Understanding Affordability: The Economics of Housing Markets' by Meen and Whitehead. Per Bao, "The long run growth of house prices has arisen primarily from consumption demand rather than housing's role as an asset and this depends on the factors that affect the income and price elasticity of that housing demand." "The authors make a convincing case that any housing policy should be assessed not just in terms of its contribution to productivity, growth, and macrostability but also in terms of the policy's effect on affordability for target groups, the effect on wealth distribution, the environment, and spatial inequality." The book shares three ideas on creating housing affordability through housing policy. 1) "It's time to go back to the fundamentals: housing's role as a consumption good." Affordable housing is more achievable when macroeconomies focus on housing from the demand side rather than the supply side. 2) Affordable housing should be one of the goals of sound fiscal and environmental policy. Policies should focus on maximizing social rather than private values. 3) Consider human factors

such as social norms, peer pressure, aspiration, place attachment, and herd behavior when considering factors that affect housing affordability. Studies on the subject do not often take into account these human factors. (Bao, 2021)

A few themes can be found from this literature review. It is clear that a price to income ratio model is an inherently flawed method of defining housing affordability. It is also clear that housing affordability definitions vary widely based on the intentions of researchers, the policies being implemented, and the resources available to housing professionals. Research suggests that housing cost items such as rent or mortgage payments should obviously be included in the definition of housing affordability. It also suggests that items such as utility costs, repair costs, transportation, and regular maintenance should be included in this definition. The literature reviewed also suggests a wide variety of secondary or tertiary items that should be considered in the definition of housing affordability. The literature describes these items using terms such as environmental and social aspects (Ezennia & Hoskara, 2019); household composition and spatial placement (Leishman & Rowley, 2012); quality-based measurements (Haffner & Hulse, 2019); and social norms, aspiration, place attachment, and herd behavior (Bao, 2021). The literature suggests that household sustainability is equally as important as housing attainability in defining housing affordability.

Research Topic:

Affordable housing is in great demand in communities across the country. There is great debate amongst scholars and practitioners as to the best way to alleviate the issue of the lack of affordable housing. It does not appear that a panacea to this issue exists but rather it is likely that a combination of multiple policies and practices will help to make housing more affordable in

communities. A wide range of solutions to this issue exist because there is a wide range of definitions to the concept of affordable housing. Policy makers and practitioners base their solutions on the underlying assumption that the definition of affordable housing is relatively static and often easily defined. Research would suggest this is not the case. Additional work is needed to help policy makers and practitioners further define housing affordability and model the factors that impact housing affordability in communities.

The researcher believes that housing affordability is impacted by multiple social, economic, and environmental factors that exist in a given community. These factors manifest in myriad ways to impact the affordability of housing in the community. This research will define these factors and model the interactions between these factors, residents, and community housing to answer the following question:

Do social, economic, and environmental factors interact with household and community conditions to influence residents' ability to obtain or maintain the housing of their choice?

The researcher believes that these factors can be ranked as first order (primary), second order (secondary), and third order (tertiary) impacts to housing affordability in the community. It is believed that second and third order factors vary by housing quality, spatial location, household composition, length of occupancy or ownership, community amenities, and household resources. The researcher defines first order factors as direct individual housing costs, such as rent costs, mortgage costs, utilities, taxes, insurance, and maintenance and repair costs. The researcher defines second order factors as indirect individual housing costs, such as

transportation and childcare. The researcher defines third order factors as indirect systemic housing costs, such as racism and discrimination or climate change.

This research will look to define, model, and describe the impact of second and third order factors on the definition of housing affordability within Habitat for Humanity practice in the state of North Carolina. The research will focus on the aforementioned practice since Habitat for Humanity is one of the largest affordable housing providers in the state and the organization's clients are, by definition, seeking affordable housing.

It is hoped that this research will help practitioners and policy makers see the benefits of implementing community development practices as a part of the creation of affordable housing in their communities. Many policy makers and practitioners focus on only economic solutions, either supply side or demand side solutions, in providing affordable housing. It is likely that a more holistic approach is needed when providing affordable housing to a community.

Chapter 3 - Methods

The research used surveys as the primary method of data collection. The research focused on the experiences and practices of Habitat for Humanity affiliates in the State of North Carolina. Surveys gathered information from affiliates about the topic of housing affordability. Specifically, the surveys gathered affiliates' thoughts on the impacts to their clients' ability to obtain or maintain affordable housing. Surveyed affiliates were interviewed to clarify survey answers and verify information found on surveys.

The survey was built comprising three main parts. The first part of the survey gathered information on impacts on Habitat clients' ability to obtain the housing of their choice. To obtain housing was defined as: An individual's ability to rent or purchase housing that meets their needs and the needs of their household while not putting an undue burden on the economic, physical, or social aspects of their life. The second part of the survey gathered information on impacts to Habitat clients' ability to maintain the housing of their choice. To maintain housing was defined as: An individual's ability to continue living in housing that meets their needs and the needs of their household while not putting an undue burden on the economic, physical, or social aspects of their life. The third part of the survey gathered information about the changing nature of factors and the potential change in impact over a client's tenure in their housing.

First order factors on the survey were purposely ignored as the research was meant to inquire about second and third order factors. A list of 21 factors was created which represent a mix of second and third order factors. These factors were chosen based on the researcher's experience in the nonprofit affordable housing industry. The choice of factors was also influenced by the existing research detailed in the literature review above. An appendix of factors was created to define each of the 21 factors and to give participants a guideline for their

responses on each factor. The first and second parts of the survey asked participants to rate each factor's impact (on a scale of 1-5) on their clients' ability to obtain or maintain the housing of their choice. The third part of the survey asked participants to list the top three factors with the greatest impact on their clients at three points in time during their housing tenure. The chosen three points in time are, 1) at the time of closing on their Habitat house, 2) at 10 years of living in their Habitat house, 3) when they have paid off their Habitat mortgage (typically 30 years).

The survey contained a consent form which only required the affiliate to signify its consent to participate. Habitat affiliates were instructed to participate as an affiliate rather than as an individual. The survey began with an introduction and instruction to the survey. The introduction gave participants an overview of the subject matter they were to be surveyed about. It explained the concepts of second and third order factors and how they impact a client's ability to obtain or maintain housing. The instructions gave some basic definitions of terms, and an explanation of why the researcher ignored first order factors in this survey. The survey contained 9 questions in total. In addition to the descriptions already provided, the survey also included questions to help identify the Habitat affiliate and questions about the typical clientele served by the Habitat affiliate. Attached to the survey was an appendix of factors which gave a description/definition of each of the 21 factors used in the survey.

There are 59 Habitat affiliates operating in North Carolina. The researcher focused on surveying frontline staff at each affiliate who are responsible for working with community members looking for affordable housing. It is thought that frontline staff have the most thorough knowledge of the experiences of community members and are thus the best individuals to survey. Each Habitat affiliate has a different number of employees and a different corporate structure. Thus, the frontline employees at each affiliate have differing titles and job descriptions.

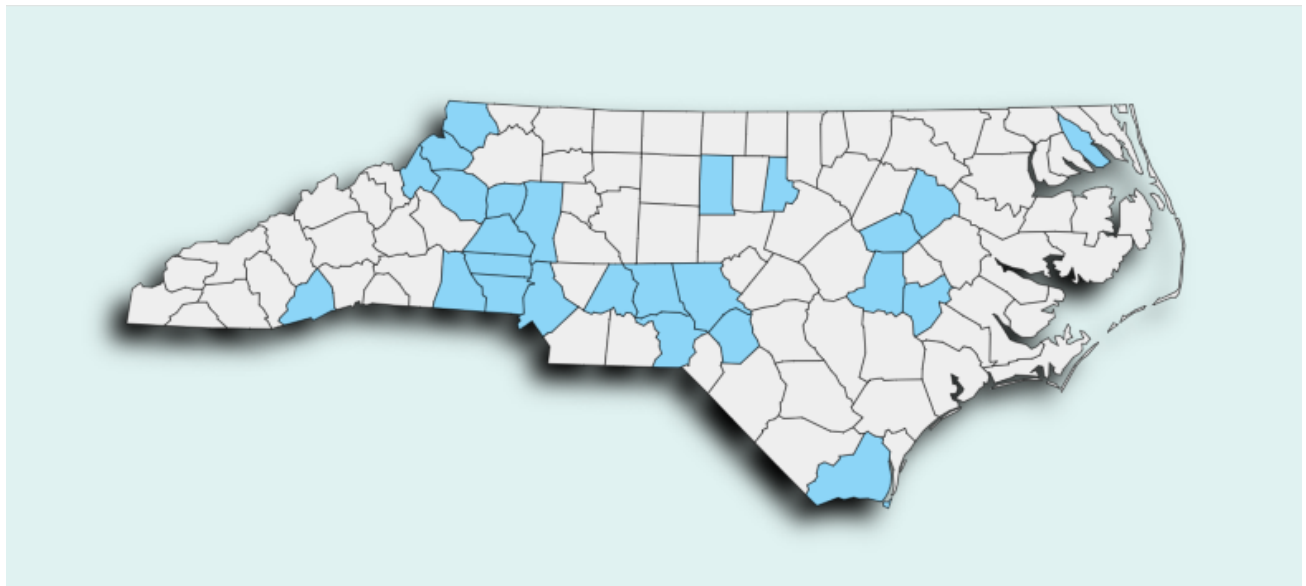
These job titles include: Family Services Coordinator, Homeowner Services Specialist, Homeowner Services Director, Executive Director, Mortgage Servicing Officer, and many others. Contact information, both phone numbers and email addresses, were obtained for 58 of the 59 operating affiliates. The researcher could not find contact information for Habitat for Humanity of Stokes County, NC. The remaining 58 Habitat affiliates were called regarding the research project and associated survey. The researcher identified as a Habitat for Humanity affiliate staff member, briefly explained the research project, and asked the affiliate to consider completing the survey. The researcher explained that a link to the survey would be emailed to the staff member. In instances where an affiliate staff member could not be reached, a voicemail was left with the same information. In some circumstances, the researcher verified the correct contact email address for the affiliate. Within a week of completing all phone calls, the survey link was emailed to every identified affiliate staff member. The contacted individuals were given 17 days to complete the survey. A follow-up email was sent 8 days into the surveying timeline to all staff members who had not yet completed the survey.

It should be noted that the researcher is employed by one of the participating Habitat affiliates. The researcher did not complete the survey but, because of their employment, has a professional relationship with the staff who completed the survey.

Chapter 4 - Findings

In total, 22 Habitat affiliates provided at least a partial response to the survey, with 20 Habitat affiliates providing completed responses to the survey. This is a 33.8% completed response rate. The two affiliates who submitted partial responses completed at least half of the survey. These 22 affiliates provide services to 32 of the 100 counties in North Carolina. Survey responses were compiled. Mean ratings for parts one and two of the survey were calculated. In addition to the survey data, the researcher also collected basic census data from the 2023 ACS. The data collected was at the county level for all of the counties served by the survey participants. Figure 1 shows a map of North Carolina counties served by Habitat affiliates that responded to the survey. (Counties served are shown in blue)

Figure 1: Map of NC counties served by responding Habitat affiliates



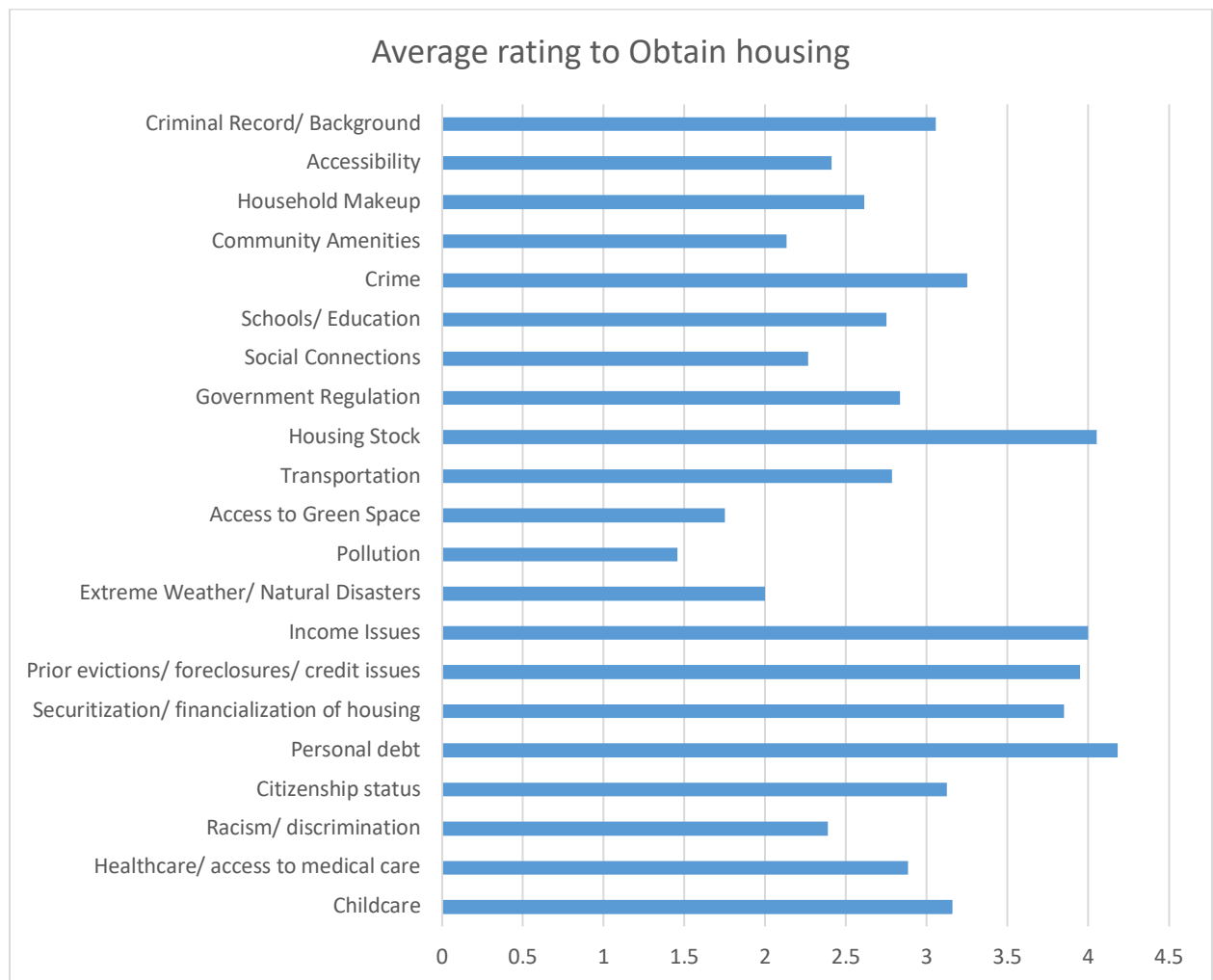
It was thought that census data might assist in conclusions about the survey results. The data was processed according to the three parts of the survey. The first section of data

corresponds to the ratings Habitat affiliate staff gave for clients seeking to obtain housing. The second section of data corresponds to the ratings Habitat affiliate staff gave for clients attempting to maintain housing. The third section of data corresponds to the ‘top-3’ factors Habitat affiliate staff gave for each point in time during their clients’ tenure in Habitat housing.

The average rating for each factor was calculated in both the categories of obtaining housing and maintaining housing. The point-in-time factors were totaled for each chosen point in time. These totals were used to calculate the percentage a factor was listed relative to each chosen point in time and the percentage a factor was listed relative to all of the factors listed in this survey section.

To the question of impacts to clients’ ability to obtain the housing of their choice, the five factors with the highest overall average rating are Personal Debt (4.18), Housing Stock (4.05), Income Issues (4), Prior evictions/ Foreclosures/ Credit issues (3.95), and Securitization/ Financialization of housing (3.85). The five factors with the lowest overall average rating are Social Connections (2.27), Community Amenities (2.13), Extreme Weather/ Natural Disasters (2), Access to Green Space (1.75), and Pollution (1.45). Table 1 shows the average rating for each factor as they impact Habitat clients’ ability to obtain the housing of their choice.

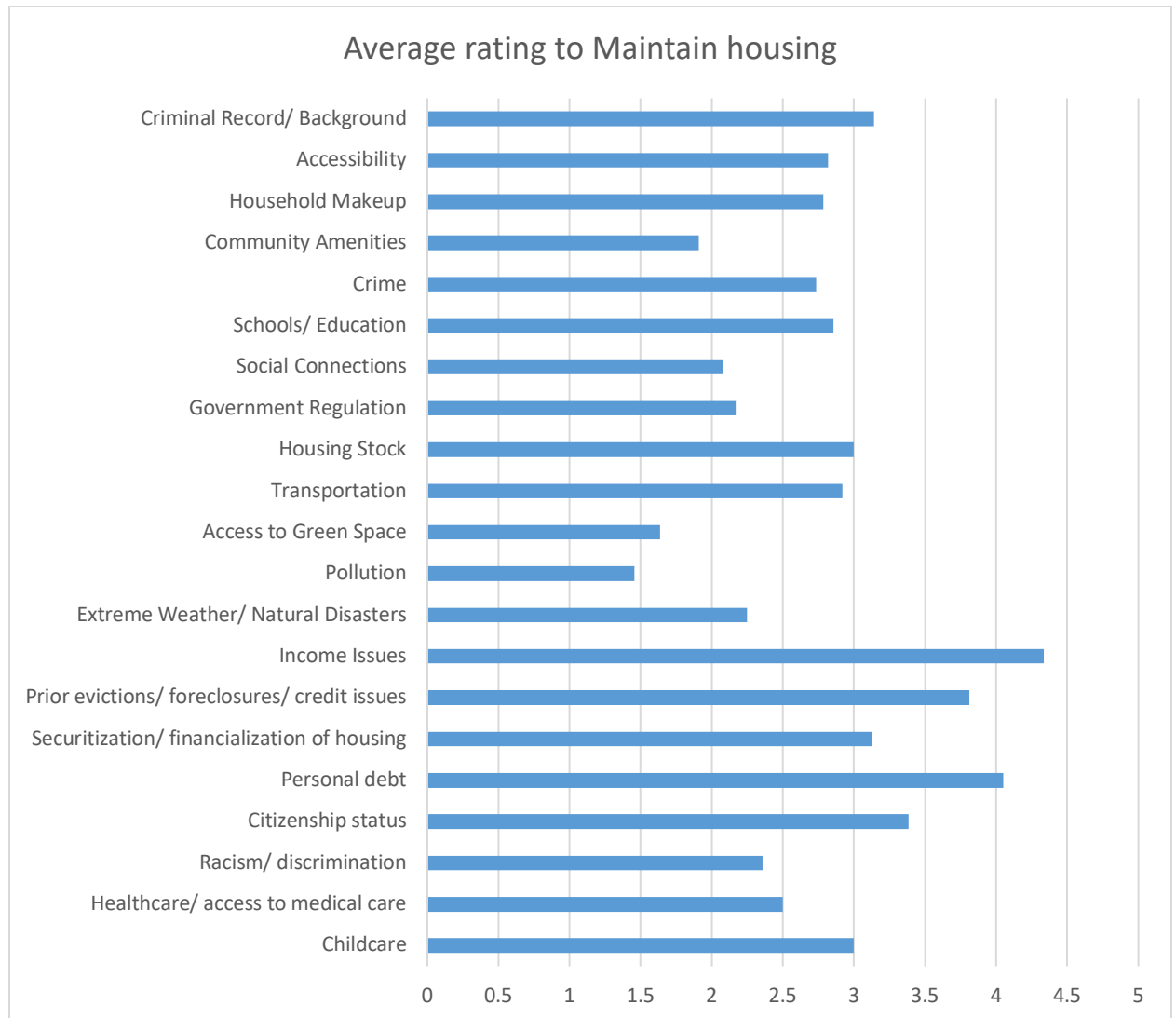
Table 1



To the question of impacts to client's ability to maintain the housing of their choice the five factors with the highest overall average rating are Income Issues (4.33), Personal Debt (4.05), Prior Evictions/ Foreclosures/ Credit issues (3.81), Citizenship status (3.38), and Criminal Record/ Background (3.14). The five factors with the lowest overall average rating are Government Regulation (2.17), Social Connections (2.08), Community Amenities (1.91), Access

to Green Space (1.64), and Pollution (1.45). Table 2 shows the average rating for each factor as they impact Habitat clients' ability to maintain the housing of their choice.

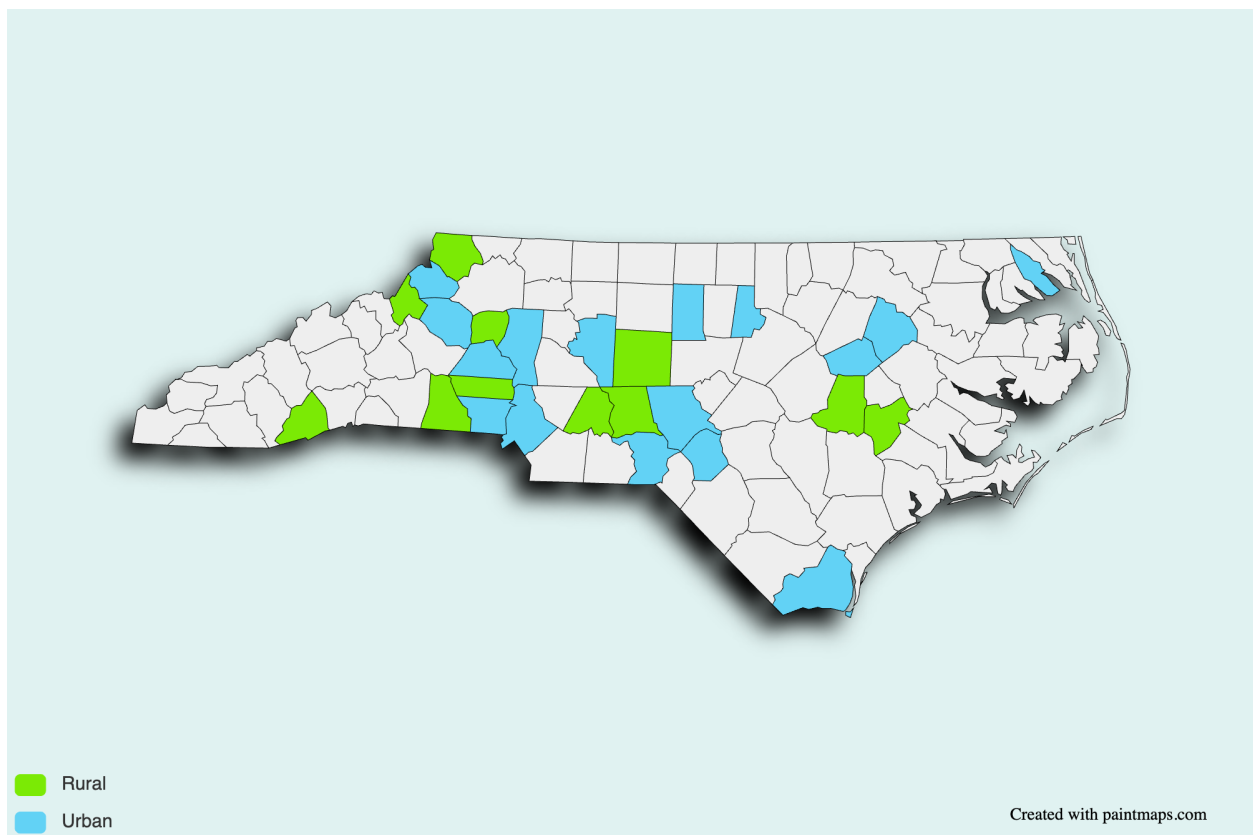
Table 2



Using the census data, the counties receiving Habitat services were divided by certain census data traits. This made for 20 possible grouping combinations for comparison.

1. Rural vs Urban counties – Using U.S. census definitions of urban and rural population, the counties with a larger percentage of population living in a rural area were designated a rural county. Counties with a larger percentage of population living in an urban area were designated as an urban county. Figure 2 shows a map of the relevant counties with rural counties shown in green and urban counties shown in blue.

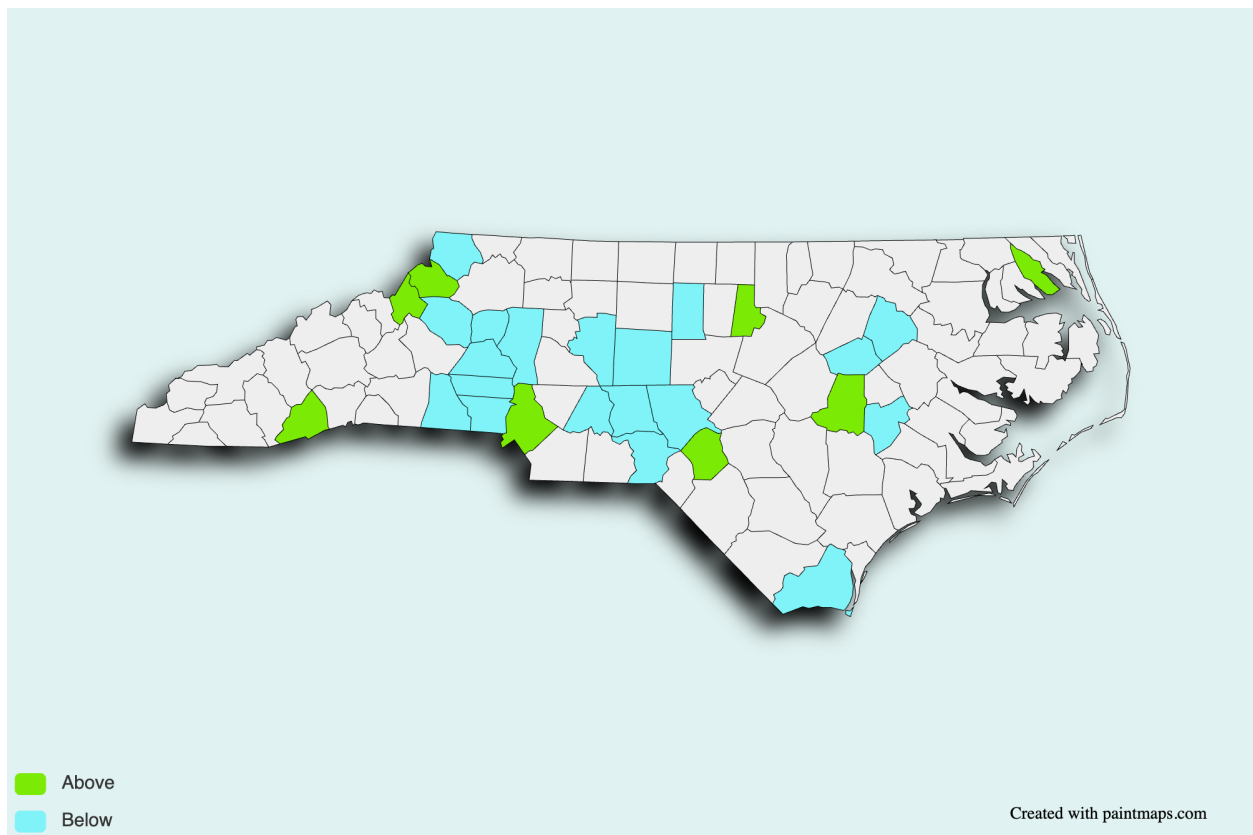
Figure 2: NC counties served by responding Habitat affiliates – Rural vs. Urban



2. North Carolina mobility rate – The geographical mobility rate is a measure of how many households are living in the same housing unit they were one year ago. The state average is 12.9%. For example, a 10% mobility rate means that 10% of the population is living in a different housing unit than it was a year ago. Counties with a geographical mobility rate below the state of North Carolina average were grouped.

Counties with a geographical mobility rate above the state of North Carolina average were grouped. These two groups were compared with each other. Figure 3 shows a map of the relevant counties with counties above the North Carolina state mobility rate shown in green and counties below this rate shown in blue.

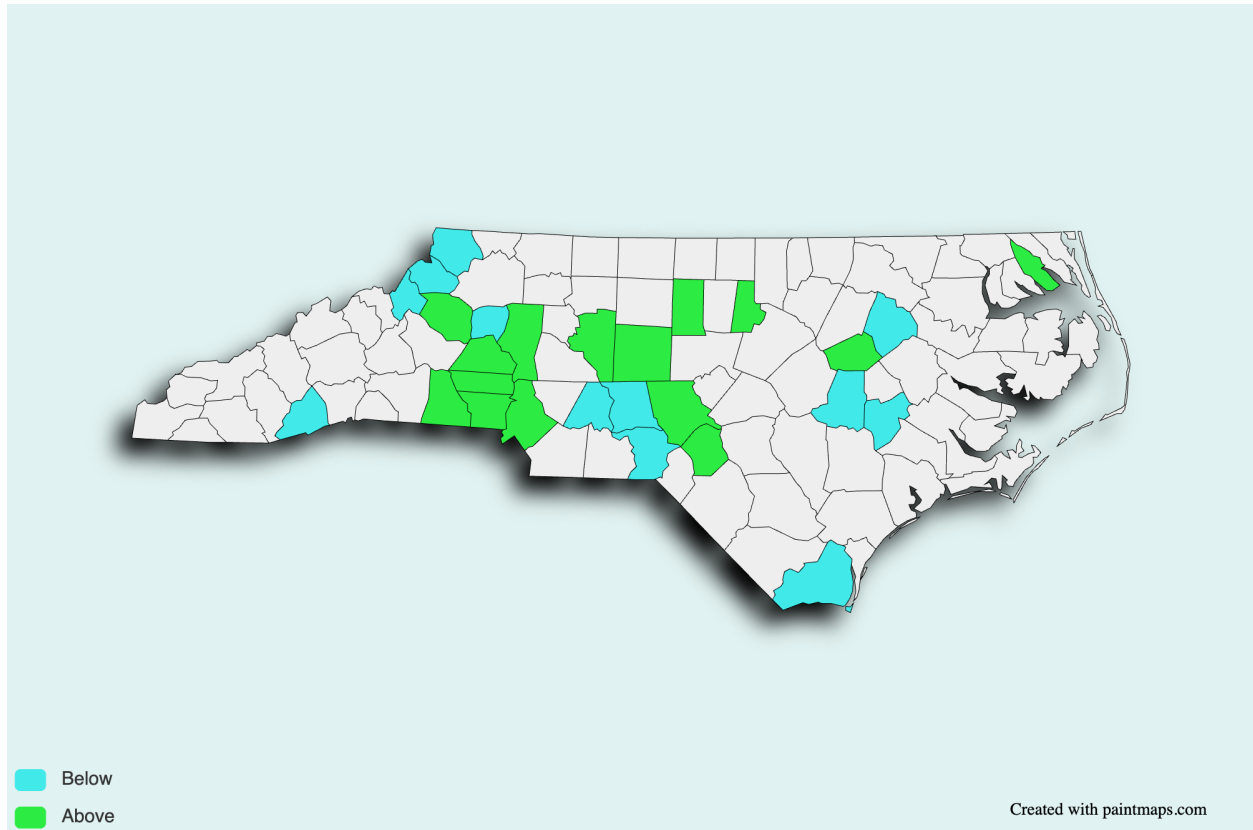
Figure 3: NC counties served by responding Habitat affiliates - above and below the NC state mobility rate



3. North Carolina vacancy rate – The vacancy rate is a measure of how many housing units are occupied. The state average is 88%. For example, a vacancy rate of 90% means that 90% of the housing units are occupied. Counties with a housing unit vacancy rate below the state of North Carolina average were grouped. Counties with a housing unit vacancy rate above the state of North Carolina average were grouped. These

two groups were compared with each other. Figure 4 shows a map of the relevant counties with counties above the North Carolina state vacancy rate shown in green and counties below this rate shown in blue.

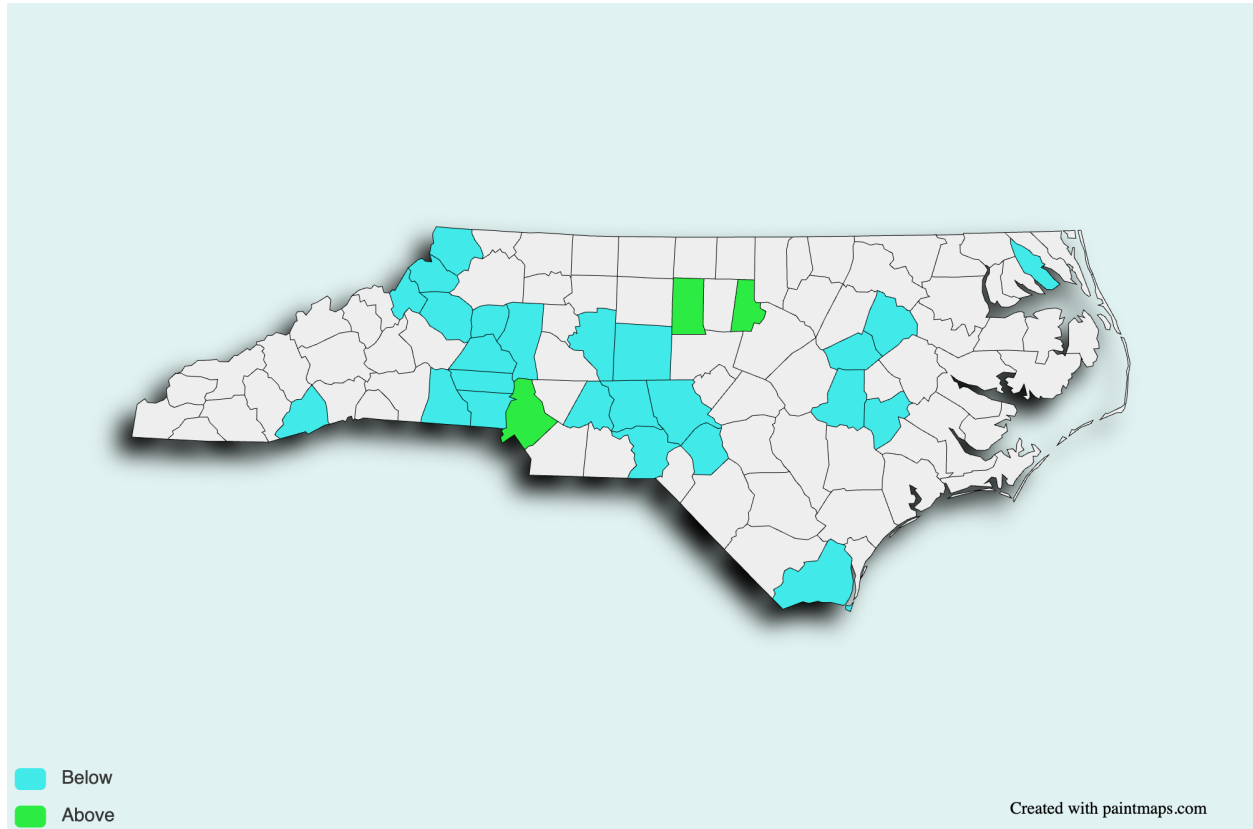
Figure 4: NC counties served by responding Habitat affiliates – above and below the NC state vacancy rate



4. North Carolina foreign born population rate – The foreign-born population rate is a measure of the population who are foreign born. The state average is 9.2%. Counties with a foreign-born population rate below the state of North Carolina average were grouped. Counties with a foreign-born population rate above the state of North Carolina average were grouped. These two groups were compared with each other. Figure 5 shows

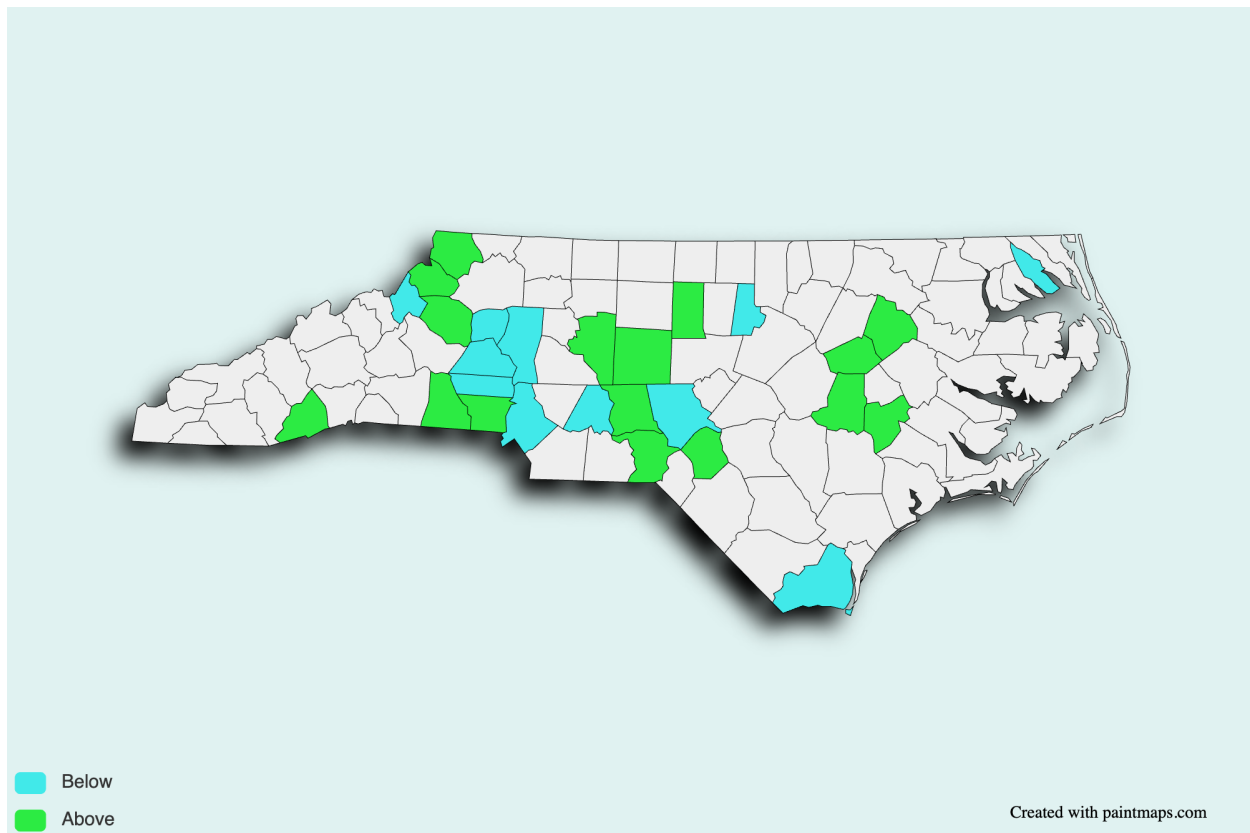
a map of the relevant counties with counties above the North Carolina state foreign born population rate shown in green and counties below this rate shown in blue.

Figure 5: NC counties served by responding Habitat affiliates – above and below the NC state foreign born population rate



5. North Carolina poverty rate – The poverty rate is a measure of the population who lives below the poverty line. The state average is 12.8%. Counties with a poverty rate below the state of North Carolina average were grouped. Counties with a poverty rate above the state of North Carolina average were grouped. These two groups were compared with each other. Figure 6 shows a map of the relevant counties with counties above the North Carolina state poverty rate shown in green and counties below this rate shown in blue.

Figure 6: NC counties served by responding Habitat affiliates – above and below the NC state poverty rate



The factors rating for each grouping was averaged for both obtaining and maintaining housing. The averages were compared with each other. When controlling for all census data traits, every grouping in both the obtaining and maintaining housing survey sections listed Personal Debt and Income Issues among the top five factors. Prior Evictions/ Foreclosures/ Credit Issues was a top five factor in 16 of the 20 possible groupings. Housing Stock was a top five factor in 12 of the 20 possible groupings. Securitization/ Financialization of housing was a top five factor in 11 of the 20 possible groupings. Every grouping in both the obtaining and maintaining housing sections listed Pollution and Access to Green Space among the bottom five factors. Community Amenities was a bottom five factor in 18 of the 20 possible groupings. Extreme Weather was a bottom five factor in 15 of the 20 possible groupings. Social

Connections was a bottom five factor in 15 of the 20 possible groupings. For the remaining groupings, the three top and bottom factors varied across each grouping and between the obtaining and maintaining housing ratings.

The factor variations in the obtaining and maintaining housing survey sections were as follows:

1. Criminal record is a top five factor in maintaining housing for rural counties, counties above the NC poverty rate, and counties below the NC mobility rate. It is a bottom five factor for counties above the NC average foreign-born rate.
2. Citizenship status is a top five factor in maintaining housing for rural counties, counties below the NC mobility rate, counties below the NC foreign-born rate, and counties above the NC poverty rate. It is also a top five factor in obtaining housing for counties above the average NC foreign-born rate.
3. Childcare is a top five factor in maintaining housing for counties below the NC vacancy rate, counties below the NC foreign-born rate, counties below the NC poverty rate, and counties above the NC mobility rate.
4. Household makeup is a top five factor in maintaining housing for counties above the NC foreign-born rate and counties above the NC vacancy rate.
5. Crime is a top five factor in maintaining housing for counties below the NC poverty rate. It is also a top five factor in obtaining housing for counties above the NC foreign-born rate and counties above the NC mobility rate.
6. Schools/ Education is a top five factor in maintaining housing for counties above the NC mobility rate.

7. Transportation is a top five factor in maintaining housing for urban counties, counties below the NC poverty rate, counties above the NC vacancy rate, and counties above the NC foreign-born rate.
8. Government regulations is a bottom five factor in maintaining housing for rural counties, counties above and below the NC vacancy rate, counties above and below the NC foreign-born rate, counties above and below the NC poverty rate, and counties above the NC mobility rate.
9. Racism/ discrimination is a bottom five factor in obtaining housing in counties below the NC mobility rate and counties above the NC vacancy rate.
10. Criminal record is a bottom five factor in maintaining housing in counties above the NC foreign-born rate.
11. Healthcare/ Access to medical care and Accessibility are bottom five factors in maintaining housing in counties above the NC foreign-born rate. They are also bottom five factors in obtaining housing in urban counties and counties above the NC foreign-born rate.

The obtaining and maintaining housing survey sections also showed the following results:

1. Citizenship is a top five overall factor for maintaining housing.
2. The Ashe and Transylvania County affiliates ranked extreme weather highly as a factor impacting their clients' ability to obtain or maintain housing. These affiliates are located in North Carolina mountain counties that were impacted by Hurricane Helene in the Fall of 2024. These affiliates ranked Extreme Weather at 4 or higher as a factor

towards obtaining or maintaining housing. The only other affiliate to do this was the Catawba County affiliate. This county was impacted by Helene but those impacts were minimal. (The researcher feels Catawba County ranked Extreme Weather this way because the researcher and affiliate have a close professional relationship. It is possible this relationship played a role influencing this rating.)

In looking at the point in time section, it is assumed that the more times an individual factor was mentioned, the more important a role the factor plays in an individual's ability to maintain their housing. The results showed that Pollution and Access to Green Space were not listed at any point in time. Personal Debt and Income Issues were the factors most frequently listed in this section, at 23% and 27%. Every other factor was listed less than 8% of the time.

Several noteworthy results were found in the point-in-time section of the survey:

1. Childcare increases in importance from closing to 10 years and disappears at 30 years.
2. Healthcare increases in importance over time.
3. Household makeup increases in importance over time.
4. Racism and Citizenship status are of minor importance at closing and no importance for the remaining time in a home.
5. Extreme Weather has no importance at closing and grows in importance over the years.
6. Housing stock is important at closing and has no importance for the remaining time in the home.

7. Social connections and government regulations have minimal importance at closing and 10 years and grow in importance at 30 years.
8. Accessibility has no importance until 30 years at which time it carries some importance.
9. Criminal record has minor importance at closing and no importance for the remaining time in the home.

The tables below illustrate the factors' impact on Habitat homeowners' ability to maintain their Habitat home. Specifically, the three graphs show the change in impact over the tenure of a Habitat homeowner's time in their home. Table 3 shows the number of times a factor was listed as a top three factor at the time of closing. It is worth noting that Income Issues and Personal Debt were listed the greatest number of times. It is also worth noting that issues such as Household Makeup, Childcare, and Healthcare were listed a small number of times.

Table 3

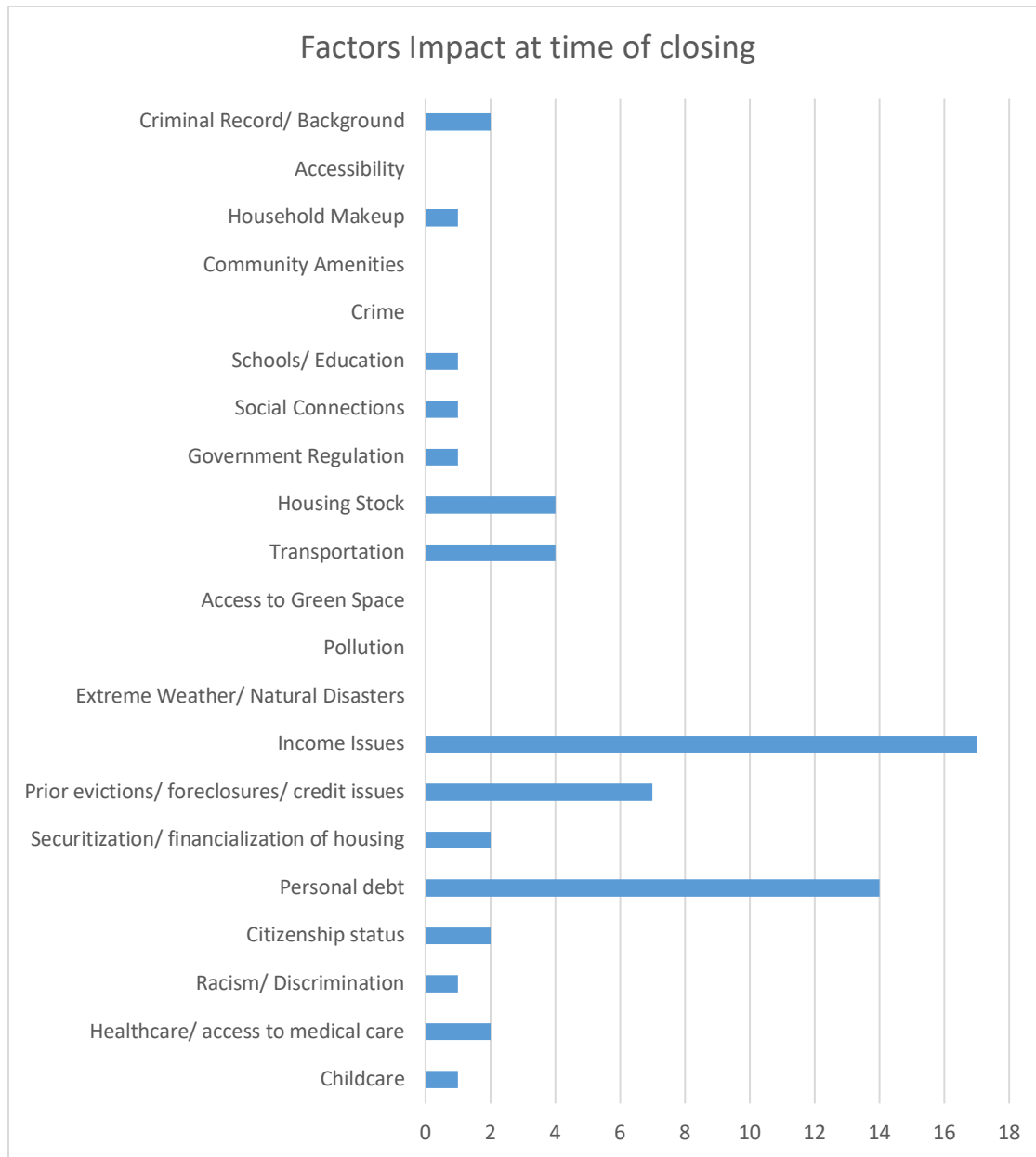


Table 4 shows the number of times a factor was listed as a top three factor after a Habitat client has been in their home for 10 years. Income Issues and Personal debt remain the most

important (frequently listed) factors. It is worth noting that Household Makeup, Childcare, and Healthcare have grown in importance.

Table 4

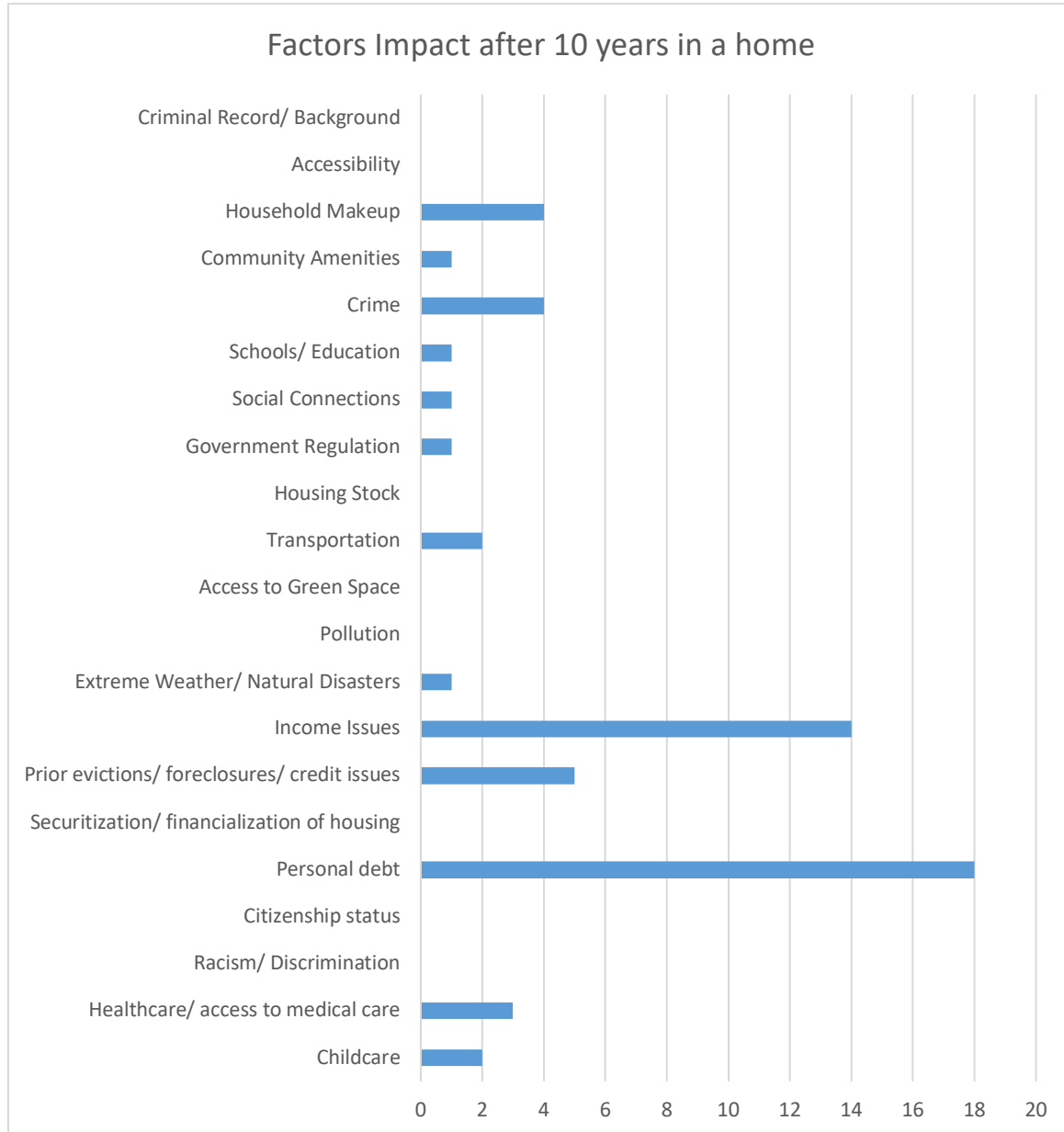
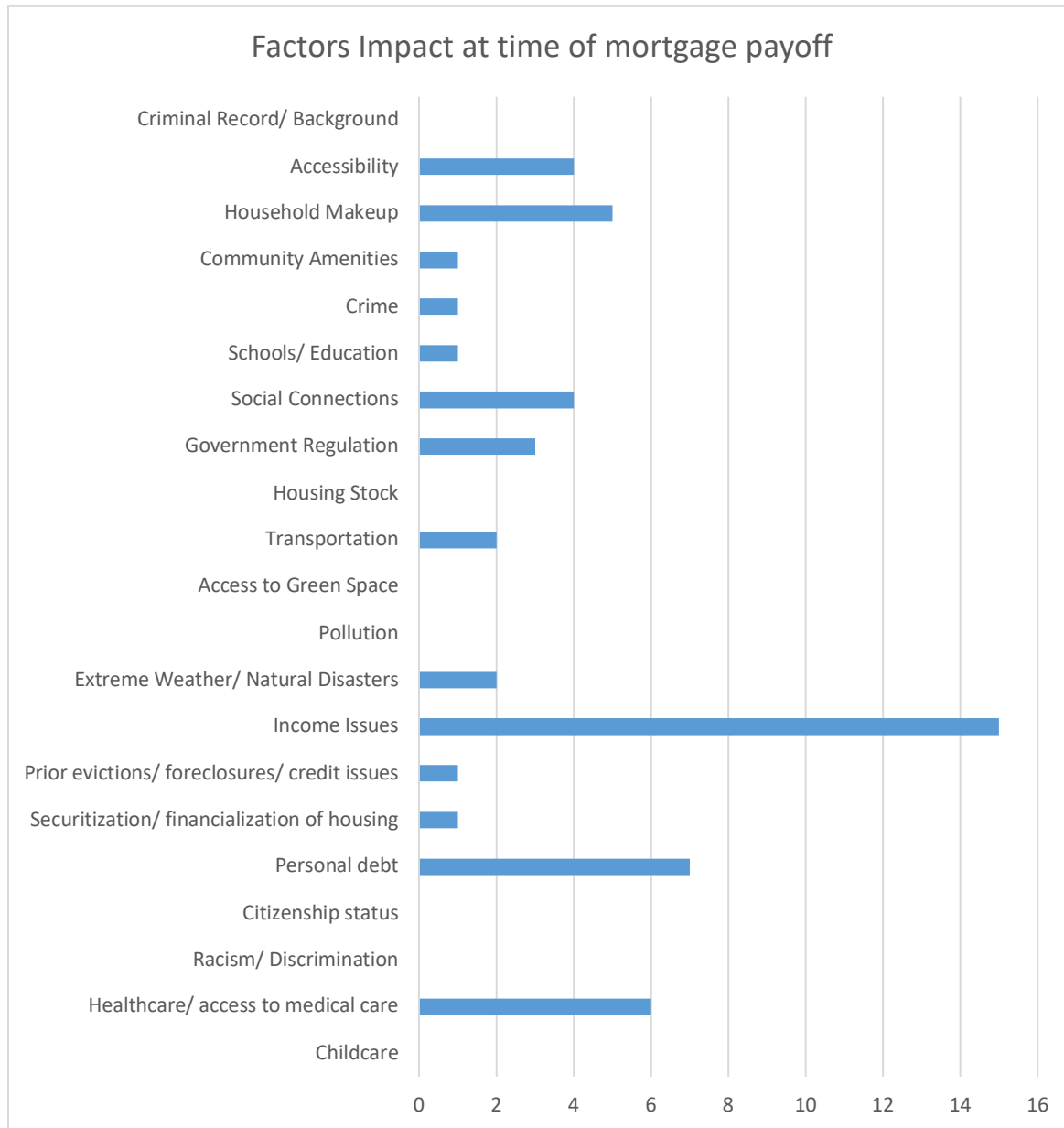


Table 5 shows the number of times a factor was listed as a top three factor after a Habitat client has been in their home long enough to pay off the mortgage. Typically, this timeline is 20 or 30 years. Income Issues and Personal Debt remain the most important factors. It is worth

noting that Accessibility has become important, Healthcare has become much more important, and Childcare has lost its importance.

Table 5



Chapter 5 - Discussion

Overall, the hypothesis introduced prior to beginning this research appears to be partially correct and partially incorrect. *It does appear, very broadly speaking, that economic factors are considered to have the greatest impact, social factors are considered to have some impact (under certain conditions), and environmental factors are considered to have little impact. Additionally, it appears that respondents feel factors more closely related to individual choice have a greater impact than systemic factors on their clients' ability to obtain or maintain housing.*

It appears that respondents view only a small set of factors as impacting (in any meaningful way) their clients' ability to obtain housing. This set of factors all relate to individual economic choices or systemic economic conditions. However, respondents view a much wider range of factors as impacting their clients' ability to maintain their housing. This wider range of factors include household makeup, childcare, criminal record, etc. Additionally, the range of factors impacting clients' ability to maintain housing broadens even more when these factors are filtered through the lens of different social, economic, and environmental conditions (as seen in the sorting of factors by different census traits). Whether categorizing the factors into primary, secondary, and tertiary factors is an appropriate model or has any bearing on the impact of factors is less clear.

Some of the overall results found from the first two sections of the survey were anticipated. It is clear that Habitat affiliates feel individual and systemic economic factors play the largest role in determining an individual's ability to obtain or maintain their housing. This is reflected in factors such as income issues and personal debt remaining as the highest ranked impacting factors regardless of the context of these factors. It was surprising to see the factors

that also remain consistently ranked as the lowest impacting factors. Extreme Weather, Pollution, and Access to Green Space are environmental related factors and remained ranked as the lowest factors that impact housing affordability.

One way to view the position of the five highest rated factors and five lowest rated factors is through the lens of individual choice vs systemic barrier. It could be argued that three out of the top five highest rated factors lean towards being impacted most by individual choice: Personal Debt, Income Issues, & Prior Evictions/ Foreclosures/ Credit Issues. It could also be argued that four out of the bottom five lowest rated factors are the result of systemic deficiencies upon which individual choice can have very little impact: Extreme Weather, Pollution, Access to Green Space, & Community Amenities.

Outside of these general conclusions, there are several more specific and interesting conclusions that could be considered. These conclusions are drawn on a limited sample set but could form the basis for further research. It would be interesting to see if interventions within these specific conclusions would result in measurable outcomes.

1. If a Habitat affiliate is located in a rural county, a poorer than average county, or a county where people move less often than average, advocating or working for fairer housing conditions for people with a criminal record could improve residents' ability to remain in their housing.
2. If a Habitat affiliate is located in a rural county, a county where people move less often than average, a county with a less than average number of immigrants, or a poorer than average county, advocating or working for protections for residents with uncertain citizenship statuses could improve residents' ability to remain in their housing.

3. If a Habitat affiliate is located in a county with a higher vacancy rate, a county with a less than average number of immigrants, a wealthier than average county, or a county with a higher than average geographic mobility rate, providing childcare options to residents could improve residents' ability to remain in their housing.
4. If a Habitat affiliate is located in a county with a higher than average number of immigrants or in a county with a lower vacancy rate, providing housing options for multigenerational families, single adults, or other household sizes and makeups could improve residents' ability to remain in their housing. This work could include improving the ability for residents to move from one housing type to another.
5. If a Habitat affiliate is located in a wealthier than average county, a county with a higher than average immigrant population, and a higher than average geographical mobility rate, addressing crime related issues in that county could improve residents' ability to remain in their housing.
6. If a Habitat affiliate is located in a wealthier than average county, a county with a higher than average vacancy rate, or a county with a higher than average number of immigrants, providing transportation options or helping to improve transportation infrastructure could improve residents' ability to remain in their housing.
7. Government regulation appears to play a very small role in a client's ability to keep their housing.
8. Two affiliates, whose service areas are located in the Blue Ridge mountains, reported that extreme weather played an important role in their clients' ability to obtain or maintain housing. These affiliates were greatly impacted by Hurricane Helene in the Fall of 2024. It makes sense that this factor is at the forefront of their mind. It is interesting

that affiliates who live closer to the Atlantic Ocean and have experienced multiple hurricanes, did not report the same impacts of extreme weather. It is possible that this is because these communities are better prepared for extreme weather. Alternatively, it is also possible that this is because extreme weather is not at the forefront of their minds.

9. It is interesting that citizenship status is one of the five highest rated factors for a client's ability to maintain housing. This could be a reflection of the current political climate. It could also be due to the extra societal and regulatory barriers faced by individuals with uncertain citizenship statuses.

Regarding the point in time section of the survey, several factors increase in importance over time namely Healthcare, Childcare, Extreme Weather, and Household Makeup. This indicates the changing nature of these factors' impact on an individual's ability to maintain their housing. It makes sense that as an individual ages, their health plays a bigger role in their housing decisions and ability to maintain housing. As households age, children enter the household and leave, other generations may enter and leave. The changing nature of the household makeup over time dictates how capably an individual can maintain their housing over time.

Extreme Weather is likely to impact households in several ways over time. With the growing impact of climate change, extreme weather will impact individual housing quality, systemic housing construction, and urban planning in several ways. Housing in certain areas of the county will become no longer 'maintainable'. For example, as sea levels rise, households located near the ocean will need to relocate further inland. For housing that remains 'maintainable', the costs of keeping that housing in good working order could become

prohibitive. From a psychological perspective, a household planning to live in a housing unit for only one year may not consider the potential disruption it might experience from extreme weather over the course of that year. However, if a household plans to live in a housing unit for a long period of time, it will certainly consider the potential impacts of extreme weather over the household's tenure in that housing. This is certainly a psychological weight that the household must carry.

Several factors are important at closing and have no importance for the remainder of the time in a home, namely Housing Stock and Criminal Record. This is to be expected as the available housing stock in a community can impact a household's ability to obtain housing. If a household member has a criminal record, this can impact the household's ability to obtain housing. It is to be expected that these factors are of importance at the time a household is attempting to obtain housing and play little role in that household's ability to maintain its housing. As described in the hypothesis, it is clear that factors vary in importance depending on the Habitat client's tenure in the home and the economic, social, and environmental situation of the client's household.

There are several other conclusions to be drawn from this research as it relates to Habitat for Humanity affiliates' perceptions of housing affordability and their philosophy behind it. The researcher acknowledges the possibility of responder bias and believes there are some important conclusions that can be drawn from this possibility. The researcher can use their knowledge of Habitat for Humanity affiliates in the state of North Carolina and the housing philosophy espoused by Habitat affiliates to draw some conclusions based on the findings. The researcher's knowledge is drawn from several years of employment with a Habitat for Humanity affiliate.

It is possible that NC Habitat affiliates believe an individual client's choices have the greatest impact on their ability to obtain or maintain housing. Additionally, affiliates may believe that a community's housing ecosystem has a lesser impact (or no impact) on a client's ability to obtain or maintain housing. This is reflected in that the findings consistently showed that factors subject to more 'individual control' were ranked highly and factors subject to more 'systemic impact' were ranked so low. This philosophy on the idea of individual control vs systemic impact is widespread throughout many affordable housing providers.

The results could reflect another similar philosophy among the participating Habitat affiliates. Affiliates were asked to discuss their clients' ability to obtain or maintain the housing of their choice. The idea of 'housing of their choice' is not often discussed among Habitat affiliates in North Carolina. A client's ability to choose aspects of their housing often takes a back seat to the client's ability to financially afford a housing unit of any kind. Said another way, direct housing cost is often seen as the only lever by which a Habitat affiliate can impact a client's housing affordability. For many years, direct housing cost has been the only tool Habitat affiliates have used to impact housing affordability for their clients. So, by extension, it is likely that Habitat affiliates see economic factors as the only factors that could have a viable impact on housing affordability. This could be a reason why factors such as Social Connectivity and Community Amenities were ranked so low. These types of factors could be considered either luxuries or immaterial (or both) when compared to direct housing costs.

Extreme Weather, Pollution, and Access to Green Space remaining in the five lowest ranked factors so consistently shows Habitat's philosophy on environmental factors as they relate to housing affordability. This philosophy could be due to a lack of resources to address environmental factors in individual communities. Needed resources could involve financial

assistance, technical assistance, or political capital. It could also be due to limited concern for the long-term effects of pollution or climate change on the housing market. Additionally, it could be due to an inability to tie environmental factors to the problem of affordable housing in individual communities.

Social Connectivity and Community Amenities remaining in the five lowest ranked factors so consistently could show Habitat's philosophy on social and community factors as they relate to housing affordability. This philosophy could be due to a view that these factors are luxuries compared to direct housing costs or have no impact on housing affordability. This philosophy could also be due to a lack of resources to support social connectivity or adequate community amenities. It should also be considered that this philosophy reflects the growing nationwide reduction in social capital in individual communities. As social capital decreases, community members become less aware of its importance in the community. This philosophy could also be due to a lack of knowledge about the intersectional nature of community and housing.

Suggestions for further research

A fundamental research difficulty exists with this research. The researcher attempted to educate participants on the research subject and then survey the participants hoping they would incorporate the new education into their survey responses. This is clearly not a viable research method, and the participants did not appear to incorporate the education into their responses. A better method may have been to conduct an initial research project in which participants were educated on the subject. Then a follow-up research project could be conducted in which the participants were surveyed on the subject, having completed the educational component.

It is worth noting that the participating Habitat affiliates reported on the demographics of their clients. The researcher felt that collecting this information might help to inform the responses received on the survey. Affiliates reported that all of their clients had lower incomes, at 80% of the area median income or below. Affiliates also reported that most of their clients were single, female, heads of their households, and racially identified as black. Many clients have small children in the household. The researcher feels this information is important because these demographics are representative of the client sample most Habitat affiliates were likely considering when answering survey questions. As this client sample size is so demographically specific, the survey results may not apply across other demographic groups.

It is also worth noting that Habitat for Humanity plays a very small niche role in the housing market and even in the affordable housing market. Habitat sells homes to low-income buyers using a shared equity model of homeownership. This leaves most Habitat affiliates with very little operational knowledge about rental housing, Land Trusts, LIHTC housing, ADUs, etc. This gives Habitat affiliate staff a very niche and specific view of the factors that impact affordable housing. This view is not representative of the entire housing market or even the affordable housing market. Additionally, Habitat is a nonprofit organization, which gives its staff a particular point of view on affordable housing. Survey results may not apply across 'for-profit' affordable housing providers.

The researcher suggests that additional research could conduct similar surveying with a wider range of demographic types in focus (i.e. individuals of different genders, races, or incomes). As previously stated, other research could be done in two parts, first focusing on educating affordable housing providers and second focusing on conducting similar surveying. Also, similar surveying could be done with other affordable housing providers or other

organizations involved in the housing market. This research could also be done with other Habitat affiliates in other states, or nationwide.

This research was conducted with affordable housing providers as the researcher felt the providers had the right combination of knowledge about the housing market and knowledge about the needs of their clients to answer the survey questions. However, similar research conducted directly with individuals who are searching for housing could broaden the knowledge base on the subject of affordable housing. Specifically, additional knowledge could be gained on the role that second and third order factors play on individuals' ability to obtain or maintain affordable housing.

Additional research could be conducted focusing on specific factors listed in this research. For example, one could research the impacts of citizenship status on someone's ability to maintain their housing. Or one could research the impacts of social connections and/or community amenities on housing affordability. Additional research could be done on the idea of 'housing of choice', the idea that a household should be able to choose housing that is both affordable and meets its needs, rather than being forced to settle for housing that is simply affordable.

Practitioners and policy makers frequently base their housing solutions on a definition of affordability that aligns with their political or ideological views. Some do so with supporting research, and some do not. Getting these professionals to consider other definitions of housing affordability has challenges beyond simply developing a better definition. Further research is needed in this field both for the purposes of education and for better defining the issue of the lack of affordable housing in our communities.

If the 30% rule of thumb is not an appropriate measurement of housing affordability, as this research suggests, what is an appropriate measurement? This research suggests that economic factors have the largest impact on a household's ability to obtain the housing of its choice. But these factors do not necessarily have the largest impact on that household's ability to maintain the housing of its choice. Said another way, the 30% rule of thumb might be the fastest and most effective tool we have at this time to measure housing affordability at the time housing is acquired. But this rule of thumb does a poor job of measuring housing affordability in the long term (over the life of a household's tenure in a housing unit). Additionally, due to its inability to account for the changing needs and circumstances of a household over the household's tenure in a unit, this rule of thumb should not be universally applied to all households, in all situations, and in all spatial locations.

Further research is needed to determine the most appropriate mix of factors that should be considered when developing an affordable housing threshold or a new rule of thumb. It is likely that additional factors should be considered when developing a new threshold or measurement. A new measurement should consider redefining what factors should be considered as housing costs. Clearly first order factors (as listed in this research) should still be considered as housing costs. But, due to the spatially fixed nature of housing, it is likely that several second or third order factors should also be considered as housing costs. Redefining what is considered a housing cost would change the implications of using a universal 30% rule of thumb as a housing affordability measurement.

Alternatively, additional research could be done to help localize a rule of thumb as a useful housing affordability measurement. It is likely that several local or regional factors should be considered when developing a rule of thumb measurement. A localized rule of thumb could

take into consideration factors such as local housing quality, community environmental conditions, local economic conditions, available public transportation, available childcare options, and community access to medical care. These factors play a role in a household's ability to maintain their housing over time.

This research suggests that Habitat affiliates in the state of North Carolina could take certain action steps or adopt policy measures to address housing affordability in their community in a few alternative ways. Citizenship status is a factor that has a greater impact on a household's ability to maintain their housing. Habitat affiliates should consider advocacy work that will provide funding or programs to help community residents with uncertain citizenship statuses maintain their housing. Accessibility and Medical care are factors that have a greater impact on a household's ability to maintain their housing. Habitat affiliates should consider implementing programs that specifically address accessibility modifications or housing improvements that alleviate housing related health issues in their communities.

Additionally, Habitat affiliates and their communities should begin to focus on interventions that help households maintain their housing, in addition to their current work. These interventions will require the work of the entire community. For example, many Habitat affiliates may consider it 'mission creep' to start a program focusing on affordable childcare in their community. But, in partnering with a community organization that focuses on affordable childcare, the Habitat affiliate is ensuring that its clients and community residents can maintain their housing affordably. This will require Habitat affiliates to partner with the community and educate the community as to the intersectional nature of housing affordability. Only by working together as a community can counties in North Carolina address the need for affordable housing.

While this research focuses on Habitat affiliates in the state of North Carolina, these action steps are likely applicable to communities and affordable housing providers across the country.

References

Anacker, K. B. (2019) Introduction: housing affordability and affordable housing. *International Journal of Housing Policy*, 19(1), 1-16. <https://doi.org/10.1080/19491247.2018.1560544>

Baker, E., Bentley, R., Lester, L., & Beer, A. (2016) Housing affordability and residential mobility as drivers of locational inequality. *Applied Geography*, 72, 65-75.
<https://doi.org/10.1016/j.apgeog.2016.05.007>

Bao, H. X. H. (2021) Understanding Affordability: The Economics of Housing Markets. *Journal of the American Planning Association*, 87(4), 588-590.
<https://doi.org/10.1080/01944363.2021.1956258>

Ben-Shahar, D. & Warszawski, J. (2016) Inequality in housing affordability: Measurement and estimation. *Urban Studies*, 53(6), 1178-1202. <https://www.jstor.org/stable/26151103>

Ezennia, I. & Hoskara, S. (2019) Methodological weaknesses in the measurement approaches and concept of housing affordability used in housing research: A qualitative study. *PLOS ONE*, 14(8): e0221246. <https://doi.org/10.1371/journal.pone.0221246>

Haffner, M. E., & Hulse, K. (2019) A fresh look at contemporary perspectives on Urban Housing Affordability. *International Journal of Urban Sciences*, 25(sup1), 59-79.
<https://doi.org/10.1080/12265934.2019.1687320>

Leishman, C. & Rowley, S. (2012) Affordable Housing. In the SAGE Handbook of Housing Studies (pp. 379-396). SAGE Publications Ltd. <https://doi.org/10.4135/97814462477570>.

Mulliner, E., Smallbone, K., & Maliene, F. (2012) An assessment of sustainable housing affordability using a multiple criteria decision making method. *Omega*, 41(2), 270-279. <https://doi.org/10.1016/j.omega.2012.05.002>

Murphy, L. (2014). 'Houston, we've got a problem': The Political Construction of a Housing Affordability Metric in New Zealand. *Housing Studies*, 29(7), 893–909. <https://doi.org/10.1080/02673037.2014.915291>

Appendix A - Thesis Survey

1. Please state the name of your Habitat affiliate
2. Please state the counties your affiliate serves in NC
3. Please rate the following factors based on their impact on your clients' ability to obtain the housing of their choice. Please review the attached appendix for definitions of the factors listed below. (1 – no impact, 2 – little impact, 3 – mild impact, 4 – some impact, 5 – considerable impact)

Social:

Childcare

Healthcare/ access to medical care

Racism/ discrimination

Citizenship status

Economic:

Personal Debt

Securitization/ financialization of housing

Prior evictions/ foreclosures/ credit issues

Income issues

Environmental:

Extreme Weather/ Natural disaster

Pollution

Access to green space

Community:

Transportation

Housing Stock

Government regulation

Social Connections

Schools/ Education

Crime

Community Amenities (access to food, banking, public safety, etc)

Household:

Household makeup

Accessibility

Criminal record/ background

Other, please specify

4. Please rate the following factors based on their impact on your clients' ability to maintain the housing of their choice. Please review the attached appendix for definitions of the factors listed below. (1 – no impact, 2 – little impact, 3 – mild impact, 4 – some impact, 5 – considerable impact)

Social:

Childcare

Healthcare/ access to medical care

Racism/ discrimination

Citizenship status

Economic:

Personal Debt

Securitization/ financialization of housing

Prior evictions/ foreclosures/ credit issues

Income issues

Environmental:

Extreme Weather/ Natural disaster

Pollution

Access to green space

Community:

Transportation

Housing Stock

Government regulation

Social Connections

Schools/ Education

Crime

Community Amenities (access to food, banking, public safety, etc)

Household:

Household makeup

Accessibility

Criminal record/ background

Other, please specify

(Researchers note: It is anticipated that the section below will be constructed as a digital grid with dropdown selection menus allowing the participant to easily enter their answers into the grid)

5. Please imagine you are selling a Habitat home to a family. Please enter the top 3 factors that will have the greatest impact on that household's ability to maintain their housing at the listed points in time.

a. Top 3 factors at house closing

b. Top 3 factors at 10 years in the home

c. Top 3 factors when mortgage is paid off

6. Please describe the income guidelines for your homeownership program.

7. Please describe the demographics of the homebuyers you have served in the past 12 months (list the number of clients in each category). (M,F, nonbinary, transmale, transfemale) (AIAN, Asian, Black, Hispanic or Latino, NHPI, W, multiracial) (Age: 0-5, 6-17, 18-24, 25-34, 35-44, 45-54, 65+)

Appendix B - Appendix of Factors

The following appendix provides the researcher's definitions of the factors listed in the attached survey:

1. Childcare – The cost of childcare and access to acceptable childcare in the community.
2. Healthcare/ access to medical care – The cost of healthcare and access to appropriate medical care in the community.
3. Racism/ discrimination – Discrimination from landlords, banks, or other housing or financial services providers based on the client's race, color, ethnicity, national origin, religion, gender, sexual orientation, familial status, age, disability, or other prohibited basis. This discrimination can be encountered at the individual level or at the systemic level.
4. Citizenship status – Requirements that a client have a certain citizenship status in order to obtain or maintain housing.
5. Personal debt – Debt incurred and/or owned by the client, including but not limited to, credit card debt, student loans, car loans, or mortgages.
6. Securitization/ financialization of housing – Financialization: housing costs money and provides potential profit for those who sell or rent housing. Those providing housing have an incentive to maximize profits. Securitization: the systemic financialization of housing. i.e. housing and/or mortgages being used as a commodity by banks and in the stock market.
7. Prior Evictions/ foreclosures/ credit issues – Derogatory credit issues owned by the client. This includes but is not limited to prior foreclosures, evictions, repossessions, charged off accounts, monetary judgments, or existing liens.
8. Income issues – Inadequate client or household income. This could be the result of unemployment, underemployment, or inadequate income from benefits such as social security, pensions, or disability.
9. Extreme weather/ natural disaster – Extreme weather events or natural disasters such as hurricanes, rain or wind storms, wildfires or earthquakes.
10. Pollution – Air pollution, water pollution, soil pollution, noise pollution, etc.
11. Access to green space – Access or proximity to a community's parks, rivers, lakes, or other green spaces.
12. Transportation – The cost of personal transportation such as auto insurance, gas, or repairs. Also the cost of or access to public transportation.
13. Housing stock – The amount of housing available in the community and the quality of available housing in the community.
14. Government regulation – Zoning regulations, building codes, consumer protections, banking regulations, etc.
15. Social connections – Relationships with or proximity to friends, neighbors, or family members. This could include a client's lack of relationships or inability to feel welcome in a community.
16. Schools/ Education – Cost of or access to schools or educational opportunities for children or adults, including colleges, career or vocational programs, or other adult learning opportunities. This also includes the quality of available educational opportunities.

17. Crime – Real or perceived neighborhood crime and police or municipal response to crime.
18. Community Amenities – Cost of or access to healthy food, banking services, fire services, or other public amenities.
19. Household makeup – The number of household members, number of and age of children, number of adults in the household, marital status or relationship status of adults in the household, number of generations living in the household.
20. Accessibility – The cost of or access to housing that suits the client's mobility or disability needs or the needs of someone in their household.
21. Criminal record/ background – The client's criminal record or background or the criminal record or background of a household member.
22. Other – Please specify factors of your choosing that suit the requirements of the study.