



Proceeding Paper

Barriers to and Enablers of Affordable Housing Construction: Insights from Construction Industry Professionals [†]

Max Spaan and Yewande S. Abraham *

Department of Civil Engineering Technology Environmental Management and Safety, Rochester Institute of Technology, Rochester, NY 14623, USA; mfs7679@rit.edu

- * Correspondence: ysaite@rit.edu; Tel.: +1-(585)-475-6214
- [†] Presented at the 1st International Online Conference on Buildings, 24–26 October 2023; Available online: https://iocbd2023.sciforum.net/.

Abstract: Recent research emphasizes the urgent need to improve affordable housing accessibility, safety, and quality while addressing poverty and economic mobility. However, there are a lack of comprehensive studies on US affordable housing construction. Our study focused on barriers to and enablers of affordable housing construction in Upstate New York through interviews with ten construction industry professionals. We identified obstacles like funding shortages, regulatory complexities, and administrative hurdles. Enablers included increased advocacy, strategic tax credit use, and reduced zoning restrictions. Although a housing supply–demand imbalance persists, emerging solutions and collaborative efforts signal a promising, equitable, and sustainable future.

Keywords: affordable housing; construction management; sustainable construction; housing shortage

1. Introduction

About 70% of extremely low-income families are severely cost-burdened, spending more than 50% of their income on rent and utilities, and only one in four extremely low-income families receive assistance [1]. The U.S. Department of Housing and Urban Development (HUD) defines affordable housing as "housing in which the occupant is paying no more than 30 percent of gross income for housing costs, including utilities" [2]. However, this definition stands in stark contrast to the reality faced by millions of Americans, where the supply of affordable housing woefully lags demand, forcing individuals into unaffordable housing or, worse yet, homelessness, which is the reality of over half a million people on any given night.

While industry professionals are making efforts to address the affordable housing deficit, statistics paint a grim picture of a crisis that shows no signs of abating [3]. Housing costs continue to surge, far outpacing household incomes, a phenomenon that disproportionately affects lower-income individuals residing in areas with an inadequate supply of social or public housing. A glaring example lies in San Francisco, where the poorest 5% of residents earn a meager approximate monthly income of USD 650, while the bottom 5% of rental rates are around USD 1500 per month [4]. This incongruity stresses the stark reality that the existing supply of affordable housing is grossly insufficient.

Affordable housing should be built at a price that does not cost so much that it prohibits its occupants from meeting other basic living costs or threatens their enjoyment of basic human rights while being adequate in quality and location [5]. There is a perception that housing affordability is just an issue in big cities, but housing affordability is just as big a problem in cities and counties around Upstate New York. For example, Rochester, Syracuse, and Albany are experiencing housing crises fueled by rising rents and a shortage of affordable housing [6]. In New York State, 73% of renter households are extremely cost-burdened; 75% fall into this category in Rochester, and there is a shortage of 655,940 affordable rental homes available for extremely low-income renters [7]. Further,



Citation: Spaan, M.; Abraham, Y.S. Barriers to and Enablers of Affordable Housing Construction: Insights from Construction Industry Professionals. *Eng. Proc.* **2023**, *53*, 36. https://doi.org/10.3390/IOCBD2023-15213

Academic Editor: Yung Yau

Published: 24 October 2023



Copyright: © 2023 by the authors. Licensee MDPI, Basel, Switzerland. This article is an open access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (https://creativecommons.org/licenses/by/4.0/).

Eng. Proc. 2023, 53, 36 2 of 6

the annual household income needed to afford a two-bedroom market rental home in New York State is USD 83,375 [8].

In this study, the barriers and enablers of affordable housing will be critically analyzed, including the project factors that affect the construction process. The findings of this study can help decision-makers and key stakeholders in the construction industry as they work towards building more affordable housing and combating the housing shortage.

2. Affordable and Sustainable Housing Construction

One of the identified barriers to affordable housing construction is land acquisition [5] and issues with building on brownfield sites due to unexpected levels of contamination [9]. Further, there is a lack of correspondence between the development of affordable housing units versus the actual geographic need for development and expansion [10]. Land-use regulations are often too restrictive or too relaxed and sometimes have political implications [5]. For example, residents oppose plans for affordable housing in their neighborhoods due to fear of increased congestion, decreased property value, and a strain on public infrastructure like schools, power, and parking availability [5].

As the need for affordable housing keeps growing, contractors need to find alternative ways to build inexpensive and sustainable homes to improve the quality of life for people. According to Kimberlin et al. [11], the two most significant sources of subsidized rental housing in the United States are the Low-Income Housing Tax Credit (LIHTC) and the Housing Choice Voucher (HCV) program. However, they have some shortcomings. For example, the LIHTC program is only available for new construction or rehabilitation, eliminating funds to fix up old affordable homes that are no longer livable [11]. The HCV requires that renters pay 30% of the household income on rent and the government pays the rest; however, not enough are issued each year, and the waitlist for receiving one of the vouchers can take several years. Income averaging sets a limit on the average income of households at 60 percent of the Area Median Income (AMI), and no household income exceeds 80 percent of the AMI. This approach can ensure affordable housing is built in the places where it is most needed [12]. Another approach is for each state to formally recognize housing as a fundamental right by amending their respective state constitutions. This recognition would entail states committing resources to expand affordable housing options, thereby addressing the increasing demand from their populations [13].

Sustainability is a crucial consideration in housing construction in the United States due to the growing demand for affordable housing and the need to provide long-term cost savings for residents and owners, improve indoor environmental quality, increase home value, and enhance occupant comfort. Developers can also use ecological features as a marketing tool for sustainable homes [14]. The most critical success factors for sustainable affordable housing are price and rental cost [15].

Despite dealing with obstacles such as limited public awareness of sustainable housing benefits, lack of interest from key stakeholders, high initial costs, lengthy payback periods, and insufficient investment in sustainable housing, sustainability can be promoted in housing by educating firms on sustainable design, raising public awareness about the benefits of sustainable housing, enforcing laws that mandate the use of sustainable construction methods, offering financial incentives for adopting sustainable solutions, and supporting emerging technologies that can optimize energy efficiency [16,17]. Understanding the current state of affordable housing construction and its barriers and enablers is crucial to implementing sustainable solutions effectively.

3. Methodology

Semi-structured interviews were conducted to gather construction industry professionals' insight on the status of affordable housing in Upstate New York, discussing the current state of affordable housing construction and its barriers and enablers. The interview questionnaire was developed after an in-depth literature review of the gaps in identifying

Eng. Proc. 2023, 53, 36 3 of 6

the barriers to and enablers of affordable housing construction. Institutional Review Board (IRB) approval was obtained for the study from the authors' institution.

The target group for this study included professionals who are knowledgeable in affordable housing construction and have had experience either working on or overseeing affordable housing projects in Upstate New York. They were identified through a snowball sample of professionals in the affordable housing construction business. Ten out of the thirteen participants who were invited participated in the interviews (Table 1). Two participants were interviewed simultaneously. The interviews began with six demographic questions followed by twelve questions surrounding the current state of affordable housing in Upstate New York and its barriers and enablers. Each interview was recorded and transcribed on the Zoom cloud recording system for future reference to make data analysis more efficient. Proper data collection procedures were developed to maintain consistency throughout the interview process. The transcripts were coded for thematic analysis.

	Job Title	Years of Experience	Population Served	Organization Type
Participant 1	CEO/President	Over 20 years	Families, seniors, special needs, and middle income	Private
Participant 2	CEO/President	15–20 years	Low-income, seniors, families, and homeless	Non-profit
Participant 3	Project Manager	10 years	Changes yearly based on state funding goals	Private
Participant 4	Senior Project Coordinator	5–6 years		
Participant 5	Project Manager/Estimator	35 years	Income-qualified, 75% affordable and 25% market	Private
Participant 6	Senior Project Manager	5 years	Seniors and low income	Private
Participant 7	President	9 years	Seniors and low income	Private
Participant 8	Senior Vice President	35–38 years	Low-income families	Non-profit
Participant 9	Managing Partner	8 years	Changes yearly based on state funding goals	Private
Participant 10	CEO/President	35 years	Low-income families	Private

Table 1. Demographic information of participants.

4. Results and Discussion

In defining affordable housing, participants who were in senior leadership roles (i.e., CEO/President) and work in the development side described the concept as the cost of rent not being more than 30 percent of an individual's income. However, participants who hold construction manager positions described affordable housing as housing that is no more than 30 percent of the total household income because anything greater than that not only makes it unaffordable but also forces people to make financial decisions based on their limited income. They also mentioned that affordable housing is usually painted in a negative light because people assume it is "low-income" or "Section 8" housing.

The participants reiterated the shortage of affordable housing in Upstate New York, and most of them believe there will never be enough affordable housing to meet the demand. Rents are also continuing to rise, which poses a problem to most residents in need of affordable housing because their income is not high enough to pay their rent and other necessities. A few of them alluded to a promising future for affordable housing and the need for more funding and incentives to build affordable housing. Participants mentioned the New York State governor's proposed plan to provide financial support for affordable housing. One participant commented on how technology is being adopted more than ever in the construction industry. They believed that emerging technologies should be used in affordable housing construction projects. One of the participants who is heavily involved in affordable housing construction mentioned that their company has not slowed down

Eng. Proc. 2023, 53, 36 4 of 6

building affordable housing and does not see it slowing down anytime soon. Building affordable housing becomes more than just a new home; it is an asset to the community, helping them grow and meet the needs of their members.

The main barriers to affordable housing construction that were mentioned are financial aspects, rules and regulations, and poor advocacy. All the participants agreed that financial aspects are a major barrier to affordable housing construction. An investor's main goal is to maximize profits, and there are a lot more obstacles to overcome to make a profit in building affordable housing compared to market-rate housing. State and federal governments have strict rules and regulations that need to be met by developers in affordable housing projects, which makes these projects complicated. For example, regulatory issues with regard to landuse and building restrictions, delays in development, administrative roadblocks like the length of application, and the decision-making process for rezoning increase the time before receiving permits and correlates with higher land and housing prices. These regulations cause issues because most communities are under pressure to raise taxes for public service funds, which results in policies being implemented that favor the construction of higher-cost developments and push back affordable housing construction. Participants also discussed the low-profit margin in building affordable housing set by New York State. Participants mentioned the need for more state funding since only one out of three projects proposed are eventually funded. Another barrier is inadequate advocacy; affordable housing is a niche market, and only companies with a mission that believe in building affordable housing advocate for it. One participant stated that the National Association of Homebuilders only advocates for affordable housing about 25% of the time because people are more concerned with market-rate housing, as that is where more of the money is. Another challenge that projects face is labor shortages, especially in identifying qualified minority contractors to work on these projects.

While overall advocacy for affordable housing is limited, it is worth noting that some participants pointed out that developers of affordable housing actively advocate for their projects at community meetings. Completed affordable housing construction projects also serve as advocates for these projects because they demonstrate their benefits. More advocacy is needed to encourage more affordable housing. Funding through state and federal tax credits supports affordable housing construction. Low-income tax credits are the largest government program in place to subsidize housing. There are also other tax credits, like historic and brownfield credits, which can be used by themselves or paired with lowincome tax credits. Other types of financing that can be used are private construction loans and conventional bank financing. These types of financing are usually used on smaller projects or individual units. More green funding and funding that meets the specific needs of a certain population can also encourage affordable housing construction. Flexible funding sources would make affordable housing funding less complicated because one of the issues that developers face is the complex requirements that come with funding. Finally, reducing restrictions on affordable housing can encourage its adoption. The participants believed that people are starting to understand how important building affordable housing is in New York and the United States due to new resources and funding opportunities.

One project factor that impacts affordable housing construction is the budget. The three main components that make up the budget of an affordable housing project as identified by the participants are acquisition costs, construction costs, and soft costs. Acquisition costs are all costs included in obtaining the property. The construction costs include all the costs needed to construct the project. Lastly, the soft costs include environmental, architectural, legal, and financing costs. When building a market-rate home, you build as cheaply as possible and receive cash flow over time, but cash flow is limited for affordable housing. That is why there is a larger developer fee for affordable housing compared to market-rate housing. Another key aspect of the budget is how much funding the developer can receive from the state and how much rental income the developer can receive from the affordable housing project. Changes in construction costs can also impact project budget. Another project factor is schedule delays. Creating a construction schedule with a feasible

Eng. Proc. 2023, 53, 36 5 of 6

timeline is crucial for a successful project. The three main phases of an affordable housing project include the concept and application phase, which can take 1-3 years and entail receiving funding for the project, and the construction phase, which, depending on the size of the project, can take anywhere between 11 and 24 months. Finally, there is the closing phase, which can take anywhere from 6 months to a year. The duration of this phase is affected by the time it takes to receive funding and the complexity of the project. Most nonprofit organizations cannot afford to spend money until they know that they have secured funding, unlike private organizations. In extreme situations, an affordable housing project could take 5 to 7 years. Other things that can impact schedule include public approvals, rezoning, permitting, environmental factors, and site control. One often-overlooked issue is the time it could take to complete due diligence, negotiate, and obtain a reasonable price for the land from the seller. The environmental factor, including unforeseen conditions, is one impact that almost all the participants discussed. Material delays, supply chain issues, and labor shortages were other described schedule impacts, especially due to disruptions such as the COVID-19 pandemic. Location emerged as a critical factor in the success of affordable housing projects, with careful assessment of community fit and accessibility to transportation and amenities playing a pivotal role in site selection.

Most affordable housing projects in New York State have been required to build sustainably for the last 10–15 years. One participant pointed out that in 3 to 4 years, affordable housing might become all-electric, eliminating fossil fuels entirely. Today's projects are being designed to meet Energy Star standards or achieve LEED certification. Another participant stated that the sustainability goals are based on the location, project size, available rebates, and the feasibility of recommended approaches. Also, the government provides guidelines and sets minimum standards for sustainability. Third-party consulting firms are commonly engaged to develop and oversee sustainability plans, and advocacy groups at the local and state levels further encourage sustainable building practices.

5. Conclusions

In conclusion, this study explored the landscape of affordable housing construction in Upstate New York. Key findings suggest that the high cost of entry, stringent rules and regulations, and lack of funding and advocacy are the main barriers to constructing more affordable housing. To foster the growth of affordable housing, it is imperative that more substantial funding mechanisms are put in place, coupled with a reconsideration of the regulatory framework to provide greater flexibility without compromising safety and quality standards. Additionally, advocacy efforts should be intensified to raise awareness and support for affordable housing initiatives, both within the private sector and among non-profit organizations. With the affordable housing crisis not ending anytime soon, more effort should be made to understand how low-income families can afford rent at 30% of their household income.

One of the limitations of this research study is that the participants were mostly from the private sector and there were a limited number from non-profit organizations, implying a need for future research to encompass the perspectives of the public sector. Moreover, expanding the scope of inquiry to include a broader geographical area within New York State can yield a more comprehensive understanding of the barriers to affordable housing construction and facilitate the development of region-specific solutions. As the quest for affordable housing continues, these efforts will remain instrumental in shaping the future of housing accessibility in the region.

Author Contributions: Conceptualization, M.S. and Y.S.A.; methodology, M.S. and Y.S.A.; formal analysis, M.S.; investigation, M.S.; writing—original draft preparation, M.S.; writing—review and editing, Y.S.A.; supervision, Y.S.A. All authors have read and agreed to the published version of the manuscript.

Funding: This research received no external funding.

Eng. Proc. 2023, 53, 36 6 of 6

Institutional Review Board Statement: The study was conducted in accordance with the Declaration of Helsinki and approved by the Institutional Review Board (or Ethics Committee) of Rochester Institute of Technology (HSRO #02022221 and 5 March 2021).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: Data are unavailable due to privacy or ethical restrictions.

Conflicts of Interest: The authors declare no conflict of interest.

References

1. NLIHC. "The Problem". National Low Income Housing Coalition. Available online: https://nlihc.org/explore-issues/why-we-care/problem (accessed on 1 September 2023).

- 2. U.S. Department of Housing and Urban Development. "Glossary of Terms to Affordable Housing". US HUD. Available online: https://archives.hud.gov/local/nv/goodstories/2006-04-06glos.cfm (accessed on 1 September 2023).
- 3. Thrush, G. As Affordable Housing Crisis Grows, HUD Sits on the Sidelines. In *The New York Times*; The New York Times Company: New York, NY, USA, 2018.
- 4. Fidler, D.; Sabir, H. The cost of housing is tearing our society apart. Retrieved Sept. 2019, 9, 2020.
- 5. World Economic Forum. *Making Affordable Housing a Reality in Cities*; World Economic Forum: Geneva, Switzerland, 2019. Available online: https://www3.weforum.org/docs/WEF_Making_Affordable_Housing_A_Reality_In_Cities_report.pdf (accessed on 5 September 2023).
- 6. Jones, D.R. Housing Affordability: A Problem Beyond New York City. Available online: https://www.cssny.org/news/entry/housing-affordability-a-problem-beyond-new-york-city (accessed on 1 September 2023).
- National Low Income Housing Coalition (NLIHC). The Gap: New York. Available online: https://nlihc.org/gap/state/ny (accessed on 1 September 2023).
- 8. National Low Income Housing Coalition (NLIHC). Out of Reach: New York. Available online: https://nlihc.org/oor/state/ny (accessed on 1 September 2023).
- 9. Greenberg, M. *Should Housing Be Built on Former Brownfield Sites?* American Public Health Association: Washington, DC, USA, 2002; Volume 92, pp. 703–705.
- Balili, A. Spatial Disparities in Affordable Housing Development across Local Geographies: Contextual Changes in the Urban Framework of Housing and the Trajectory of Affordable Housing Development of Brooklyn as It Relates to Three Local Neighborhoods. Ph.D. Thesis, Columbia University, New York, NY, USA, 2020.
- 11. Kimberlin, S.; Tach, L.; Wimer, C. A Renter's tax credit to curtail the affordable housing crisis. *RSF Russell Sage Found. J. Soc. Sci.* **2018**, *4*, 131–160. [CrossRef]
- 12. America's Affordable Housing Crisis: Challenges and Solutions. Hearing before the U.S. Senate Committee on Finance. 115th Cong. 2017. Available online: https://www.finance.senate.gov/imo/media/doc/30902.pdf (accessed on 1 September 2023).
- 13. Massimo, M. Housing as a Right in the United States: Mitigating the Affordable Housing Crisis Using an International Human Rights Law Approach. *BCL Rev.* **2021**, *62*, 273.
- 14. Olanrewaju, A.; Tan, S.Y.; Abdul-Aziz, A.R. Housing providers' insights on the benefits of sustainable affordable housing. *Sustain. Dev.* **2018**, 26, 847–858. [CrossRef]
- 15. Chan, A.P.C.; Adabre, M.A. Bridging the gap between sustainable housing and affordable housing: The required critical success criteria (CSC). *Build. Environ.* **2019**, *151*, 112–125. [CrossRef]
- 16. Al Surf, M.S.; Trigunarsyah, B.; Susilawati, C. Saudi Arabia's sustainable housing limitations: The experts' views. *Smart Sustain. Built Environ.* **2013**, 2, 251–271. [CrossRef]
- 17. Abraham, Y.S.; Terreno, S.; Asadi, S.; Afolabi, A.O. Sustainability in Affordable Housing: Trends and Opportunities for Connected Communities. *Comput. Civ. Eng.* **2021**, 2021, 1220–1227.

Disclaimer/Publisher's Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.