



Possibilities to escape the rental trap

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Abstract

Despite a resurgence of economic activity since the 2008 financial crisis and longstanding government policies promoting homeownership, the percentage of renters has remained stable over the past decade despite most preferring homeownership. This study examines the time required for various rental market groups to save for a down payment on an apartment in the capital area from 2011 to 2022. We also assess the potential impact of a government program allowing certain low-income groups to set aside just 5% of a property's price as a down payment. The focus is on people in the lowest 20th percentile group. Using data on wages, taxes, compulsory pension contributions, and spending patterns, we analyze how much each group can realistically save, considering both minimal (bare) and typical consumption benchmarks. This analysis reveals how much each group can save for a down payment. Our findings show that despite economic prosperity and wage increases outpacing the consumer price index (excluding housing costs), the time needed to save for a down payment in 2022 remains nearly the same as in 2011 due to rising housing prices. Single parents face the most difficulty saving for a down payment, but the 5% down payment program offers a more realistic path to homeownership. The implications are that government policies should focus on controlling house prices and continuing the 5% down payment program to enhance homeownership opportunities.

Keywords: *Down payment, Homeownership, Housing prices, Rental market, Savings.*

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1. Introduction

The 2008-2012 housing crisis – a part of the Global Financial Crisis (GFC) – was characterized by plummeting house prices worldwide and rising foreclosures (Mian, Sufi, & Trebbi, 2015). Many lost the safety of homeownership, and a significant portion of their entire savings tied to their home equity. This outcome hit low-income groups the hardest (Zwiers, Bolt, Van Ham, & Van Kempen, 2016). Housing issues have again taken center stage in the global north, but now, due to a lack of access to housing. House prices have risen phenomenally in the past decade, much more rapidly than income (Tekin, 2022). In Iceland, many people struggle to save for a down payment, some of whom lost their homes during the GFC, with wage increases not keeping up with rising housing prices. According to Iceland's Housing and Construction Authority (HMS), the homeownership percentage has not reached the same levels as in the pre-crisis period (HMS, 2020) and only increased slightly during the onslaught of the COVID-19 pandemic (HMS, 2021). Research has demonstrated that renters in Iceland are often characterized by intense precarity (Mixa, Loftsdóttir, & Rúnarsdóttir, 2021) and that most would rather be homeowners (HMS, 2021). In other countries, renters often have a more secure

legal status, but obtaining affordable rental accommodation might be difficult, as Bergsten and Hansson (2023) point out (2023). In Sweden, official waiting lists for a rental apartment are very long, thus paradoxically often forcing people to settle for inflated rental contracts in the black market (Hananel, Krefetz, & Vatury, 2021). Research has drawn attention to the down payment requirement as an essential factor in renting, even though results regarding the possibility of home ownership and interest rate change are unclear. Hedlund's findings regarding down payment requirements show that the relationship with the homeownership rate is not significantly affected in the long run. However, short-term effects may occur while homeownership rates respond to interest rate changes (Hedlund, 2019a). This contradicts findings by Andrews and Sánchez (2011) that show that the relaxation of down payment restrictions results in a rise in the homeownership rate in OECD countries, meaning that more people become homeowners when down payment restrictions are eased.

This paper maps out variables that shape the capacity of individuals living in Iceland to accumulate savings for a down payment during the 2011-2022 period. The possibility of a home purchase instead of renting depends on the ability to set money aside, i.e., the positive difference between people's income after taxes and spending. The research questions for this paper are: Can renters in the lowest income groups save for a down payment? How long does it take individuals in the rental market to save for a down payment? The paper draws attention to the need to acknowledge different positionality in affording home ownership.

Scholars have long pointed out that housing issues impact social groups disproportionately (Arundel, 2017; Howard, 2024; Stefani, 2020; Timperley, 2020). The same is the case with monetary variables, including access to loans, which can significantly affect differently positioned social groups (Baxamusa, 2020). The standard way to measure the affordability index is to compare the percentage of median housing prices to the median gross household income (See, for example, (Cox, 2023; Lee, Kemp, & Reina, 2022)). Our methodology combines living expenses with other variables and constitutes a novel approach. We take this one step further by comparing various cost-of-living expenditures for different family structures while also considering the interest received on savings, thus gauging state policies' possible impact on homeownership. We see this as a first step to broaden the scope to incorporate diverse social groups with varying expenses, focusing first on Iceland and then for academics to broaden such research in international comparison studies. In our analysis, we compare down payments of 5% and 15%, reflecting changes that were initiated by the Icelandic government in 2017, in which first-home-buyers in low-income groups have, with certain restrictions, the opportunity to pay only 5% of the purchase price as a down payment as opposed to the regular 15% requirement (HMS, 2024b). This is similar to a recent program in Sweden (Nordström, Svensén, Ribbing, & Lepola, 2022).

The analysis commences from 2011 for three reasons: Firstly, during the post-2008 crisis, many Icelanders lost their homes (Matthíasson, 2021) and savings. Many of those then faced financial duress in the rental sector, which, according to a 2011 study, proved costlier than homeownership (Institute of Economic Studies, 2011). Real wages fell following the crisis, reaching a low around 2011. The second reason is that a massive increase in tourism characterizes this period (Loftsdóttir, 2019). High unemployment, as Icelanders witnessed following the 2008 crisis, not only quickly became a distant past but caused an increased speed of migration to Iceland, where jobs were abundant and relatively high wages compared to Europe became even higher. Thirdly, pivotal statistical data, including rental and cost-of-living indices for varied family types, became first available in 2011.

We begin this paper with a short historical review of international trends relating to housing and especially renting. We then focus more on Iceland, mainly the rental market, and how tourism's effects have often kept people stuck in rented properties. The data part of our research provides examples of low-income families' ability to save for a down payment, thus 'escaping' the rental market during 2011-2022. We finally discuss the implications of our findings and what they mean for renters' ability to become homeowners.

2. Housing and Rental Trends Internationally and in Iceland

Housing is generally the most significant single asset today but is unevenly distributed (Kuo, 2021). This wealth inequality underscores the marked economic distinctions between homeowners and individuals grappling with the challenges of achieving homeownership. The post-2008 financial crisis marked a crucial turning point, leading to widespread home evictions and housing-related setbacks (Fields & Hodkinson, 2017; Immergluck, 2009) with low-net-worth households bearing the brunt (Mian & Sufi, 2015; Waldron, 2024). Following the European economic downturn, the younger demographic increasingly relied on assistance to secure housing (McKee, Moore, Soaita, & Crawford, 2017; Montanari & Staniscia, 2017; Preece, Crawford, McKee, Flint, & Robinson, 2020).

In the years preceding the GFC in 2008, homeownership percentages progressively rose across most countries (Grinstein-Weiss, Key, & Carrillo, 2015; Jordà, Schularick, & Taylor, 2014). After the GFC, many individuals were thrust back into the rental market as foreclosures became distressingly common (Hartley, 2011). Although some regained a foothold in the rental market, homeownership percentages remained below the zenith achieved just before the GFC (Eurostat, 2024). Since the GFC, several prevailing factors have significantly influenced the capacity of individuals to save for a down payment. For individuals who previously owned homes but were forced to relinquish them after the GFC, a substantial portion of their savings was often tied up in their homes (Mian & Sufi, 2015).

Consequently, this demographic had to commence their savings endeavors anew. Due to increased rental rates, it has also become more difficult for people in the rental market to set aside money for a down payment. Rental rates between 2011 and 2014 rose, for example, two times faster than wages for renters, and home sale

prices increased four times faster than homeowners' wages in Salt Lake City in the U.S. (Salt Lake City Housing and Neighborhood Development, 2018). Gete and Reher (2017) show that rental rates in real terms rose during the same 2011-2014 period by more than 23% in the top 10% fastest growing metropolitan areas, yet tighter lending standards during that same period depressed homeowner rates (2017). These higher rates, combined with less accessibility to mortgage loans, may have caused institutional investors to enter the housing market with better access to finance and turn those properties into rentals (Lambie-Hanson, Li, & Slonkosky, 2019). U.S. data suggests that buyers are not buying more expensive houses because they earn more than before but because they have taken on more debt. Davis, Larson, Oliner, and Smith (2023) show that the average debt-payment-to-income ratio has risen recently. It is considerably higher than most of the 1990s and was only higher than its current percentage during the early 2000s.

The prolonged low-interest rate environment during the 2000s up until 2021 (Gamber, 2020) not only made real estate more affordable and propelled housing prices upwards, but it also curtailed the interest income generated from savings accounts, adversely affecting those accumulating funds for down payments. Consequently, the interest earned on these savings during 2011-2020 lagged the levels experienced in the preceding three decades.

A similar development in the international housing market occurred in Iceland following the 2008 economic collapse. Following the 2008 crisis and subsequent jump in unemployment, many households could not maintain mortgage payments and were thus forced out of their houses and into the rental market (Ministry of Social Affairs, 2015). The percentage of households living in their premises dropped by 4% from 2005 to 2013 (Jónsdóttir, 2015) while the percentage of people in the rental market increased from 17% in 2007 to 27% in 2013, with the increase mainly concentrated to people aged 25-34, low-income people and single parents (Ministry of Social Affairs, 2015). The varying average household sizes in rented versus owned properties explain the difference in the growth rates of households and population

Historically, Iceland has strongly emphasized private homeownership, with minimal state intervention in housing policy, primarily favoring self-building endeavors (Sveinsson, 2004). Iceland's Minister of Infrastructure recently reiterated this emphasis during a presentation outlining governmental housing policies (Ministry of Infrastructure, 2023). Studies by Iceland's Public Housing and Construction Authority (HMS) show that two-thirds of people are in the rental market because of necessity, and less than 10% want to be in it (H. HMS (2021). Since households in the rental market tend to have lower incomes than homeowners, the question is particularly relevant for the low-income segment.

The rental market in Iceland is characterized by significant precarity, with the prevailing view that participation therein reflects a certain degree of failure (Mixa et al. (2021), which may explain the historically relatively low percentage of people in that market. While the ratio is higher in other countries, the need for home ownership may remain high. For example, Bergsten and Hansson (2023) show that while around 58% of multi-family housing in Sweden is rental, the long queues to access the rental market, income demands, and other factors make it inaccessible for households with limited income and savings.

Mass tourism has significantly impacted Iceland's housing market since the 2008 crisis, becoming the centerpiece of Iceland's economic resurrection (Benediktsson, Lund, & Huijbens, 2011). The number of tourists arriving annually in Iceland was 500,000 in 2007-2011 but then shot up to 2.3 million in 2018 (Icelandic Tourist Board, 2018). That 2018 figure corresponds to approximately sixfold of Iceland's population during the same period. The percentage of Iceland's travel and leisure industry exports rose from 19% in 2009 to 35% in 2019 (Statistics Iceland, 2024c, 2024e). The massive inflow of foreign currency kept the Icelandic currency strong, making imports cheaper than otherwise, thus dampening inflation pressure. This development had extensive implications on the demand for housing due to the increased number of tourists and immigration, mainly due to labor demand in the tourist industry (Mixa & Loftsdóttir, 2021, 2024). Iceland's Housing Fund estimated that the proportion of apartments rented out for long-term leasing in Iceland had decreased from 10.6% in 2015 to 7.5% in 2019, with the percentage falling most substantially in Reykjavík and Hafnarfjörður (2019, pp. 7-8).

Given that the number of registered properties in 2018 was close to 88,000 in that area (Registers Iceland, 2024a). Mermet estimates that around 4.5% of these properties in the capital area were listed on Airbnb at some point in the year. The impact was especially significant in the downtown area, where about 20% of properties were short-term rentals; in certain parts, this figure exceeded 50% (Mermet, 2019). Elíasson and Ragnarsson (2018) estimated that 15% of the total rise in house prices in real terms during the 2014-2017 period was due to Airbnb short-term renting. Their findings are significantly more than those in the United States. Barron, Kung, and Proserpio (2020) estimated an effect of approximately only a fourth compared to Iceland, despite pointing out that heavily owner-occupied areas, like most of Iceland, were generally less affected.

The increase of tourists also attracted foreign labor to Iceland to fulfill the demand within the industry. New employment opportunities related to the tourism industry became a significant reason foreign nationals moved to Iceland due to short-term and long-term employment opportunities (Karlsdóttir & Jóhannesson, 2016). In 2008, immigrants comprised less than 10% of tourism workers (Vareikaité, Minelgaité, & Magnússon, 2022). By 2023, that percentage had risen to 44% (Statistics Iceland, 2024b). Elíasson and Ragnarsson (2018) estimated that the net inflow of people to the country had a 30% impact on the rise in housing prices during 2014-2017, or twice the effect of the increased housing demand created by Airbnb.

The added job creation due to the surge within the travel and leisure industry meant that Iceland's economy remained resilient after 2010 despite the massive losses related to the 2008 crisis. This economic expansion led

to higher wages, rising far above the consumer price index (CPI), meaning that real wages during the period rose substantially. The wage increase, however, lagged the rise in housing, with the housing index within the capital area rising almost threefold while the wage rise was just above doubling. As rental rates tend to correlate with housing prices, rental rates in Iceland also increased during the period, although not as much as housing prices and close to the wage index. As Figure 1. shows, this discrepancy increased considerably following the onslaught of the COVID-19 pandemic, when the lower interest rate environment caused housing prices to surge.

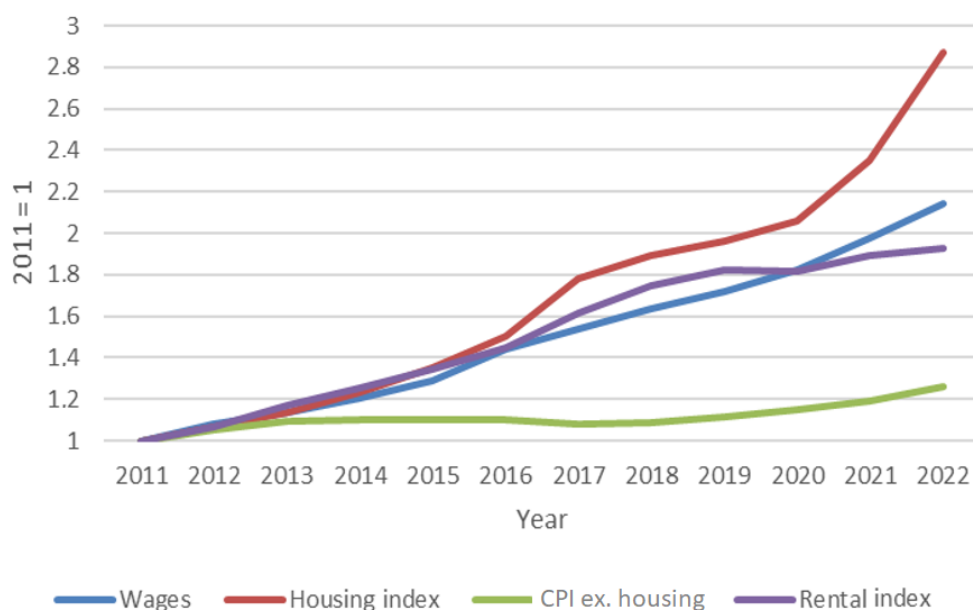


Figure 1. Wages, CPI, housing prices, and rental rates in Iceland 2011-2022.

Source: Registers Iceland (2024b); Statistics Iceland (2024d) and Statistics Iceland (2024f).

Public policies did not react to these forces, such as creating programs to add more housing for the general public or divert new property buildings toward housing for residents. The failure to put a lid on rising real estate prices affects renters most, who tend to be concentrated in low-income groups (Hedlund, 2019b). Baxamusa raises broader questions about the appropriate role and responsibilities of the public and private sectors when more low-wage jobs are being created, as in Iceland within the tourist industry in recent years than housing for them (Baxamusa, 2020). While regulatory measures have been introduced in Iceland to limit the effects of Airbnb rentals (Airbnb, 2023) those limitations have been ineffective. This situation rhymes with Ireland, where the lightly regulated model of renting has led to an affordability crisis (Waldron, 2024). Baxamusa (2020) further points out that high-growth industries produce more renter occupations, explicitly listing leisure and hospitality as “renter industries” where most workers in the subsectors are renters. With the increase of immigrants and short-term workers, many of whom work in the “renter industry,” it is possible that a ‘generation rent’ may develop as opposed to the traditional private homeownership model in Iceland, where private ownership has been a possibility for most people.

3. The Research

Several variables are necessary to intertwine when estimating people’s chances of saving for a down payment and, if so, how long it takes. We begin by listing those variables, their usefulness, and limitations. They are wages, household consumption, and rental and energy costs, which are used to estimate what is left to save for a down payment. We estimate the housing prices to determine the down payment needed and interest rates a saver receives on accumulated savings. We then list the calculations. We gathered data for each year and assumed that each year would mirror the future. Data for each year does hence not move forward to the following year, as if one is looking at a time series, but rather that the data each year is assumed to reflect future data with the variables being constant since that is the assumption each individual can reasonably infer about future expectations at any given point in time.

3.1. Wages

Wage data was collected from Statistics Iceland (2024a) and wages were defined as total wages. Such wages include work done during regular business hours and shift hours, bonus payments and extra hours, and other irregular wage payments.

To estimate how much money a person has left to spend on consumption and savings, we look at after-tax wages manually using a calculator from Iceland Revenue and Custom (2024) for each group. The data assumed monthly payments, the renter being single, January being the starting point, and the employee paying 4% to set aside into a mandatory pension. We assumed no money was being set aside for individual retirement savings. Defining all renters as single persons simplifies the situation for couples due to tax considerations. Different tax

codes for single persons compared to couples defined as married may thus limit the reliability of the results for couples with one child.

Instead of limiting the data to average wages, we compartmentalize wage groups. Such data is available from 2014 and onwards. We adjusted data during the 2011-2014 period for each group using the general wage index for each group.

Statistics Iceland categorizes average wages into different percentile groups, including the 20th, 40th, 60th, 80th, and 90th percentiles (Statistics Iceland, 2024a). For instance, the 20th percentile wage indicates that 20% of people in Iceland earn less than this amount, while 80% earn more. We focus on the 20th and 40th percentile groups, given that most people in the rental market are in low-income groups (Baxamusa, 2020). Also, the 40th percentile is approximately where the wage limit happens to be for individuals eligible to receive governmental assistance, having to pay only 5% as a down payment for a home (HMS, 2024a).

We focus on the most common groups in the rental market in Iceland: Singles or single parents (Ministry of Social Affairs, 2015) while also focusing on couples with one child. Additionally, we compare average wages between women and men. It should be noted that migrants receive around 8% lower wages than Icelanders for comparable occupations (Statistics Iceland, 2019). Analyzing those effects is beyond the scope of this article, but waits for future analysis.

3.2. Household Consumption

One of the lessons of the 2008 crisis was that many in Iceland became heavily indebted due to high consumption during the Goldilocks years before the crash. After the 2008 crisis, the Icelandic government established a consumption benchmark program to determine household costs to maintain a sensible living (Ministry of Social Affairs, 2011). Depending on their structure, these costs are defined as a benchmark for family consumption. Financial institutions have since used this database to determine whether families can receive housing loans and to what extent. These costs do not include housing costs, such as electricity and heating, rent, or mortgage.

The benchmark consists of two scenarios. The first one aims to determine typical or what can be defined as reasonable costs for each family structure. We simplify by naming that scenario “typical.” The second scenario assumes that consumption is limited to bare necessities. We define that scenario as “bare.” Our analysis shows that there is a considerable difference. Typical costs are often more than twice the bare costs.

In the database, it is possible to manually see how these costs vary by selecting a few predetermined variables. The most significant variables are the number of adults and children in each family. One can choose whether the family lives in the capital area or more rural areas. Here, we limit the analysis to the capital area. Since houses are most expensive near central places, where one might not need a car, we assume that people in our examples own a vehicle. These assumptions are due to the need to delimit the analysis, while further extensions would be interesting.

After considering these costs, they are deducted from the after-tax wages depending on whether one assumes typical or bare costs. This provides information on what money is left for rental costs and energy, which then provides an estimate of what money is left to set aside for savings. Direct data is available for 2011-2019. The numbers have not been updated since then, and an estimation is thus needed. The year 2019 has been used as a starting point and adjusted for 2020-2022 by the CPI.

3.3. Rental Costs

Registers Iceland began estimating rental prices monthly in Iceland in 2011, creating a rental index for the capital area. It also began assessing rental prices in 14 regions, of which seven are in the capital area. Those estimates differed between apartment size types (Registers Iceland, 2024c). From such data, one can estimate the average rental cost per square meter for a specific apartment type within each area. We compiled the average annual prices for each apartment type in an area within the capital. We did not focus on the area with the highest turnover since it is also the most expensive. Instead, we rely on an area with the second highest turnover but is among the cheapest within the capital area (between Kringlumýrabraut and Reykjanesbraut). We rely on an area with a large enough sample to be considered somewhat reliable (some areas have small samples).

3.4. Energy Costs

The Icelandic Regional Development Institute provides information about electricity and heating costs for general households (Icelandic Regional Development Institute, 2024). In our study, we use what the institute defines as the lowest electricity and most common cost for heating in Reykjavík.

Once *Typical* or *Bare* costs, in addition to rental and energy costs, have been deducted from the net income, the remaining money, if any, can be set aside as savings for a down payment.

3.5. Housing Purchase Prices

Registers Iceland provides information about square meter sales prices in various sections of Iceland (Registers Iceland, 2024b). We assume that people in the rental market would buy a home in a relatively inexpensive neighborhood. Among the cheapest ones is Breiðholt, a neighborhood that is relatively far away from the downtown center. There are also sufficient sales transactions, so the data is reliable.

Square meter sales data is compiled for that area from 2011-2022. The price of each apartment is then multiplied by the number of square meters of the apartment bought. We assume that a single person buys a 60-square-meter apartment. That number rises to 70 for a single person with one child and 80 for a couple with one child. We assume buyers must save for a 15% or 5% down payment, the target price to accumulate.

3.6. Interest Rates

We presume that people invest their savings in a bank account due to stability in returns instead of stocks and bonds. Savers in Iceland have two options to save in bank accounts: non-indexed accounts and bank accounts indexed to the CPI. There are pros and cons to either choice.

The deciding factor in choosing the non-indexed account is that since 2010, people in Iceland have received a certain amount of interest on their tax-free savings (including net capital gains and dividends from listed companies and coupon payments from bonds). Hence, it is more apparent how much people save from a non-indexed account, while nominal returns from index accounts would fluctuate with inflation. We thus calculate first total interest returns, then consider and apply the capital gains tax only in cases where the annual interest rate income exceeds the tax-free threshold. We assume people put their savings into a one-year time account, which provides slightly higher interest and is available with relatively short-term notice. To estimate the savings in real terms, we deduct the average inflation each year from the nominal savings rate.

3.7. Summarization

To summarize, we begin by finding the amount available for savings. This is done by finding total wages and subtracting taxes, typical or bare consumption, rent, and energy costs. This gives us the money available to save.

$$P = TW - t - C - re \quad (1)$$

We denote P as the annual savings, TW is the total wages, t is taxes, C is consumption (typical or bare), and re is rent and energy costs.

3.8. Accumulation of Savings

Savings and interest per year are added up. When savings are negative, or if it takes over 30 years to accumulate, we set the value to zero and assume that saving for a down payment is impossible. The money is assumed to provide a twelve-month interest rate. The sum of that amount is the total annual savings.

That value is plugged into a rearranged logarithmic future annuity formula as the future value, which determines the number of years required to save for a down payment. The target amount is the square meter price times the size of the home bought for each type of family unit and the percentage, 15% or 5%, needed for a down payment.

In calculating the years it takes to save for a down payment, we rearrange the future annuity formula to find the years it takes to accumulate the target price. This formula takes into account interest on interest, assuming the same annual savings are set aside every year. The rearranged future annuity formula is:

$$n = \frac{\log\left(\frac{FV \times R}{P} + 1\right)}{\log(1+R)} \quad (2)$$

The number of years needed to save for a down payment is n , the target amount, which is a down payment, is $F.V.$ (future value), P is the annual savings, and R is the interest rate per period in real terms. We thus estimate future interest on annual savings and interest. Since we estimate a future target price each year for a target that fluctuates, i.e., a percentage of housing prices, we apply real interest rates within the annuity formula. That is done by subtracting the average inflation for each given year from the nominal returns received in the bank account. This assumption about savings reflects what people might expect in real terms; however, the rising housing prices relative to other goods and services diminish the real value of these savings.

4. Results

We look at three types of groups. We begin by looking at the average Icelandic person income-wise. First, we look at what is categorized as “all” by [Statistics Iceland \(2024a\)](#) followed by women and men (the only gender categories available). We then focus on groups based on their income: the lowest 20% percentile income and lowest 40% percentile income groups. The third type is subgroups of single individuals, single parents, and couples with one child.

4.1. Average Income

We begin by looking at the years it takes to save for a 15% down payment for an average wage-wise person, man or woman, as seen in [Figure 2](#). Each case assumes that the person is single and childless, owns a car, and lives in a studio rental apartment in the Kringlumýrabraut area. We do not observe the time for a 5% down payment since none of those groups are eligible for such government assistance.

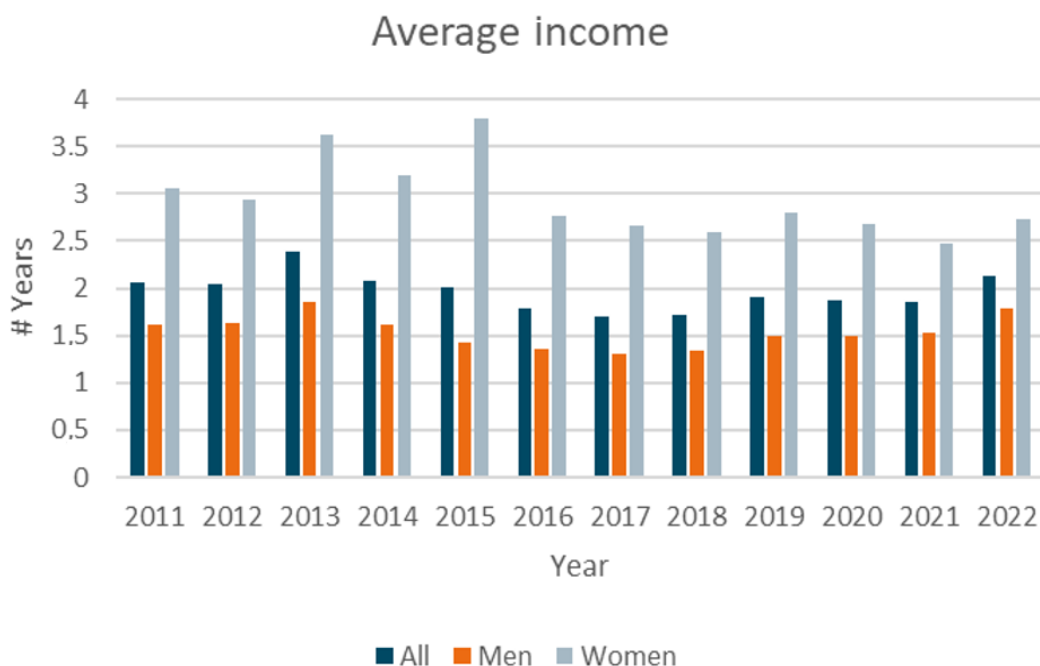


Figure 2. The time it takes to save for a 15% down payment with typical spending from 2011-2022.

Since these groups could very quickly save for a down payment during the whole 2011-2022 period by consuming only the bare minimum, or around one year, our focus is on typical spending. It takes an average-income person and average male a slightly more protracted amount of time to save for a down payment in 2022 as in 2011 when Iceland was still reeling from the economic crisis. Women need, however, a slightly shorter time to save for a down payment in 2022 compared to 2011, but still a considerably longer time compared to men. Even though wage discrepancies between the sexes have diminished, the difference is still visible, partly due to the amplification in the narrow distinction between after-tax wages and consumption.

Looking at the savings possible by living a typical life for these two genders, as seen in Figure 3, one can see the effects of wages constantly rising more than the CPI during 2011-2022, as demonstrated in Figure 1. With higher real wages, the average-wage person has been able to set aside more money for savings constantly. During 2011-2014, it remained similar, between 20% and 23%, but it has risen continuously and hovered around 30% during 2015-2022. This trend was reflected in the number of years reaching the target from 2011-2016. After that, however, it remained steady until the COVID-19 pandemic hit in March 2020, causing Central Banks to lower interest rates and a housing boom. Interest on savings fell by around 2% of the total annual savings set aside and interest returns, while the housing index rose from late 2019 to late 2022 almost 50%. Hence, the years needed to save for a down payment increased from 1.8 to 2.3 during 2020-2022.

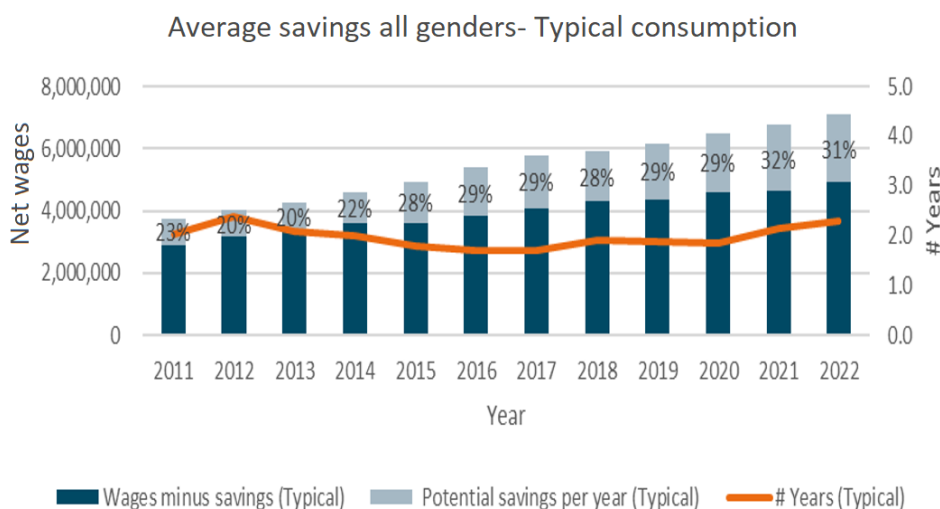


Figure 3. Average savings and years needed to save for a 15% down payment 2011-2022 for all genders.

As expected, the average-wage man needed fewer years to save for a down payment than the average-wage person. Figure 4. illustrates that the time required rose from a low of 1.3 years during 2016-2017 to 1.9 years

in 2022, or around 50%, despite the potential to save each year continued to increase in the following years, although the change was incremental.

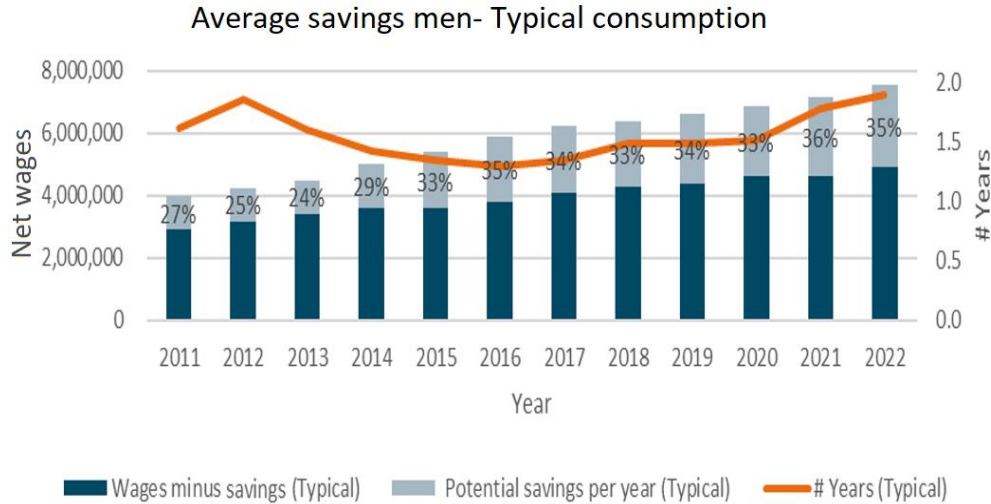


Figure 4. Average savings and years needed to save for a 15% down payment 2011-2022 for men.

Figure 5. illustrates that the average-wage woman must spend more years saving for a down payment, or roughly three years, as opposed to 2 years for an average-wage man. The reason is that the average wages for women have risen (very) slightly more than men’s. Men had 13.6% higher salaries in 2011 but 13.3% in 2022 (Statistics Iceland, 2024a). This slight change still has had the effect that it takes the average-wage woman fewer years to save for a regular down payment in 2022 than in 2011. This trend is also exemplified by the percentage a woman can set aside for savings, which rose 9% versus 8% for men.

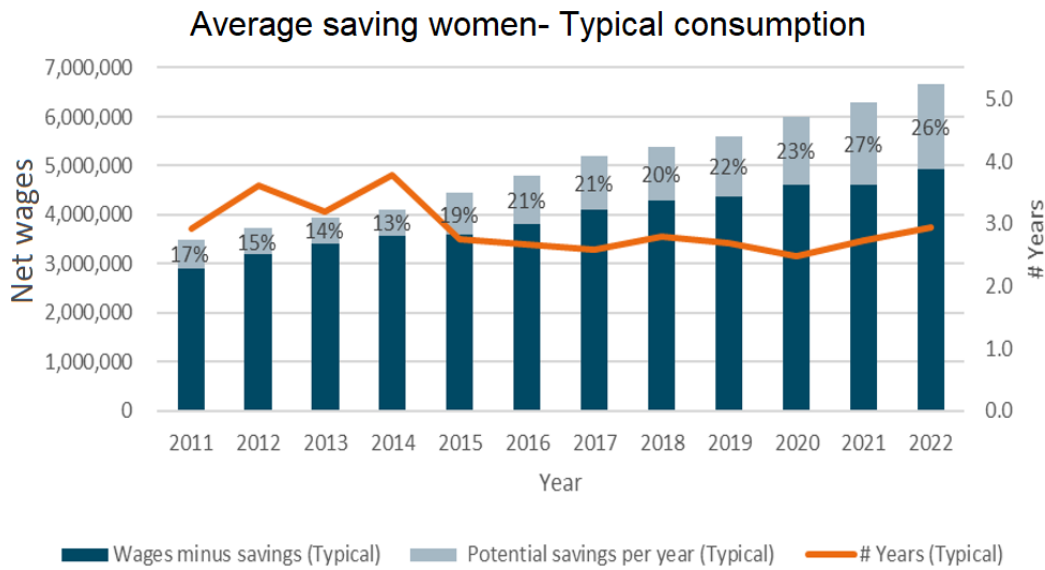


Figure 5. Average savings and years needed to save for a 15% down payment 2011-2022 for women.

4.2. 20th Percentile Income Group

We first look at a single person in the 20th percentile income group. That person cannot save for a down payment by living a typical consumption standard, so we focus on a bare state of expenditures. Figure 6. shows that by living by such bare standards, that person can in 2-3 years save for a 15% down payment and less than a year by only needing to save for a 5% payment. The number of years it took was stable in 2011-2015 but has risen considerably since then, reaching a peak in 2022.

20% percentile single childless - 15% & 5% down payment

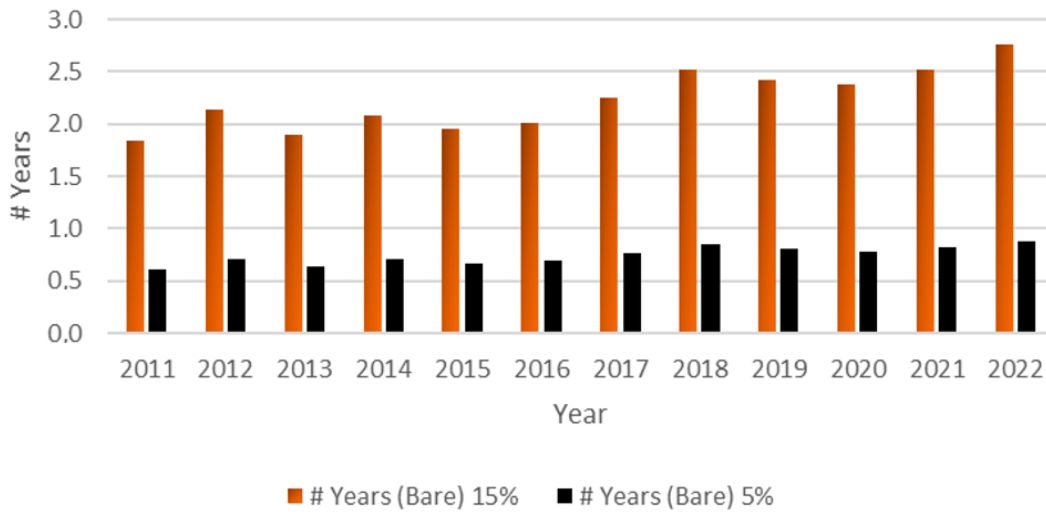


Figure 6. The time it takes to save for a 15% and 5% down payment with bare spending from 2011 to 2022 for a 20th percentile single person.

Figure 7 shows that the percentage of money available to set aside as savings remained similar during 2011-2022. The number of years needed to save for a down payment never-the-less increased and has never been as high as in 2022.

20% percentile single childless - Bare consumption

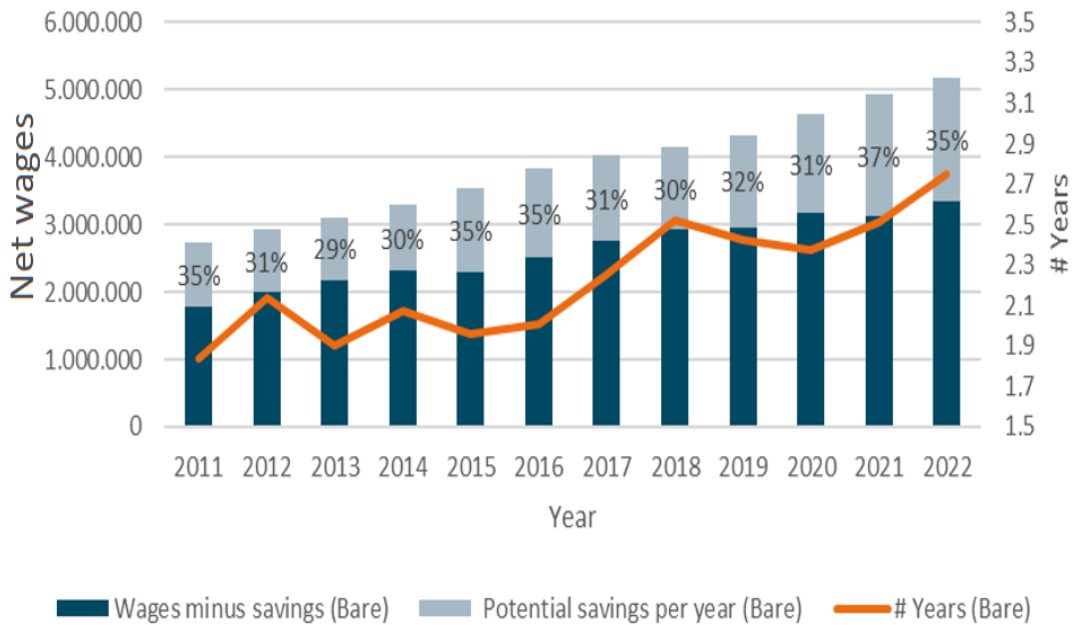


Figure 7. Average savings and years needed to save for a 15% down payment 2011-2022 for a 20th percentile single person.

Next, we focus on a single parent with one child in kindergarten. Like a single person in the same income group, there is no realistic chance of saving for an apartment or living a typical expenditure lifestyle. When saving for a 15% down payment, the task is virtually impossible for 2012-2013 and practically impossible for most other years, being ten years in 2022. The task is much more manageable when aiming for a 5% down payment, which, despite rising housing costs, has been at the lowest levels during the period, hovering between 2-3 years.

20% percentile person with a single child 15% & 5% down payment

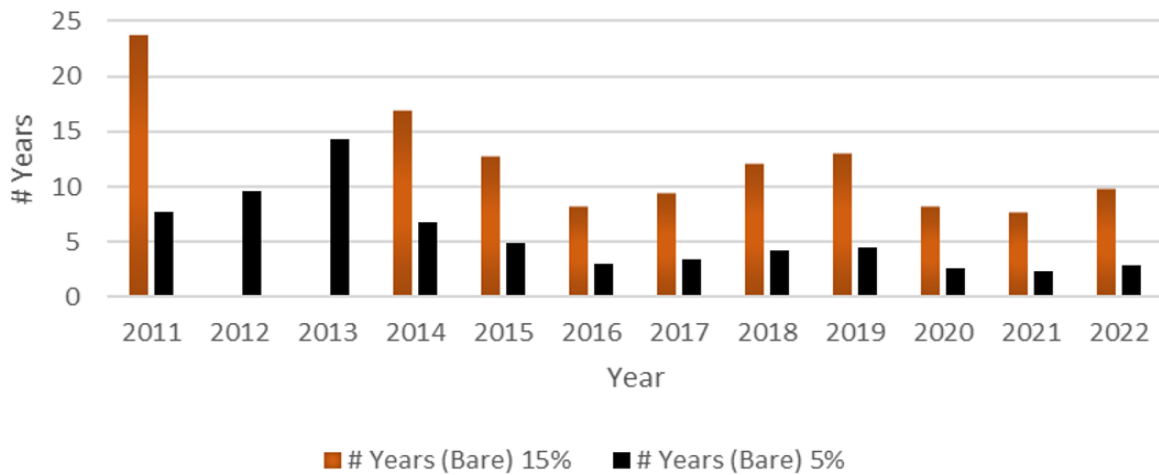


Figure 8. The time it takes to save for a 15% and 5% down payment with bare spending 2011-2022 for a 20th percentile single parent.

As Figure 9 illustrates, single parents have practically no chance of saving for an apartment, even when spending merely bare expenditures. The lowest figure during 2011-2022 was eight years, which rose to 10 years in 2022. This trend occurred despite wages increasing considerably and an ever-increasing amount available to set aside under bare conditions. Figure 8 illustrates that the 5% barrier is a more realistic goal.

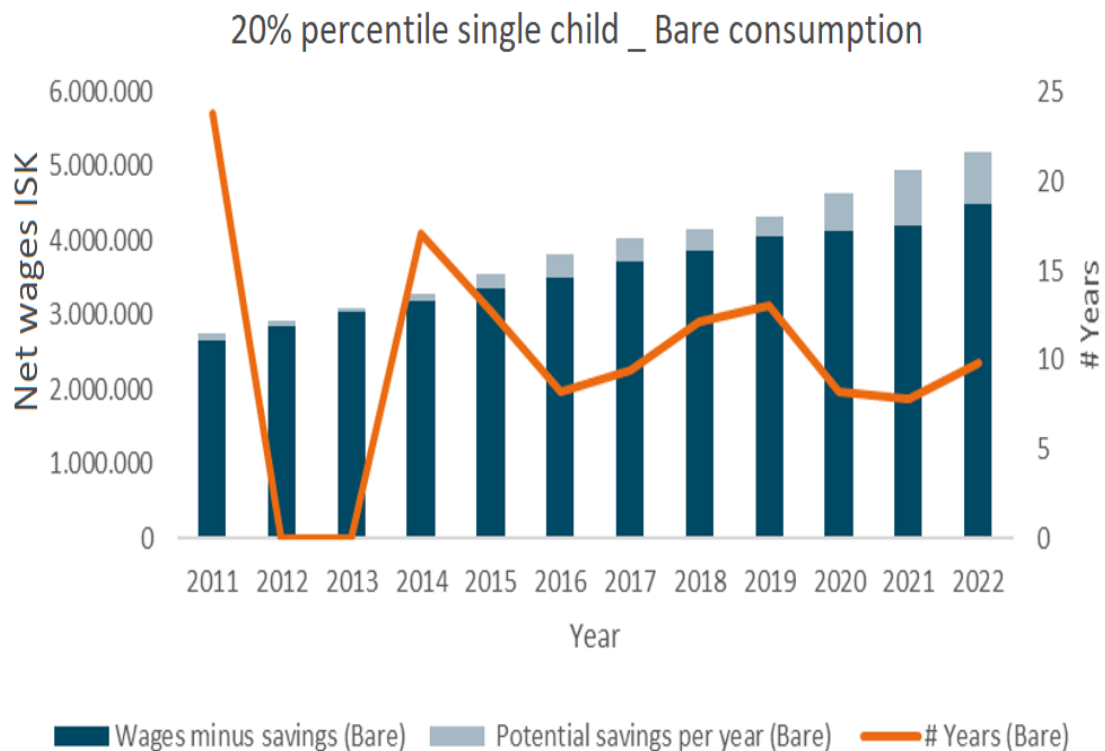


Figure 9. Average savings and years needed to save for a 15% down payment 2011-2022 for a 20th percentile single parent.

Figure 10 shows that a couple with one child should be able to save for a down payment in a relatively short time. Even under typical expenditure circumstances, the number of years needed is under three, while it was over five years from 2011 to 2012. If the couple is unmarried, they might still be eligible to receive governmental assistance for the 5% down payment option. Here, the increased salary considerably outweighs the increase in housing prices, with the savings years gradually decreasing.

20 percentile couple with child _ 15% down payment

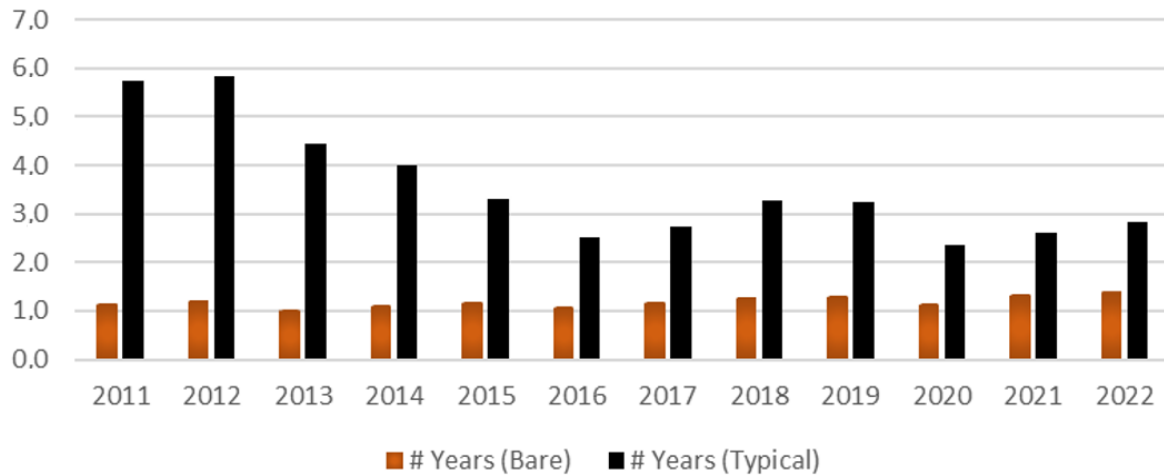


Figure 10. The time it takes to save for a 15% and 5% down payment with bare and typical spending from 2011 to 2022 for a 20th percentile couple with one child.

The effects are further shown in Figure 11., which shows that the couple in this example has been able to set aside much more money (almost a fourth of net wages) in the later part of the period compared to the first years. This trend is amplified with two wage earners in the household. Hence, despite typical living standards and being low-income, such a household has opportunities to save for a down payment, which explains why single individuals and single parents are most likely to be in the rental market.

20 percentile couple child - Typical consumption

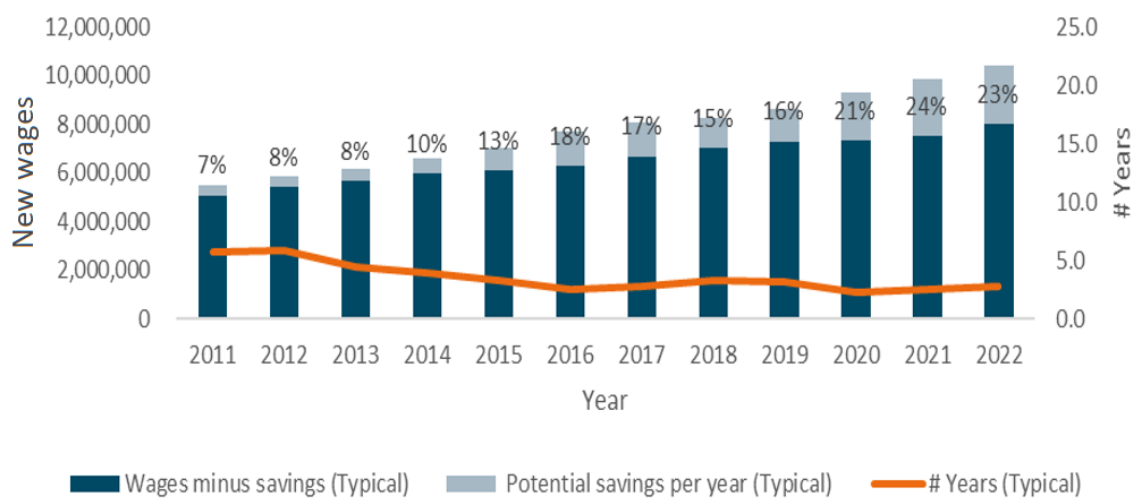


Figure 11. Average savings and years needed to save for a 15% down payment 2011-2022 for a 20th percentile couple with one child.

4.3. 40th Percentile Income Group

Finally, we look at the same three group samples in the 40th percentile income group. We start again with a single person living in a studio apartment and owns a car. Compared to the 20th percentile single person, the possibility of owning a home increases dramatically. While the 20th percentile person could only save by bare expenditures and then need almost three years under such conditions for a 15% down payment, a 40th percentile person could lead a typical lifestyle expenditure-wise and save for a down payment in approximately four years, as Figure 12 shows.

40 percentile single childless - 15% & 5% down payment

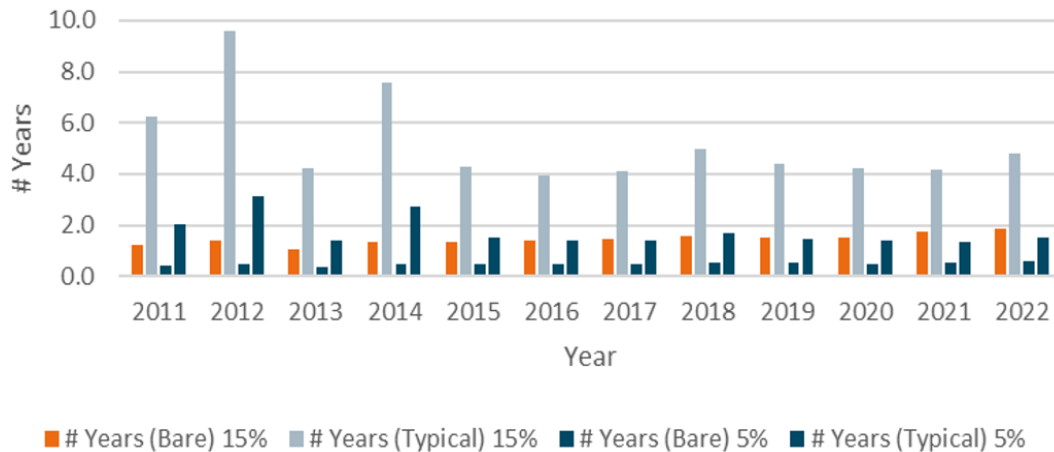


Figure 12. The time it takes to save for a 15% and 5% down payment with typical and bare spending 2011-2022 for a 40th percentile single person.

Meanwhile, a single person in the 20th percentile could save around a third of net wages. **Figure 13** shows that the percentage hovers in the mid-40% for the 40th percentile person for most years. It takes only a tad bit less than two years for such a person to save for a 15% down payment by living in bare expenditure conditions. This is almost a year less than a person in the 20th percentile group.

40 percentile single childless - Bare consumption

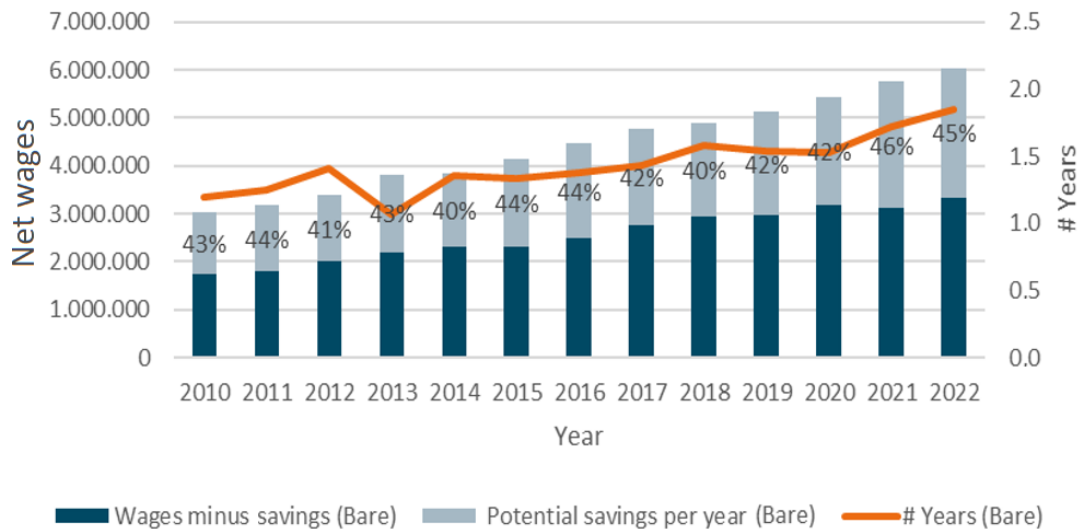


Figure 13. Average savings and years needed to save for a 15% down payment 2011-2022 for a 40th percentile single person.

While the situation is better for single individuals in the 40th percentile, it is still strenuous for single parents. They still cannot set money aside for a down payment, living typical lives expenditure-wise. While the 20th percentile single parents needed around ten years of living in bare conditions to save for a down payment, **Figure 14.** shows that it takes a 40th percentile single parent a much more tolerable four years. 2022 is notably the second-highest year in the sample, hovering around or above three years for most of the period. It is, however, possible to reach the 5% threshold in only approximately one year, compared to 2-3 years for a single parent in the 20th percentile group.

40 percentile single child - 15% & 5% down payment

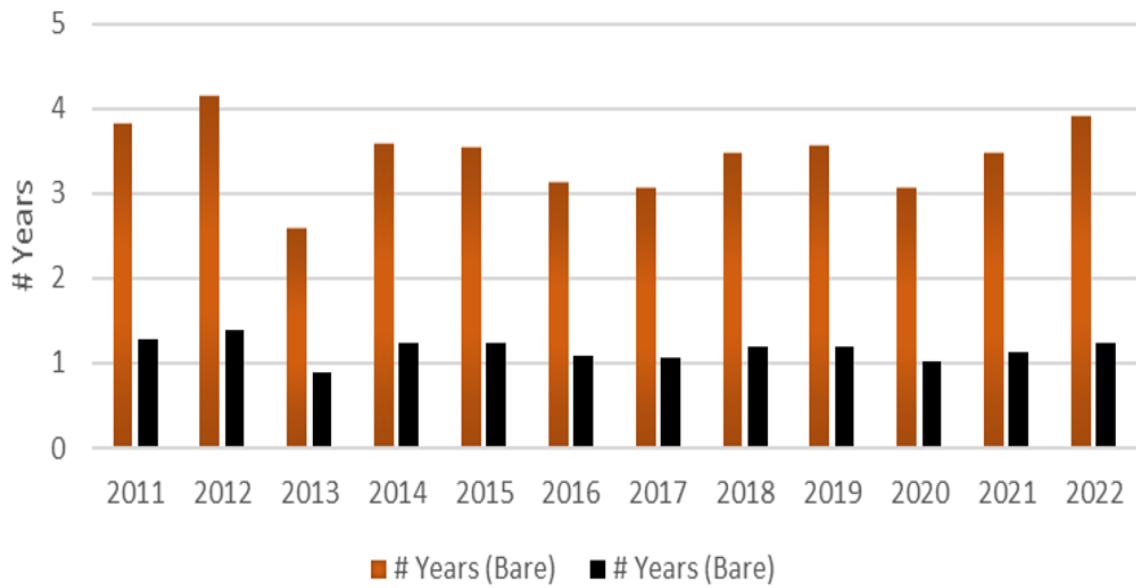


Figure 14. The time it takes to save for a 15% and 5% down payment with bare spending 2011-2022 for a 40th percentile single parent.

Figure 15 shows that even though more money is available to save, or 25% in 2022 compared to 17% in 2011, the number of years it takes to save for a 15% down payment was practically the same due to higher rental costs and housing prices.

40 percentile single child - Bare consumption

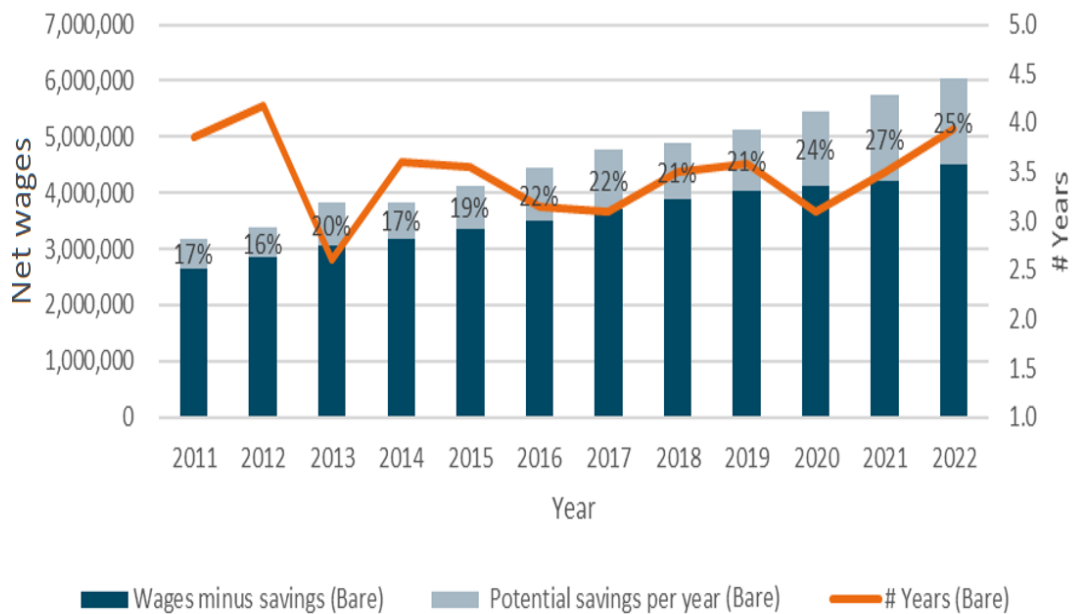


Figure 15. Average savings and years needed to save for a 15% down payment 2011-2022 for a 40th percentile single parent.

Figure 16. demonstrates that a couple in the 40th percentile with one child can easily save for a down payment. The time it takes has been stable throughout the 2011-2022 period. The amount of time leading a typical expenditure lifestyle saving for a 15% down payment is around a year and a half compared to almost three years for the comparable family in the 20th percentile income category.

40 percentile couple child - 15% & 5% down payment

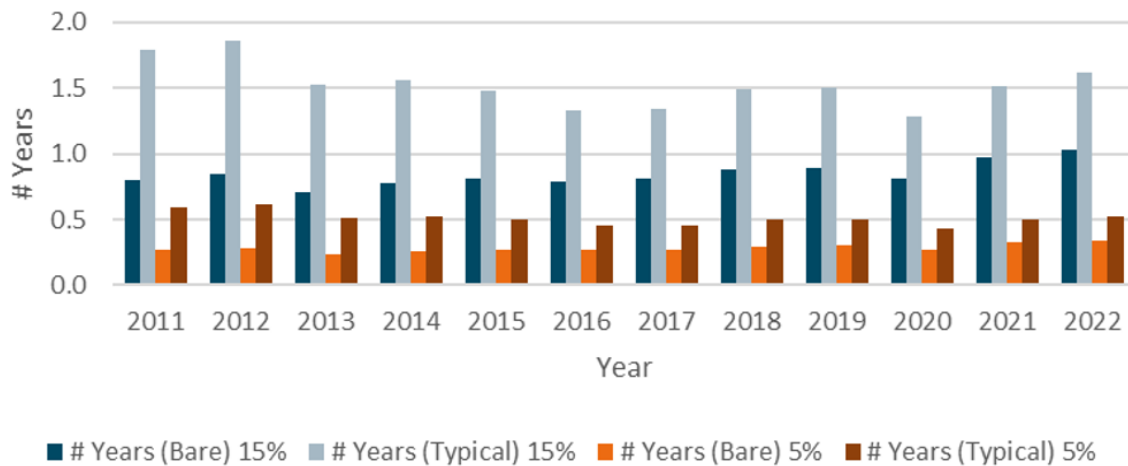


Figure 16. The time it takes to save for a 15% and 5% down payment with bare and typical spending 2011-2022 for a 40th percentile couple with one child.

Although housing prices have significantly risen, the time it takes to save for a down payment for a 40th percentile couple with one child remains low. Figure 17. shows that the percentage of wages available to set aside for savings has canceled out the higher cost associated with a 15% down payment.

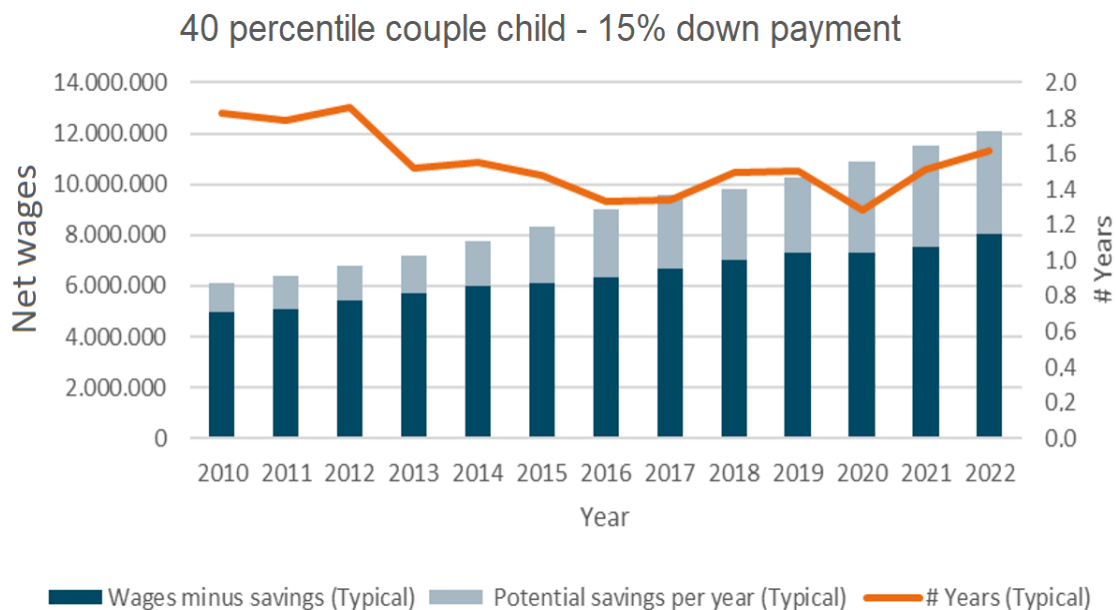


Figure 17. Average savings and years needed to save for a 15% down payment 2011-2022 for a 40th percentile couple with one child.

5. Discussion

We analyzed the time required for individuals and specific family types in the capital area’s rental market to save for a down payment, assessing whether saving is feasible under normal conditions. It appears that, on average, the duration required to save for a down payment in 2022 remains similar to that in 2011. This similar amount of time is particularly striking given the overall economic prosperity. Notably, women typically require more time to save for a down payment than men, a discrepancy that greater familial responsibilities, such as child-related sick leaves, may exacerbate. Among the three family categories analyzed (single, single with child, married), those in the 20th income percentile, especially single parents, face considerable challenges accumulating enough for a down payment.

Part of the analysis focused on the difference between the 5% downpayment and 15%. Our study shows that lowering the down payment threshold to 5% is essential for the 20th percentile income group’s chances of becoming homeowners. It can be argued that single parents in that category would need additional aid to have a realistic hope of becoming homeowners. In the 40th percentile income-group category, the chances are

considerably better in all three categories. Single parents in that group have, however, still difficulties reaching that aim with a 15% down payment threshold. Having access to 5% down payments is essential for that group.

The Icelandic government has stated that it intends to support people willing to become homeowners. Our data indicates that the 5% down payment program might be essential in opening doors for such possibilities. While people might eventually manage to save for a down payment, they could ask themselves whether they perceive it to be worth it. As Timperley says in her book *Generation Rent*, many young people have given up hope of ever being able to save for a down payment and ask themselves if it is worth trying. The YOLO (You Only Live Once) attitude has emerged, which can be viewed as a response to an increasingly insecure world despite higher wages due to higher rental rates and rising house prices (2020, pp. 8–23), meaning that becoming a homeowner being is seemingly ever more far-fetched.

References

- Airbnb. (2023). *Responsible hosting in Iceland—airbnb help center airbnb*. Retrieved from <https://www.airbnb.com/help/article/2462>
- Andrews, D., & Sánchez, C. A. (2011). The evolution of homeownership rates in selected OECD countries: Demographic and public policy influences. *OECD Journal: Economic Studies*, 2011(1), 1–37. https://doi.org/10.1787/eco_studies-2011-5kg0vswqpmg2
- Arundel, R. (2017). Equity inequity: Housing wealth inequality, inter and intra-generational divergences, and the rise of private landlordism. *Housing, Theory and Society*, 34(2), 176–200. <https://doi.org/10.1080/14036096.2017.1284154>
- Barron, K., Kung, E., & Proserpio, D. (2020). The effect of home-sharing on house prices and rents: Evidence from Airbnb. *SSRN Scholarly Paper 3006832*. <https://doi.org/10.2139/ssrn.3006832>
- Baxamusa, M. (2020). *A new model for housing finance public and private sectors working together to build affordability*. New York: Routledge.
- Benediktsson, K., Lund, K. A., & Huijbens, E. (2011). Inspired by eruptions? Eyjafjallajökull and Icelandic tourism. *Mobilities*, 6(1), 77–84. <https://doi.org/10.1080/17450101.2011.532654>
- Bergsten, L., & Hansson, A. G. (2023). Intermediary housing tenures in Sweden: Developers' response to inaccessible housing markets and its implications for tenant-buyers. *Nordic Journal of Urban Studies*, 3(1), 4–22. <https://doi.org/10.18261/njus.3.1.1>
- Cox, W. (2023). *Demographia international housing affordability, 2023 Edition*. Retrieved from <https://fcpp.org/wp-content/uploads/Demographia-International-Housing-Affordability-2023-Edition-Final.pdf>
- Davis, M. A., Larson, W. D., Oliner, S. D., & Smith, B. R. (2023). A quarter century of mortgage risk. *Review of Finance*, 27(2), 581–618. <https://doi.org/10.1093/rof/rfac034>
- Eliasson, L., & Ragnarsson, Ö. P. (2018). *Short-term renting of residential apartments effects of Airbnb in the Icelandic housing market central bank of Iceland*. Retrieved from <https://www.sedlabanki.is/library/Skraarsafn—EN/Working-Papers/WP%2076.pdf>
- Eurostat. (2024). *Distribution of population by tenure status, type of household and income group—EU-SILC survey*. Retrieved from <https://data.europa.eu/data/datasets/fatijckzlxuhnx3wzuw?locale=en>
- Fields, D. J., & Hodkinson, S. N. (2017). Housing policy in crisis: An international perspective. *Housing Policy Debate*, 28(1), 1–5. <https://doi.org/10.1080/10511482.2018.1395988>
- Gamber, E. N. (2020). *The historical decline in real interest rates and its implications for CBO's projections*. Retrieved from Congressional Budget Office, Working Paper No. 2020-09:
- Gete, P., & Reher, M. (2017). Mortgage supply and housing rents. *SSRN Scholarly Paper 2756056*. <https://doi.org/10.2139/ssrn.2756056>
- Grinstein-Weiss, M., Key, C., & Carrillo, S. (2015). Homeownership, the great recession, and wealth: Evidence from the survey of consumer finances. *Housing Policy Debate*, 25(3), 419–445. <https://doi.org/10.1080/10511482.2014.971042>
- Hananel, R., Krefetz, S. P., & Vatury, A. (2021). Public housing matters: Public housing policy in Sweden, the United States, and Israel. *Journal of Planning Education and Research*, 41(4), 461–476. <https://doi.org/10.1177/0739456X18793702>
- Hartley, D. (2011). *Distressed sales and housing prices google docs*. Retrieved from https://drive.google.com/file/u/0/d/0B1IM3i0QzVxQdzJ2QWx3OW1fUnM/view?usp=sharing&resourcekey=0-1nfgvNEbGjpVxt0m2y01eQ&pli=1&usp=embed_facebook
- Hedlund, A. (2019a). *Down payments and the homeownership dream: Not such a barrier after all? The Center for Growth and Opportunity*. Retrieved from <https://www.thecgo.org/research/down-payments-and-the-homeownership-dream-not-such-a-barrier-after-all/>
- Hedlund, A. (2019b). *Housing affordability – trends, consequences, and policies. The Center for Growth and Opportunity*. Retrieved from <https://www.thecgo.org/research/housing-affordability-trends-consequences-and-policies/>
- HMS. (2020). *Conditions on the housing market results of an attitude survey*. Retrieved from https://hms-web.cdn.prismic.io/hms-web/7082cff2-cc85-4508-a9f9-938036b5256e_adstaedur-a-husnaedismarkadi_mai-2020.pdf
- HMS. (2024a). *Affiliate loans*. Retrieved from <https://reiknival.hlutdeildarlan.is/>
- HMS. (2024b). *Equity loan*. Retrieved from <https://hms.is/en/loans-and-benefits/equity-loan>
- HMS, H. (2021). *The state of the rental market—results of the 2021 survey*. Retrieved from https://hms-web.cdn.prismic.io/hms-web/1f7bab32-bd5b-4ae2-96e6-d8eb7eff53c_stadan-a-leigumarkadi-konnun-arsins-2021.pdf
- Howard, A. (2024). Seven propositions about 'generation rent'. *Housing, Theory and Society*, 1–22. <https://doi.org/10.1080/14036096.2024.2319758>
- Iceland Revenue and Custom. (2024). *Withholding tax calculator*. Retrieved from <https://www.skatturinn.is/einstaklingar/reiknivalar/reiknival-stadgreidslu/>
- Icelandic Regional Development Institute. (2024). *Graphs and records. Regional organization*. Retrieved from <https://www.byggdastofnun.is/is/utgefifid-efni/grof-og-skrar>

- Icelandic Tourist Board. (2018). *Report of the minister of tourism, industry and innovation on tourism tolerance*. Tourism Office. Retrieved from <https://www.ferdamalastofa.is/is/tolur-og-utgafur/utgefing-efni/umfang-og-ahrif/skyrsla-ferdamala-idnadar-og-nyskopunarradherra-um-tholmork-ferdamennsku>
- Immergluck, D. (2009). The foreclosure crisis, foreclosed properties, and federal policy: Some implications for housing and community development planning. *Journal of the American Planning Association*, 75(4), 406–423. <https://doi.org/10.1080/01944360903124316>
- Institute of Economic Studies. (2011). *Housing market development and comparison with other nations*. Retrieved from https://ioes.hi.is/files/2021-05/Throun_a_husnaedismarkadi_og_samanburdur_vid_onnur_lond.pdf
- Jónsdóttir, U. (2015). *The rental market status and prospects*. People's Association of Iceland. Retrieved from https://www.asi.is/media/266394/leigumarkadur_Una.pdf
- Jordà, Ò., Schularick, M., & Taylor, A. M. (2014). *The great mortgaging: Housing finance, crises, and business cycles* Retrieved from (SSRN Scholarly Paper ID 2507753). Social Science Research Network:
- Karlsdóttir, A., & Jóhannesson, G. P. (2016). Tourists as migrants/migrants as entrepreneurs—the agency of the visitor's eye. In *Mobility to the Edges of Europe: The Case of Iceland and Poland*: Vol. ed. Rancew-Sikora, Dorota, and Unnur Dís Skaptadóttir. In (pp. 38–65). Warsaw: Scholar Publishing House.
- Kuo, F.-Y. (2021). *Homeownership remains primary driver of household wealth*. Eye On Housing - National Association of Home Builders. Retrieved from <https://www.nahb.org/blog/2021/02/Homeownership-Remains-Primary-Driver-of-Household-Wealth>
- Lambie-Hanson, L., Li, W., & Slonkosky, M. (2019). *Leaving households behind: Institutional investors and the US housing recovery*. Retrieved from (SSRN Scholarly Paper No. 3314570):
- Lee, Y., Kemp, P. A., & Reina, V. J. (2022). Drivers of housing (un) affordability in the advanced economies: A review and new evidence. *Housing Studies*, 37(10), 1739–1752. <https://doi.org/10.1080/02673037.2022.2123623>
- Loftsdóttir, K. (2019). Crisis and coloniality at Europe's margins: Creating exotic Iceland. *NORA-Nordic Journal of Feminist and Gender Research*, 23(4), 246–260.
- Matthíasson, P. (2021). *Is it true that close to 14 thousand families in Iceland were "carried out onto the street" following the economic collapse of 2008? The Science Web*. Retrieved from <http://www.visindavefur.is/svar.php?id=79336>
- McKee, K., Moore, T., Soaita, A., & Crawford, J. (2017). 'Generation rent' and the fallacy of choice. *International Journal of Urban and Regional Research*, 41(2), 318–333. <https://doi.org/10.1111/1468-2427.12445>
- Mermet, A.-C. (2019). *The "Airbnbification" of the Icelandic capital. Towards an assessment of the socio-spatial impacts of Airbnb in the Reykjavik capital area*. Reykjavik: Icelandic Tourist Board.
- Mian, A., & Sufi, A. (2015). *House of debt: How they (and You) caused the great recession, and how we can prevent it from happening again*. Chicago: The University of Chicago Press.
- Mian, A., Sufi, A., & Trebbi, F. (2015). Foreclosures, house prices, and the real economy. *The Journal of Finance*, 70(6), 2587–2634. <https://doi.org/10.1111/jofi.12310>
- Ministry of Infrastructure. (2023). *Housing forum: The goal is to create a fairer housing market*. Retrieved from <https://www.stjornarradid.is/efst-a-baugi/frettir/stok-frett/2023/08/30/Husnaedisthing-Markmidid-ad-skapa-rettlitari-husnaedismarkad/>
- Ministry of Social Affairs. (2011). *Icelandic consumer guide*. Retrieved from <https://www.stjornarradid.is/verkefni/felags-og-fjolskyldumal/neysluvidmid/>
- Ministry of Social Affairs. (2015). *Information about the situation in the housing market*. Retrieved from <https://www.stjornarradid.is/efst-a-baugi/frettir/stok-frett/2015/09/23/Upplýsingar-um-stoduna-a-husnaedismarkadi/>
- Mixa, M. W., & Loftsdóttir, K. (2021). Tourism development and housing after Iceland's 2008 Crash. In J. Dominguez-Mujica, J. McGarrigle, & J. M. Parreño-Castellano (Eds.), *International Residential Mobilities: From Lifestyle Migrations to Tourism Gentrification*. In (pp. 269–289): Springer International Publishing. https://doi.org/10.1007/978-3-030-77466-0_14.
- Mixa, M. W., & Loftsdóttir, K. (2024). 'People need housing to live in': Precarity and the rental market during tourism gentrification. *Housing Studies*, 1–22. <https://doi.org/10.1080/02673037.2024.2339920>
- Mixa, M. W., Loftsdóttir, K., & Rúnarsdóttir, A. L. (2021). You don't know which house you'll move into next: Ambiguity and tenants' experience of the Icelandic housing market. *Icelandic National Society*, 12(1), 87–104.
- Montanari, A., & Staniscia, B. (2017). 3. Young Italians on the move. In B. Glorius & J. Domínguez-Mujica (Eds.), *Kultur und soziale Praxis*. In (1st ed., pp. 49–74): Transcript Verlag. <https://doi.org/10.14361/9783839434789-003>.
- Nordström, E., Svensén, R., Ribbing, M., & Lepola, K. (2022). *Starter loan for first-time home buyers (SOU 2022:12)*. *The State's Public Investigations*. Retrieved from <https://www.regeringen.se/contentassets/5563926cf5244002a1645c13b35e294b/startlan-till-forstagangskopare-av-bostad-sou-202212.pdf>
- Preece, J., Crawford, J., McKee, K., Flint, J., & Robinson, D. (2020). Understanding changing housing aspirations: A review of the evidence. *Housing Studies*, 35(1), 87–106. <https://doi.org/10.1080/02673037.2019.1584665>
- Registers Iceland. (2024a). *Number of apartments | National register of Iceland*. Retrieved from <https://www.skra.is/thjonusta/gogn/talnaefni/fjoldi-ibuda/>
- Registers Iceland. (2024b). *Real estate prices*. Retrieved from <https://verdsja.fasteignaskra.is/#/kaupverd>
- Registers Iceland. (2024c). *Indices of purchase and rental price*. Retrieved from <https://shiny.skra.is/ytrivfur/visitala/>
- Salt Lake City Housing and Neighborhood Development. (2018). *Growing Slc: A five year housing plan 2018-2022*. Retrieved from http://www.slcdocs.com/hand/Growing_SLC_Final_No_Attachments.pdf
- Statistics Iceland. (2019). *Statistics Norway: Immigrants with about 8% lower wages than nationals*. Statistics Iceland. Retrieved from <https://hagstofa.is/utgafur/frettasafn/laun-og-tekjur/rannsokn-a-launamun-efir-bakgrunni-2008-2017-10942/>
- Statistics Iceland. (2024a). *Distribution of full-time wage earners by employee group, profession and gender 2014-2022*. Retrieved from https://px.hagstofa.is/pxis/pxweb/is/Samfelag/Samfelag_launogtekjur__1_laun__1_laun/VIN02004.px/table

- /tableViewLayout1/?loadedQueryId=04d47ace-c064-4442-9871-98c9d2e5e75b&timeType=from&timeValue=2014
- Statistics Iceland. (2024b). *Number of people employed in industries according to records by month, sex, age and background. 2008-2023*. Retrieved from https://px.hagstofa.is/pxis/pxweb/is/Samfelag/Samfelag__vinnumarkadur__vinnuaflskraargogn/VIN10030.px/
- Statistics Iceland. (2024c). *The main items of export of goods and services 2009-2012*. Retrieved from https://px.hagstofa.is/pxis/pxweb/is/Efnahagur/Efnahagur__utanrikisverslun__3_voruthjonusta__voruthjonustaeldra/UTA05001.px/table/tableViewLayout2/
- Statistics Iceland. (2024d). *Wage index, annual averages from 1989*. Retrieved from <https://hagstofa.is/talnaefni/samfelag/laun-og-tekjur/launavitala/#:~:text=V%C3%ADsit%C3%B6lur%20launa.%20Myndrit.%20Talnaefni.%20528%201000.%20Borgart%C3%BAn%2021A,%20105%20Reykjav%C3%ADk>
- Statistics Iceland. (2024e). *Selected items of export of goods and services 2013-2023*. Retrieved from https://px.hagstofa.is/pxis/pxweb/is/Efnahagur/Efnahagur__utanrikisverslun__3_voruthjonusta__voruthjonusta/UTA05003.px/table/tableViewLayout2/
- Statistics Iceland. (2024f). *Consumer price index, annual averages*. Retrieved from <https://hagstofa.is/talnaefni/efnahagur/verdlag/visitala-neysluverds/#:~:text=V%C3%ADsitala%20neysluver%C3%B0s.%20Myndrit.%20Talnaefni.%20Ver%C3%B0lag%20sreikniv%C3%A9.%20Til%20grundvallar%20C3%BAtreikningnum%20eru%20notu%C3%B0>
- Stefani, A. D. (2020). Debt, inequality and house prices: Explaining the dynamics of household borrowing prior to the great recession. *Journal of Housing Economics*, 47. <https://doi.org/10.1016/j.jhe.2018.09.001>
- Sveinsson, J. R. (2004). *The formation of urban homeownership in Iceland*. Paper presented at the ENHR Conference July 2-6, Cambridge.
- Tekin, E. (2022). *How home prices and household incomes changed since 1960. Clever Real Estate*. Retrieved from <https://listwithclever.com/research/home-price-v-income-historical-study/>
- Timperley, C. (2020). *Generation rent*. Surrey: Canbury Press.
- Vareikaité, S., Minelgaité, I., & Magnússon, G. (2022). National diversity in the management of Icelandic limited companies. *Journal of Business and Economics*, 19(1), 27-52. <https://doi.org/10.24122/tve.a.2022.19.1.2>
- Waldron, R. (2024). Responding to housing precarity: The coping strategies of generation rent. *Housing Studies*, 39(1), 124-145. <https://doi.org/10.1080/02673037.2021.2022606>
- Zwiers, M., Bolt, G., Van Ham, M., & Van Kempen, R. (2016). The global financial crisis and neighborhood decline. *Urban Geography*, 37(5), 664-684. <https://doi.org/10.1080/02723638.2015.1101251>