How does the complexity of housing policy affect its acceptance in Singapore?

Teresa Ng Wan Tong Li Regine Ip Siyi Ye Anishaa Nopany

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Abstract

This paper explores how the perceived complexity of Singapore's Build-To-Order (BTO) housing policy shapes public understanding and attitudes toward affordability. Drawing from responses gathered across three universities, we looked at how easily people could find and understand key information on the BTO system. Preliminary result indicated that many respondent found it hard to navigate the HDB website or identify if whether they were eligible. Some participants changed their views on affordability after seeing the process explained in simpler terms, particularly when shown estimated mortgage costs. This points to the importance of how policy information is delivered, and how clearer explanations may help shape public attitudes.

1 Introduction

Singapore's success is rooted from its unique ability to manage multi-racial and multi-religious harmony. Singapore's founding father Mr Lee Kwan Yew emphasize on equality regardless or race or religion. In three decades, several department and laws were enacted to protect the established racial and religious harmony. According to SG101, an archived document chronicling Singapore's

history, HDB estates were crucial elements used to safeguard and foster the harmony. Public housings were allocated to include a mixture of residents of all races. These common spaces surrounding the housings facilitated congregation and interactions.

In a multiracial society, racial harmony is the foundational pillar. Policymaker in Singapore must weight competing objectives such as: equity, affordability and fiscal sustainability. Former Prime Minister Lee emphasized the importance of a strong leader, playing an active role in advancing the economy and ensuring social cohesion (Lionheartlanders, 2023). The Lion's city vision was exemplified by housing policies. Housing policies in Singapore reflects a complex balancing act, given the intricacy involved in ensuring fairness across all segments of society. The Ministry of National Development constantly updates these housing policies to meet public expectations, socioeconomic diversity, and national priorities.

Scarcity of Land

Besides the delicate balance of a multiracial society, Singapore is limited to a land area of approximately $740km^2$. The population size residing within the country is disproportionately large, at roughly 5.9 million. Of this population, there are an estimated 3.6 million Singaporean citizens (Department of Statistic Singapore, 2025). The scarcity of available land presents another obstacle to optimizing housing policies within Singapore. There are coexisting pressures to be handled and resolve, highlighting the complexity associated with housing policies

1.1 Build-to-Order Flats (BTO)

An important feature of Singapore's public housing policy is the Build-To-Order system. The Build-To-Order scheme was first introduced in 2001. According to PropertyGuru, Build-To-Order (BTO) flats are defined as apartments constructed by the Housing and Development Board (HDB), when at least 65 - 70% of the units have been booked. These BTO flats typically take approximately 3 - 4 years to finish construction upon commencement. The affordability of these BTO flats are

often met with mixed reviews. However, as mentioned earlier by our Senior Minister Lee (CNA, 2022), an average four room BTO flat in non-mature estates cost approximately S$341,000 in 2019 and $348,000 in the first three quarters of 2022. This figures provide evidence of successful housing policy, keep housing prices within affordable reach of an average Singaporean household.

Over the years, BTO housing policy grants have been evolving to keep pace with citizen's demands and needs. The ruling People's Action Party (PAP) has maintained their commitment to affordability across all income brackets. In 2024, new framework of classification and grant were introduced. An Enhanced Housing Grant was introduced, increasing up to $120,000 for families and $60,000 for singles. Furthermore, the new classification of "Prime" and "Plus" category were set in place to curb the arbitrage and speculative resale among higher-income households (HDB, 2025).

Eligibility for BTO Schemes

According to the HDB website, there exist multiple layer of eligibility criteria to determine the citizen's qualification to apply for the BTO schemes.

The two most general categories are:

1. **Family Scheme** – This applies to households where at least one party is a Singaporean citizen, and the other party must be either a Singaporean or a Permanent Resident (PR).

2. **Single Scheme** – This is applicable to individuals who are single and aged 35 or above, or to those who are widowed or orphaned and aged 21 or above.

Grants available under BTO Schemes

The application process for housing grants is largely determined by the eligibility categories under which citizens are classified.

We further classify each group by income range, roughly outlining the grant amount. The grant listed below assume that these applicants are first-timers.

Family Scheme

Table 1: Enhanced Housing Grant (EHG) Range for First-Time Applicants under Family Scheme

Average Monthly Household Income	EHG Amount (S$)
Less than $1,500 – $3,000	$120,000 – $95,000
$3,001 – $5,000	$90,000 – $65,000
$5,001 – $7,000	$55,000 – $30,000
$7,001 – $9,000	$25,000 – $5,000

Single Scheme

Table 2: Enhanced Housing Grant (EHG) Amount for Singles Scheme (Grouped)

Half of Average Monthly Household Income	EHG Amount (S$)
Less than $1,250	$60,000 – $52,500
$1,251 – $2,250	$47,500 – $35,000
$2,251 – $3,250	$32,500 – $20,000
$3,251 – $4,500	$15,000 – $2,500

Housing Loans

Applying for a HDB loan requires an assessment of credit and income. HDB offers a loan rate that is moderately low, pegged at 0.1% above the CPF ordinary account interest rate (Propertyguru, 2025). Besides HDB loan, several banks within Singapore offers loan package with low-cost financing and manageable repayments.

Resales of BTO Flats

The initial duration of eligibility of BTO falts into the resale market was a minimum occupation periof of five years. To curb speculation of BTO flats by the higher-income group, a separate requirement is issued for flats that are classified as prime and plus (HDB, 2025).

1.2 Political Debates and Diverging Views

Housing Policies within Singapore has always been a contentious issues, particularly during Singapore's quadrennial General Elections. Opposition parties, primarily the Worker's Party (WP) and Progress Singapore Party (PSP), have been consistently advocating for public housing policy reforms.

During the 2022 General Election, WP candidate Mr. Louis Chua vociferously criticized current eligibility criteria of BTO policies, arguing that marital status is an exclusive status that discriminates singles. The housing policies prevented singles under the age of 35 from purchasing public housing. Mr. Chua proposed for the new threshold of 28 years as a minimum eligibility age for singles to purchased public housing. Equivalently, the PSP proposed for an "Affordable Home Scheme", whereby buyers would only incur construction and location premium cost. Land cost and interest would be deferred and payable upon resale.

Furthermore, the leader of the Oppositon Party, Mr. Pritam Singh contended that the government has not sufficiently acknowledged the citizen's widespread concern on the affordability and accessibility of public housing (Tham, 2024).

1.3 Government's Position

In response to these performative criticism, Senior Minister Mr. Lee reaffirmed the public in 2023 that public housings remain widely affordable. He cited evidence that a substantial number of home owners utilized their Central Provident Funds to pay off mortgages with little to no cash outlays (Fang, 2025).

To refute these strategic dissent, government officials asserted that the lowering of single eligible age group to 28 years old is likely to generate inefficiencies. These inefficiencies present themselves as over demand of smaller units at younger age, resulting in over supply as these are resold upon marriage, creating unavoidable churn in the housing market. These proposals are also likely

to open the door to arbitrage opportunities for higher-income individuals. By the same token, demographic trends lend context to these debates. The median age of first marriage in Singapore is currently 31 for grooms and 29.5 for brides (MSF, 2024). This supports the rationale behind the existing age-based eligibility framework.

The boisterous claim by the Opposition Party that the Government lack understanding of public concerns regarding housing affordability is an overstatement and disconnected from the broader policy context. These arguments are often taken out of context, overlooking the complexities involved in nationwide policymaking. Housing policy does not operate in a vacuum, especially in the context of Singapore. These policies are closely intertwined with efforts to maintain racial harmony, economic stability, and social cohesion. The policies must be weighted across each sector, accounting for potential ripple effects. Applying theoretical argument of the butterfly effect, a tiniest mishap in any sector could send waves of catastrophic effects in many sectors. In a delicate multiracial and multi-religious society, even well-intentioned reforms could unintentionally disrupt social balances. Furthermore, the complexity of Singapore's housing policies can obscure the trade off made, reducing public understanding, allowing things to be easily blown out of context. Therefore, criticism that ignore such broader constraints may undermine the delicate equilibrium within Singapore has worked hard to sustain. This lack of understanding of complex policies and trade-offs has emerged as a significant source of public dissatisfaction with government housing policies.

Therefore, this research is conducted to explore how the understanding of the complex BTO housing policies may influence the public acceptance and satisfaction. This paper posits that the way information on BTO policies are portrayed through government websites contributes to the dissatisfaction with a housing system that is, in reality, relatively affordable but poorly communicated.

1.4 Affordability: A Matter of Perception?

The role of the government is to take a forward looking approach, balancing competing constraints residing within the nation. It is essential that the government ensure that economic, social and political interests are well accounted for. In this light, the perceived unaffordability of BTO flats is likely to be a matter of perception than policy failure itself. Recent public concerns were raised on external platforms such as reddit, citing ths headline prices of $400,000 to $500,000 as being highly unmanageable. These figures may appear alarming in absolute form and in isolation. Nonethless, when viewed with the Singapore's housing policy framework, comprising of CPF contributions, HDB loans, enhanced grants and long repayment periods, monthly affordability becomes significantly more manageable for most first-time buyers.

Beyond affordability mechanisms, the Singapore's housing policy reflect a deeper social issue. The government has provided a robust system to support home-ownership, but citizens have a role to play in this partnership. The increase tendency to expect a high or full coverage from the states weakens a sense of shared responsibility. As Professor Tommy Koh mentioned at the Singapore Bicentennial Conference in 2019, while Singapore is a First World Country, some attitudes remain short of civic-mindedness expected of an advanced society. His remarks while controversial, highlights the importance of fostsering a collective mindset, not only in environmental behavior but also in expectations of public services like housing.

1.5 Complexity in Public Understanding

Preliminary fieldwork conducted by the team through casual engagement with many Singaporeans within Singapore Management University (SMU) found that many struggled to comprehend the BTO policies, particularly in terms of availiable grants, application procedures, and eligibility requirements. This lack of understanding has revealed itself as a significant source of public dissatisfaction with government housing efforts.

The complexity arises from difficult navigating through official digital platforms such as HDB

websites, impeding users from accessing relevant information easily. The team will conduct two separate test to access the complexity of understanding Singapore's housing policies. This is follow by a stratified sampling in the City Center of Singapore. The limitation of a not fully representative sample is acknowledge. However, the study aim to serve as a proxy to provide insights into housing policies. As far as the authors are aware, this is the first study that attempts to empirically study how the complexity of public housing policy affects citizen's satisfaction with the BTO system. This research contributes to the broader literature on housing policy and governance within a high-density urban and delicate society.

The paper will proceed to discuss relevant literature review before proceeding to Methodology.

2 Literature Review

There is scarce literature assesses how the complexity of policy communication affects public acceptance of Singapore's housing system. Nonetheless, several studies provides pertinent insights into the policy frameworks and public perceptions of the Build-To-Order (BTO) system and the public housing model in Singapore.

Agarwal and his team (2025), examined Singapore's BTO policy and identifies the impact of it on marriage patterns and consumption behavior. The findings presented found that BTO schemes were effectively promoting earlier marriages, with newly married BTO residents being significantly younger than those in resale properties. At the same time, they pointed out funding BTO resulted in the declining material well-being of married females. While this evidence may suggest that BTO flats are unaffordable, it should be interpreted with caution. Possible confounding effect such as the birth of a child or aging parents may require increasing expenditures, reducing material well-being. This emphasizes that even when housing policies may be structurally sound, inadvertent effects may be inevitable.

Heo (2023) introduces Singapore's housing model as one that comprises deep historical root and state-led path dependence. Deeply rooted ideals of nation-building, ethnic integration, and economic self-reliance paved the path towards the formation of HDB and home-ownership schemes in the 1960s. He stresses that there is significant public trust in the housing system, offering an alternative explanation that the dissatisfaction that arises today is likely due to perceptions and delivery, in lieu of policy failures.

An insightful study by Park (2022) validates Heo's position. Park compared housing policies in Singapore and South Korea, underscoring Singapore's extraordinary achievement in the delivery of 90% of housing through the public sector. Park contended that this maybe the largest public housing program in the developed world. Despite limited land, Singapore maintained substantially high home-ownership, insulating housing market from speculative pressures. This research sup-

ported the view that Singapore's housing polices have historically kept polices both equitable and economically viable.

Zhang and his team (2021) warranted that Singapore's housing policies are shown to be affordable and well-founded through the inclusion of CPF-financed mortgages, land acquisition laws, and state-provided public housing. The unconventional approach of a hybrid policy have helped to preserve the long-term affordability of public housing.

Meanwhile, Ti and See (2021) discuss the role of ethnic integration in Singapore's housing policies. Public housing in Singapore plays a crucial role in promoting social stability. This may result in residents being unable to comprehend certain aspects of the policies, as these areas are part of a larger system targeted at managing diversity and housing equity, rather than an indication of policy failure. Building on this, Abeysinghe and Gu (2021) demonstrated that HDB price inflation is largely fundamental-driven. This reinforces the argument that discontent of housing policies in Singapore stems from emotional or informational gaps, in place of affordability challenges.

Finally, Chua (2020) revealed that public housing in Singapore balances several conflicting priorities. The public housing must remain affordable for new entrants but, ultimately serves as an appreciating capital good for existing owners, and support retirement requirements. The BTO system was introduced to correct the previous oversupply problems in the 2000s, remaining as a vital policy to balance demand and fiscal responsibility.

While the aforementioned studies does not directly account for the policy complexity and its effect on public acceptance, there is overwhelming academic consensus supporting the view that Singapore's housing policy is unique and effectively successful. The affordability, high home-ownership rate and deep integration of social and economic policy are internationally recognized. These lends credibility to our claim that dissatisfaction arises from external or confounding factor, not the core design of the HDB system. This strengthens our motivation to study whether the complexity in communication, rather than a policy design flaw, explains any public uncertainty or discontent.

3 Methodology

3.1 Complexity of BTO Policy

The study begin by accessing the complexity of understanding Singapore's BTO housing policy. A heuristic test was designed to navigate the complexity with how difficult it is for users to locate essential information on BTO eligibility and grants via the HDB website. We focus on several elements designed to capture the ease of accessibility. These elements include the number of clicks, intuitiveness of link labels, visibility of information, and presence of disruptive elements such as pop-ups or redirects, this evaluation provides insight into how website structure may shape public understanding of the BTO application process. This navigation focused finding offers some valuable insights for examining the barriers to information accessibility of BTO policies

This non-participant usability method involved completing a series of structured navigation tasks designed to reflect a typical user's journey in seeking BTO-related information.

Three key tasks were assessed:

1. Locating Enhanced Housing Grant (EHG) eligibility criteria for singles and couples,

2. Finding the full eligibility criteria for applying to a BTO flat,

3. Identifying the step-by-step application process for a BTO flat.

A complete checklist outlining these evaluation criteria is provided in Appendix.

Task 1: Find EHG for Varying Income Distributions (Singles and Couples)

- Number of clicks from homepage
- Effectiveness of internal search bar
- Intuitiveness of link labels (Rated 1–5)
- Visibility of relevant information without heavy scrolling
- Whether information is on a single or multiple pages
- Presence of pop-ups, login prompts, or redirects
- Estimated time to complete the task
- Overall ease of finding information (Rated 1–5)

Task 2: Find BTO Eligibility Criteria

- Same checklist criteria as Task 1

Task 3: Find Step-by-Step BTO Application Process

- Same checklist criteria as Task 1

Each task was completed manually by our team and timed, with observations recorded for each criterion. This method enabled us to identify key usability barriers in navigating BTO-related information on the HDB platform.

3.2 Survey-Based Cross Sectional Study

A survey was administered from April 2025 to June 2025. An in-person survey comprising of a 5-minute questionnaire was conducted in the central premise of Singapore. Our team managed to collect 149 responses, of which two survey responses were removed due to citizenship. Our sample targeted Singaporeans aged 21 years and above, representing the gender, race and religious demographic of Singapore. Due to the lack of resources, the limitation of the lack of a more representative sample is acknowledged. However, this study serves as a proxy to understand how complexity affect understanding and satisfaction of housing policies.

3.2.1 Questionnaire

The questions were strategically design to capture subjective perceptions and understanding of BTO housing policies. A copy of the questionnaire is attached in the appendix. It consisted of four major components:

1. **Demographic Information** - Demographic variables such as their age, gender, education level, and household income were collected.

2. **General Attitudes Toward Housing Policies** – Respondents' overall perception of BTO policies were collected, including trust in government intentions, perceived fairness, and satisfaction with their current housing situation.

3. **Understanding of Policy Rules** – A series of knowledge-based questions was included to assess respondents' actual understanding of policy features.

4. **Perceived Affordability (Before and After Explanation)** – Respondents were asked to rate the affordability of BTO flats before and after being presented with a simplified explanation of available grants and CPF deductions. This served as a basic behavioral test to evaluate the role of information framing in shaping affordability perceptions.

3.2.2 Method of Analysis

Firstly, the data collected was cleaned in Excel.

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Sampling Process

Defining the Population: Given our initial objective to understand public attitudes toward housing policy, we initially considered limiting our target population to Singaporean students and faculty members, as they would be directly affected by such policies. Their perspectives are arguably of particular relevance to policymakers.

However, this approach proved infeasible, as most universities in Singapore do not provide data disaggregated by nationality. As a result, we define our population as all students and faculty members in Singaporean universities, regardless of nationality. Nonetheless, among the 140 valid responses we collected, only two came from non-Singaporeans. This may be because the survey was conducted during the term break, when many international students had returned to their home countries. Therefore, while our analysis is formally based on the overall population, it may still largely reflect the attitudes of Singaporeans. We will further elaborate on this point in the data analysis section.

Given this population definition, it was most appropriate to define clusters at the university level. However, due to the large number of universities in Singapore — and the fact that several smaller private institutions do not publicly provide data on student and faculty numbers — we faced certain limitations in cluster selection.

To ensure data availability and relevance, we ultimately selected ten universities in Singapore that offer accessible data on their student and faculty populations and together represent the majority

of our target population. The list of these universities is shown in Table 12 in the Appendix.

Cluster Selection In theory, the first-stage sampling of clusters should follow a simple random sampling approach. However, practical considerations limited our ability to do so. Since the survey had to be conducted on-site, we needed access to university buildings where students and faculty members gather. Moreover, given time constraints and the need to maximize the number of responses, we prioritized universities that were more convenient for us to travel to.

Based on these considerations, we selected SIM, SMU, and UAS as our sampled clusters. Within each of these universities, we applied 1-in-10 systematic sampling by randomly selecting a starting point and then choosing every 10th person thereafter.

The sampled clusters and their corresponding sample sizes are listed in Figure 1 below, and in Table 13 in the appendix.

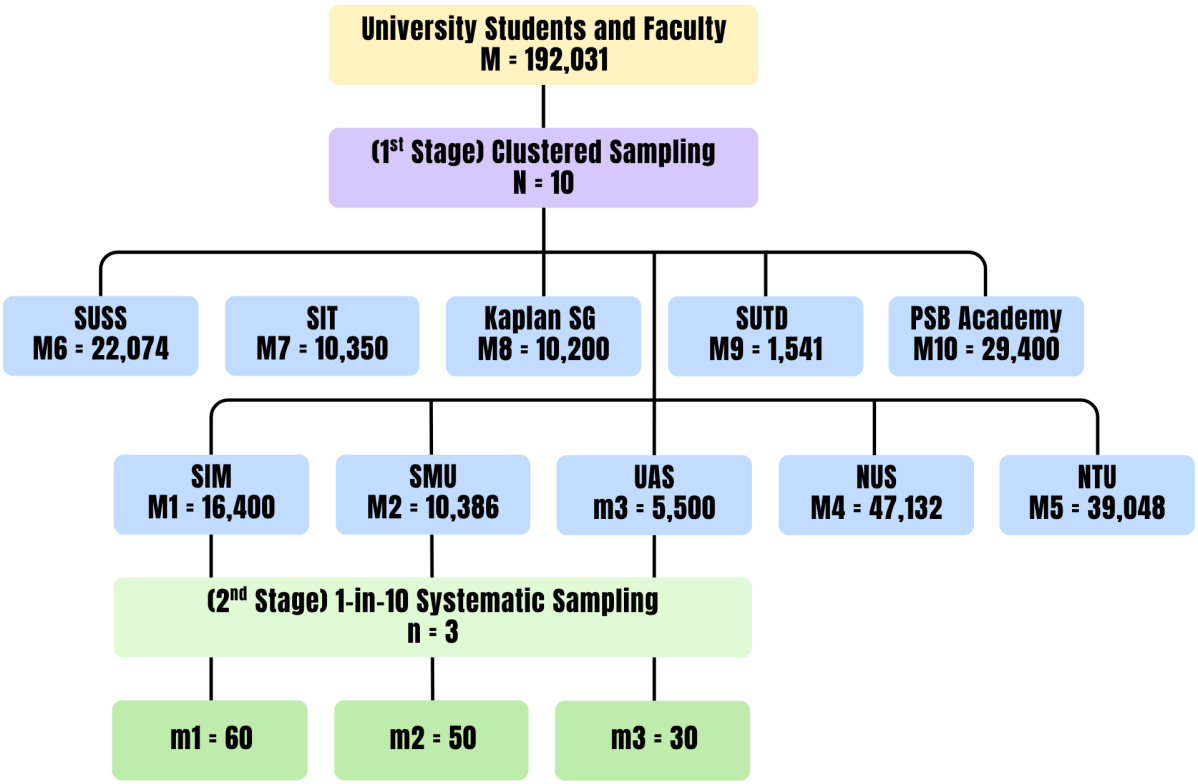

Figure 1: Sampled Clusters and Sample Sizes

4 Result

Results upon conducting the heuristic navigation test is presented in table 3.

4.1 Result from the Analysis of Complexity

Table 3: Navigation Complexity Assessment of BTO Website Tasks

Criteria	**1. EHG Eligibility by Income**	**2. BTO Eligibility Criteria**	**3. BTO Application Process**
No. of Clicks from Homepage	5	3	3
Internal Search Bar Effective	Yes	Yes	No
Intuitiveness of Link Labels (1 = Intuitive, 5 = Not)	4	4	1
Relevant Info Visible Without Heavy Scrolling	No	No	Yes
Info Displayed on Single or Multiple Pages	Single (many tabs)	Single (many tabs)	Single
Pop-ups / Login Prompts / Redirects Present	Yes	Yes	No
Estimated Time to Complete Task	2 min 01 sec	1 min 12 sec	1 min 07 sec
Overall Ease of Finding Info (1 = Easy, 5 = Difficult)	5	4	1

Notes:

- Task 1 and 2 were met with navigation through multiple tabs and burdened by login prompts, contributing to higher perceived complexity.
- Internal search bar functioned well for Tasks 1 and 2, on the contrary poor link labeling and hidden information led to longer completion times.
- Task 3 stood out as the most user-friendly.
- The discrepancy in scrolling burden suggests inconsistent design standards across pages.
- An average of approximately 4 clicks suggest that information are hidden deeply in layers.

4.2 Result from the Analysis of Survey

This section reports the results from the assessment of our surveys. The results are first reported as a whole before separating across three different university groups. Findings are structured into four sections:(1) policy understanding, (2) behavioral delay, (3) factual accuracy, and (4) perception of affordability (before and after information treatment).

1. Policy Understanding and Clarity Participants were asked whether they found Singapore's housing policies easy to understand. The question utilizes a scale of 1 (Easy to understand) to 5 (Very Difficult). The average score across schools was relatively moderate, and there is observed variation across different schools, as shown below.

Table 4: Summary of Understanding and Clarity Measures

$\bar{y}_i$	$\bar{y}_1 = 3.2; \bar{y}_2 = 3.14; \bar{y}_3 = 3.067$
$\hat{\mu}$	1.770
$\hat{V}(\hat{\mu})$	0.202
Error Bound	0.899
95% Confidence Interval	(0.871, 2.669

The estimated population mean is 1.77. We are 95% confident that the true average score lies between 0.87 and 2.67. Although the respondents in our sample generally held neutral attitudes toward the complexity of Singapore's housing policy, we find that the true population perception may indicate low complexity.

2. Behavioral Impact: Delay Due to Complexity Respondents were then asked if they had ever delayed or reconsidered applying for a BTO due to the complexity of the procedures or unclear information.

Two estimation methods were considered in this analysis. The first method assumes M is known since we previously defined the population as the total number of students and faculty members in the 10 universities. However, we acknowledge that this approach is subject to downward bias due to the relatively small cluster sizes in our sample. Based on this method, we estimate with 95% confidence that between 7.1% and 20.6% of all university students and faculty members have delayed or reconsidered applying for a BTO flat due to the complexity or lack of clarity in housing policies, and the actual proportion among Singaporean respondents may be higher even if we do not consider out small cluster size.

The second estimation method assumes that the total population size is unknown. Although this assumption does not hold for our project, this method is less sensitive to the small cluster sizes in our sample, as it does not rely on population size information. Using this second method, we estimate between 20% and 30% of Singaporean students and faculty members may have delayed or reconsidered applying for a BTO flat due to complexity or lack of clarity in the housing policy. However, due to the aforementioned limitations, this figure should be interpreted with caution.

Table 5: Proportion Who Delayed BTO Application Due to Complexity (Binary)

$\bar{y}_i$	$\bar{y}_1 = 0.217; \bar{y}_2 = 0.280; \bar{y}_3 = 0.233$	
	M Known	M Unknown
$\hat{p}$	0.134	0.240
$\hat{V}(\hat{p})$	0.010	0.001
Error Bound	0.063	0.054
95% Confidence Interval	(0.071, 0.206)	(0.186,0.294)

The results summarized above suggest significant evidence that complexity has resulted in increased difficulty in application process, thereby affecting satisfaction.

3. Factual Knowledge Accuracy To assess if there was a divergence between percieved understanding and actual understanding of Singapore's housing policies, we asked survey particpants a series of 4 factual questions. Sample accuracy rates by cluster ranged from 60.5% to 66.7%, indicating a "passing" score. The results of our estimation offer a different perspective on the public's understanding compared to self-assessment.

According to the first estimation method, we are 95% confident that the true population proportion of correct answers lies between 0.184 and 0.512. Using the second method, we are 95% confident that the true population proportion of correct answers lies between 0.559 and 0.683. This suggests that the actual accuracy rate among Singaporean university students and faculty members is unlikely to exceed 70%.

Table 6: Factual Understanding Accuracy

$\bar{y}_i$	$\bar{y}_1 = 0.617; \bar{y}_2 = 0.605; \bar{y}_3 = 0.667$	
	M Known	M Unknown
$\hat{p}$	0.348	0.621
$\hat{V}(\hat{p})$	0.007	0.001
Error Bound	0.164	0.062
95% Confidence Interval	(0.184, 0.512)	(0.559, 0.683)

4. Affordability Perception (Before and After Explanation) Participants were initially told to rate the affordability of BTO flats. After which, they were presented with a simplified policy details and explanation, clearly explaining to them how the BTO policy actually works. The table below shows affordability ratings before and after this explanation. While most still found BTO unaffordable, post-explanation perceptions did seem to improve.

By comparing the results before and after presenting additional information, we observe a slight improvement in respondents' perceptions of housing affordability. When comparing the difference in responses, the two estimation methods yield inconclusive results. Using the first method, the 95% confidence interval includes zero, whereas the 95% confidence interval using the second method does not. Thus, we are unable definitively conclude whether there is a statistically

Table 7: Perceived BTO Affordability and Perception Change (Binary)

	Before		After	
$\bar{y}_i$	$\bar{y}_1 = 0.450; \bar{y}_2 = 0.500; \bar{y}_3 = 0.500$		$\bar{y}_1 = 0.600; \bar{y}_2 = 0.540; \bar{y}_3 = 0.600$	
	M Known	M Unknown	M Known	M Unknown
$\hat{p}$	0.266	0.475	0.325	0.581
$\hat{V}(\hat{p})$	0.004	0.001	0.007	0.001
Error Bound	0.120	0.057	0.169	0.058
95% CI	(0.146, 0.412)	(0.418, 0.532)	(0.156, 0.482)	(0.523, 0.638)
	M Known		M Unknown	
$\hat{p}_1 - \hat{p}_2$	0.059		0.106	
$\hat{V}(\hat{p}_1 - \hat{p}_2)$	0.011		0.002	
Error Bound	0.207		0.081	
95% CI	(-0.148, 0.266)		(0.025, 0.187)	

significant improvement in people's perception of BTO affordability.

Anticipating this uncertainty, we also designed a supplementary question. We asked respondents whether they had changed their response between the two questions. Regardless of estimation

Table 8: Perceived BTO Affordability and Perception Change (cont.)

$\bar{y}_i$	$\bar{y}_1 = 0.183; \bar{y}_2 = 0.160; \bar{y}_3 = 0.367$	
	M Known	M Unknown
$\hat{p}$	0.116	0.207
$\hat{V}(\hat{p})$	0.0004	0.001
Error Bound	0.041	0.071
95% Confidence Interval	(0.075, 0.157)	(0.559, 0.683)

method, the 95% confidence interval does not include zero. Specifically, the first estimation suggests that approximately 0.75% to 15.7% of the population changed their perception of affordability after performing the calculation. The second estimation indicates a higher range, with 13.6% to 27.8% of the population showing a change in attitude.

All statistic presented above are statistically significant at 5% level.

5 Discussion & Policy Implications

Navigation Complexity: From the navigation study, we concluded that while the HDB websites provides essential and relevant information, its navigation structure lacks consistency and intuitiveness. This is especially true when sourcing for more complex information such as the Enhanced Housing Grant (EHG) eligibility. These tasks often require multiple clicks, and tend to require users to login. The internal search bar performs inconsistently, and link labels are not always intuitive, as reflected by average ratings of 4 out of 5 for the first two tasks.

However, the task in relation to BTO application process demonstrated high usability, suggesting that the website is more for transactional guidance than information clarity. These findings support the conclusion that the HDB website has navigation complexity, which could contribute to user dissatisfaction and misperception about BTO policy.

Survey Analysis: Across multiple dimensions of this survey, the findings suggest that the design, clarity, and communication of these policies have significant varying effects on public attitudes and decisions.

We begin the discussion of results by revisiting the general perception of complexity. Respondents were asked to rate how easy it was to understand Singapore's housing policies, and while the estimated population mean was 1.77 (suggesting ease), the sample averages from the three university clusters hovered closer to neutral, ranging from 3.0 to 3.2. While this discrepancy may seem inconsistent, it is not surprising. As previously mentioned, we found that the relatively small cluster size may lead to an underestimation of the true mean. Nonetheless, the results remains important as we can infer that the surveyed individuals are likely to represent a demographic that is more likely to be familiar with reading complex texts. The neutral understanding level obtained suggests that the complexity of the BTO policy may indeed be too complex for the general public. This highlights the need for policies to be further simplified and transparent to improve citizen's satisfaction.

Furthermore, we examined whether complexity has any real consequences on behavior by asking if the lack of policy clarity caused any delays or reconsideration in their decision-making. Two estimation methods were used in this analysis. The first method assumes M is known, given our narrow definition of the population. However, we acknowledge that this approach is subject to downward bias due to the relatively small cluster sizes in our sample.

The second estimation method assumes that the total population size is unknown. Although this assumption does not hold for our project, this method is less sensitive to the small cluster sizes in our sample, as it does not rely on population size information. Since our interest lies in the range of the estimated proportion rather than in the exact value, the results from this estimation remains informative.

Using the first method, we estimate that between 7.1% to 20.6% of the population would have delayed or reconsidered applying for a BTO do to lack of clarity. The second method places the estimate between 18.6% and 29.4%. As expected, we observe the first method yields a much lower confidence interval. However, both estimates are significant at 95% confidence level, suggesting that complexity is not just an abstract issue and that it has tangible effects on how people approach housing decisions. Thus, the implication that perceived complexity of the BTO policy may reduce the housing opportunities of people who lack support or prior knowledge, inadvertently tipping the scale in favor of those of higher education and income levels.

Perceived comprehension of the policies is yet another crucial factor. We asked participants to rate how well they believed they understood housing policies, on a scale of 1-5. Data collected found an estimated average understanding score of 1.657, indicating a high level of understanding. Although this appears encouraging at face value, it again diverges from the actual sample-level averages, which were around 2.9 to 3.0. This finding should be interpreted with caution, particularly due to the sampling design, but it raises concerns about a possible mismatch between perceived and actual understanding.

To further delve into the mismatch between perceived and actual understanding, we included a series of factual knowledge questions on core BTO eligibility and grant rules. Using the first method of estimation, we estimate that the average respondent could only answer about 1 to 2 out of 4 questions correctly (between 18.4% and 51.2%). Using the second method, the confidence interval suggests that the true accuracy rates range between 55.9% and 68.4%. while even the higher estimate under the alternative method does not exceed 70%. Given that our sample primarily comprises university-educated respondents, these results offer valuable insights: if individuals with higher educational attainment struggle to reliably navigate basic BTO eligibility rules, it is likely that the general public may face even greater challenges. This underscores how policy information is not only complex but may also be unintentionally exclusionary, reinforcing inequality by privileging those who can decode the system.

Upon understanding the barrier created by complex policy design, we examined perceptions of affordability. Consistent with our prior assumptions, an equally nuanced picture emerged. Initially, just under half of respondents perceived BTO flats to be affordable. After more information and realistic estimates were shown, the proportion who thought the HDB flats were affordable increased. To evaluate whether there was a statistically significant difference, we estimated the difference in responses. However, the two estimation methods yield conflicting results. Using the first method, the 95% confidence interval includes zero, whereas the 95% confidence interval using the second method does not. Given the limitations of both estimation methods in the context of our sample, we are unable to draw a definitive conclusion regarding whether there is a statistically significant improvement in people's perception of BTO affordability.

Anticipating this uncertainty, we also designed a supplementary question to explore whether a better understanding of housing policy influences people's attitudes toward BTO affordability. We asked respondents whether they had changed their response between the two questions. We find that regardless of estimation method, the 95% confidence intervals did not include zero. This strongly supports the conclusion that better comprehension of housing policies can influence

whether someone believes a BTO flat is affordable. These results further suggest that affordability is not just about the actual price point, but also about how pricing is communicated. While causation cannot be definitively proven, the findings strongly suggest that more accessible and personalized information may positively influence perceptions of affordability and increase application intent among previously uncertain individuals.

Taken together, the tests and findings underscore a broader issue: people are not only misinformed but are also navigating a system that is inherently difficult to understand due to its design. BTO policies may lose their intended effect if they are not easily accessible. While many of our respondents were students and faculty members with higher levels of education, their struggles to interpret basic BTO eligibility rules and affordability estimates reflect a larger systemic problem in how housing policy is communicated in Singapore.

Therefore, the policy implication is twofold. First, clarity and simplicity is vital and should be the central goals when presenting BTO housing policy. Second, public agencies like HDB and Ministry of National Development (MND) should consider embedding interactive tools within the webpage, such as affordability calculators, enhancing the user journey and experience so that individuals can make informed decisions with confidence. Ultimately, housing access is shaped not solely by eligibility, but also by the clarity with which the pathway to it is communicated.

6 Conclusion

This study sets out to explore how the complexity of Singapore's BTO housing polcies affect public understanding, perception and ultimately the acceptance and satisfaction. Through a series of test comprising of a heuristic usability assesment of the HDB website and a cross-sectional survey, we identified clear and significant evidence. The results make it apparent that information delivery and policy communication and accessibility plays a vital role in shaping perceptions and decisions.

Our findings are in alignment with the body of literature and government positions that Singapore's housing policies are well-designed and fundamentally affordable, but they do reveal significant information barriers. Empirical evidence points towards much navigation difficulty on official websites and widespread uncertainty about eligibility and grant detail. It is evident that these complexities hamper effective policy uptake and public trust. We reiterate that a measurable proportion of participants reconsidered or delayed BTO applications due to confusion, suggesting that complexity is not just a cosmetic flaw. Instead, it carries real behavioral consequences.

The shocking conclusion of our study that even educated individuals in our sample struggled to accurately answer basic factual questions about the BTO system. This reinforces the view that more accessible and intuitive communication is urgently needed.

The critical result found within the study is the increase in respondents who viewed BTO housing as affordable after receiving a simplified explanation. By conducting a behavioral study through cross sectional survey, this demonstrates the transformative power of transparent information framing.

In conclusion, the team asserts that Singapore's housing policy is highly affordable. It also agreeable that it fails in certain aspect such as the presentation of information. Therefore, the challenge is not only to design fair and sustainable housing policies, but also to ensure that these policies are understandable and accessible to the people they are meant to serve. As Singapore continues to adapt its housing framework to changing demographics and societal, improving the clarity of pol-

icy communication must be a parallel priority. This would ensure that public satisfaction matches the structural soundness of the BTO system.

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Appendix A: Heuristic Evaluation Checklist – HDB Website Usability

Task 1: Find EHG for Varying Income Distributions (Singles and Couples)

Criterion	Response/Notes
Number of clicks from homepage	
Did the internal search bar help reduce effort? (Yes/No)	
Were the link labels intuitive and descriptive? (1–5)	
Was the relevant information visible without heavy scrolling? (Yes/No)	
Was the information located on a single or multiple pages?	
Any pop-ups, login prompts, or redirects encountered? (Yes/No)	
Estimated time to complete the task	
Overall ease of finding information (1–5)	

Table 9: Heuristic Evaluation – Task 1

Task 2: Find BTO Eligibility Criteria

Criterion	Response/Notes
Number of clicks from homepage	
Did the internal search bar help reduce effort? (Yes/No)	
Were the link labels intuitive and descriptive? (1–5)	
Was the relevant information visible without heavy scrolling? (Yes/No)	
Was the information located on a single or multiple pages?	
Any pop-ups, login prompts, or redirects encountered? (Yes/No)	
Estimated time to complete the task	
Overall ease of finding information (1–5)	

Table 10: Heuristic Evaluation – Task 2

Task 3: Find Step-by-Step Process to Apply for BTO

Criterion	Response/Notes
Number of clicks from homepage	
Did the internal search bar help reduce effort? (Yes/No)	
Were the link labels intuitive and descriptive? (1–5)	
Was the relevant information visible without heavy scrolling? (Yes/No)	
Was the information located on a single or multiple pages?	
Any pop-ups, login prompts, or redirects encountered? (Yes/No)	
Estimated time to complete the task	
Overall ease of finding information (1–5)	

Table 11: Heuristic Evaluation – Task 3

Table 12: University Population Clusters

Name	Total Number of Students and Faculty
Cluster 1: NUS	47,132
Cluster 2: NTU	39,048
Cluster 3: SIM	16,400
Cluster 4: SUSS	22,074
Cluster 5: SIT	10,350
Cluster 6: SMU	10,386
Cluster 7: Kaplan Singapore	10,200
Cluster 8: UAS (NAFA + LASALLE)	5,500
Cluster 9: SUTD	1,541
Cluster 10: PSB Academy	29,400
Total	192,031

Table 13: Sampled Clusters and Sample Sizes

Sample Cluster	**Population**	**Sample Size**
SIM	16,400	60
SMU	10,386	50
UAS	5,500	30