Micro-Apartments: A Movement to Smaller Living Spaces in Japan

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Abstract

Between 2010 and 2011, the population of Japan began to decline and has continued to do so since. At the same time, more and more young Japanese adults are living in small living spaces, including micro-apartments. The most obvious factor relating to this is a rise in independence and lack of interest in romantic relationships, but that isn't all. Both contemporary and historical housing policies impact the modern-day market, as well as the unique structure of the Japanese housing market. Lastly, small living spaces often present themselves as sustainable options, as they don't allow for a lot of belongings and their small footprint could allow for dense housing developments. Proper implementation and infrastructure, however, is necessary to ensure that micro-apartments can play a beneficial role in society. Looking at Japan as a case study for what could happen across the world as fertility rates shrink and urbanization rises in other countries is important. With proper analysis, we can find housing that fits both the needs of young people and the environment, while also providing sustainable infrastructure built around it.

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Micro-apartments are living spaces characterized by their small size, even smaller than that of a traditional studio apartment (Soub & Memikoğlu, 2020). In a world where 57.5% of all people live in urban areas (Central Intelligence Agency, 2023) and housing costs continue to rise (Kubo & Yui, 2011), many people are seeking affordable options without sacrificing a central location. One such idea is micro-apartments. Their appeal is that they are generally more affordable than a traditional apartment in the same area, while being of higher quality than the cheapest options (Hida, 2022). They provide a convenient option for people living alone with jobs in urban areas who spend a lot of their time out of their apartment (Kottmann, 2022). They are increasingly appearing in cities such as London, New York, Hong Kong, Tokyo, and other urban centers where housing has become unaffordable for many people after the 2008 financial crisis (Harris & Nowicki, 2020). The small footprint of these units also provides promising opportunities, but also failures, for the future of housing sustainability (Nelson, 2018). Micro-apartments and similar living spaces have the potential to play an important role in the future, but that requires proper implementation.

This paper will analyze the presence of small living spaces in urban Japan. Additionally, it will examine the long-term sustainability of micro-apartments and other small living spaces. In urban Japan, housing market dynamics and discrimination, movement away from traditional family structures towards individualism, and marketing of sustainability, including faux sustainability, are the primary causes for a movement towards smaller living spaces.

Japanese Housing Market

One of the primary contextual factors affecting the change in living spaces in Japan is the Japanese housing market. Before talking about its current state, it is important to understand the

post-war history of the housing market. After World War II, Japan began to rapidly urbanize, with 12 million people migrating into urban centers from 1954-2019, 10 million of those going to Tokyo (Yoshida, 2021). This initially led to a severe housing shortage in urban areas, which had to be resolved by the government through various policies and initiatives (Kubo & Yui, 2011). The Ministry of Construction was established in 1948 and created the "three pillars for housing policy" (Kobayashi, 2016, p. 15). These were the Government Housing Loan Corporation (which financed 19.41 million housing units in its 57 years of existence by providing loans to increase mortgage liquidity), the Public Housing Act (which promoted the construction of public rental housing), and the Japan Housing Corporation (which assisted primarily lower and middle income people moving from rural to urban areas and helped establish multifamily residential units in urban Japan) (Kobayashi, 2016). These policies helped to stimulate residential construction and provide housing to those who could not otherwise afford it. Although these policies succeeded in stimulating growth of housing stock, this growth was almost exclusively directed towards helping "standard families" (meaning traditional nuclear families with a husband, wife, and one or more children) (Hirayama & Izuhara, 2008, p. 3). The GHLC did not give mortgages to single-person households until 1981 and had an age requirement (over 40 until 1988, then over 35) until 1993 (Hirayama & Izuhara, 2008).

Japan is far more densely populated than many other countries, with the per capita habitable area being only 800 square meters, compared to 19,300 in the USA (Yoshida, 2021). High housing prices in urban centers also caused many families to move to surrounding areas of major cities, creating suburbs (Kubo & Yui, 2011). Rural families also moved to suburban areas, increasing the spread of suburbanization (Kubo & Yui, 2011).

Another defining characteristic of the Japanese housing market is the stark decline in value of properties over time. There is a very low turnover in Japanese homes, resulting in a very small secondary market (Kobayashi, 2016). Relative to the US, Japan has nearly as many newbuild sales as the US, but only a fraction of the existing home sales (Kobayashi, 2016). This issue is contributed to by the frequency of earthquakes, because design regulations are updated after every major earthquake (Yoshida, 2021). The revisions made in 1981 are extremely important, making a large difference in the safety of houses built before and after the earthquake (Yoshida, 2021). Considering the amount of houses built following World War II, that is extremely noteworthy. Without a large secondary housing market and with safety concerns for older housing stock, a house's value falls over time (Yoshida, 2021)

In the modern market, owner occupied dwellings have steadily represented about 60% of occupied households (61.7% as of 2013), and overall rental units represent 35.6% (private rental units being 28.5% of that) (Yoshida, 2021). Homeownership, however, is extremely slanted when compared by age (Yoshida, 2021). Of household heads aged 60 and over, 80% own their homes, while this rate is only 39% and 15% for the groups 30-39 and 18-30 respectively (Yoshida, 2021). Over the time of this rapid real estate development, Japan had a very traditional view on the nuclear family (Kubo & Yui, 2011). In the past few decades, however, there has been a change in demographics. There has been a rapid increase in single person and married couple households and a steady decline in nuclear family households (Kubo & Yui, 2011). This change has resulted in the need for housing designed for single people, because home ownership in Japan was designed with the nuclear family in mind (Hirayama & Izuhara, 2008). These younger groups mostly rent and have lower average incomes (Yoshida, 2021). Landlords for private apartments in Japan even tend to prefer clients that they know will have a large turnover,

especially college students and people in college, because Japan has very strong tenant protection policies that make it difficult to terminate leases (Yoshida, 2021). Japan has a relatively high rental vacancy rate at 18.5% (Yoshida, 2021), because it is more economically advantageous for landlords to have higher rental prices than to lower the rent and fill the spot (Yoshida, 2021; Yoshida et al., 2015). If the rent is low, the tenant is more likely to stay for a long period of time, and the landlord will be unable to renegotiate the lease or raise the rent over time (Yoshida, 2021). Additionally, landlords lose the ability to make decisions on renovations and changes to the building in the case of extended leases (Yoshida et al., 2015). The size of rental housing is also far smaller than non-rental housing. As of 2018, the average single detached house (~50% of the housing stock) in Japan is 129.3 square meters, the average condominium (10.6% of housing stock) is 75.1 square meters, and the average size of a private rental (~30% of housing stock) is 45.6 square meters, as visualized in Figure 1. (Yoshida, 2021).

Table 1

Housing Stock in Japan as of 2018[1]

Housing Type	Number of units (millions)	Average unit size (sq. meter)
Detached and Townhouses	27.01	129.3
Condominiums	5.71	75.1
Private Rental	15.30	45.6
Public Rental	1.92	52.8
Quasi-Public Rental	0.75	51.0
Corporate Housing	1.10	51.5

[1] 2018 Housing and Land Survey of Japan

Note. Adapted from *Land scarcity, high construction volume, and distinctive leases characterize Japan's rental housing markets*, by J. Yoshida, 2021. Copyright 2023 by The Brookings Institution.

In Japan, women have been long discriminated against through policy (Hirayama & Izuhara, 2008). The lack of loans by the GLHC for single-person households encouraged marriage to have ownership of living space (Hirayama & Izuhara, 2008). The "individualised (property) ownership system" initiated in 1947 divides ownership of households by income contributed (Hirayama & Izuhara, 2008, p. 6). Women are encouraged to make less money and remain as dependents through tax loopholes, and also face gender discrimination in hiring, promotions, and wages (Hirayama & Izuhara, 2008). This means that married women often have minimal property ownership compared to a male spouse. Single women also face a myriad of challenges. Lower wages make it more difficult to secure housing, and the owners of rental properties discriminate against unmarried women because they are perceived as not having a stable income and as "strange people" (Hirayama & Izuhara, 2008, p. 12). Condominiums have been a very attractive option, for they give the woman partial ownership of the building and are located on safe, well-traveled streets where women tend to feel safer (Kubo & Yui, 2011). Due to the collapse of the housing bubble, however, condominium prices rose significantly, out of the budget of many single women (Kubo & Yui, 2011). These struggles contribute to many unmarried women continuing to stay at their parents' home, with over 60% of women between the ages of 25 and 39 living in their parents' house (Hirayama & Izuhara, 2008).

Independence in Japan

The other most important aspect of the change of living spaces comes from demographic changes in Japanese societies. Japan's aging society, fueled by low birth rates, has gained a lot of attention. In 2020, only 864,000 babies were born, which was the lowest recorded since records began being kept in 1899 (Lufkin, 2021). That is a Total Fertility Rate of 1.39 children per woman, 0.71 below replacement (Central Intelligence Agency, 2023). Meanwhile they have the highest percentage of people over the age of 65 out of any country in the world at 28.4% (Arakawa, 2020).

It is also very important to look at the changes happening in the younger generations, especially as they will continually influence this shift. Japan has been a very traditional society, but the norms are quickly changing. While there was previously a heavy emphasis on finding a spouse and having children, that has been greatly reduced. Additionally, many people in Japan are viewing their homes in a different way than before. Lastly, some researchers are predicting a change in how young Japanese people manage their social relationships. All of these factors are also influencing the size of homes people are choosing to live in.

Until recently, Japanese culture has had an emphasis on traditional, heterosexual marriages, where the man works and provides for the family, and the woman stays home and takes care of the household and the children (Kottmann, 2022). The aforementioned housing market and workplace were closely tied to these ideas of how the family should operate (Arakawa, 2020). Since the Japanese census began in the 1920s, the percent of unmarried men and women above the age of 50 had each been below 5% until the 1990s (Arakawa, 2020). By 2015, this percentage rose to 23.4% for men and 14.1% for women, with these numbers projected to keep increasing (Arakawa, 2020). The new truth is that there is a significant portion

of the Japanese population that simply is not going to get married. Only 19.7% of never-married men and 27.3% of never-married women between the ages of 18 and 34 are “in a relationship with a person of the opposite sex as lovers” (National Institute of Population and Social Security Research, 2015, p. 5). Additionally, 30.2% of never-married men in this age group “are not in any relationship with the opposite sex” and “do not want to date in particular,” along with 25.9% of women (National Institute of Population and Social Security Research, 2015, p. 5). This has translated to the types of housing, as 56.8% of homes included a married couple in 1980, but that has dropped to 36% as of 2010 (Ronald et al., 2018). Since 2005, single-person households have become the most common household type (Ronald et al., 2018). As marriage is delayed and relationships become less common in Japan, single person households are likely to continue to rise as the dominant form of housing in Japan.

Even the way young people view their living spaces is evolving. Although there is some debate about whether young people view their solo living spaces as temporary, as found by Ronald, Druta, and Godzik (2018), or long-term, as found by Kottmann (2022), there is agreement on the perceived purpose of the home. Some people (often men) view their living spaces as a space to fulfill their needs (sleeping, storage, etc.) and some people (often women) view their living space as “a space of autonomy, privacy, and freedom” (Kottmann, 2022, p. 1173). Even some individuals in relationships don’t want to sacrifice the value of having their own living spaces, viewing their personal space as sacred and choosing to visit their significant other instead (Kottmann, 2022; Ronald & Nakano, 2012). Hida (2022) interviewed one woman who said she had not had her partner over to her apartment, saying that “this space is for me” (para. 10). According to the 2015 National Japan Fertility Survey, “freedom of action and lifestyle” was by far the biggest merit of staying single, with 69.7% and 75.5% of never-married

male and female respondents listing it, respectively (2015, p. 3). Many young people in Japan value having the freedom of their own space and choosing how they live their life. This perception of personal space expands beyond just romantic relationships, with almost a third of Japanese people saying they have not had friends over ever (Hida, 2022). Instead, many people choose to leave their space of solitude and seek out connections in an external environment (Arakawa, 2020).

This transitions to the theory that people may begin to live their social lives in a different way than has been traditionally done. One example of this is the rise of people doing activities independently, as opposed to going out with a group of friends (Lufkin, 2021). While previously it was shameful in Japan to be seen alone in public spaces, recent years have seen a rise in options for individuals to go out by themselves, from solo bars to solo karaoke (Lufkin, 2021). One theory surrounding this idea, presented by Arakawa (2020), is "a shift from communities built on 'belonging' to a new model built on 'contacts'" (From Communities of Belonging to Communities of Connections section, para. 4). This means that instead of being associated with a certain group or community, people will instead leave their bubbles of isolation, have a briefer form of contact with someone or some people, and that will be enough to "provide a sense of psychological ease," even if they don't belong to a specific community (Arakawa, 2020, From Communities of Belonging to Communities of Connections section, para. 4). These points of contact can be through many different means, from colleagues, to a stranger at a bar, to people on the internet (Arakawa, 2020). This corresponds with viewing a living space as a functional necessity and the rise in living alone, because people will have to leave their living space to get out and see other people and get the necessary social interaction (Lufkin, 2021). The interviews done by Kottmann (2022) align with this idea of changing norms, finding that people are trying

to find new, nonstandard ways of relating with people outside of the standard family. Without declaring causation, there certainly seems to be a correlation between an increase in solo living and a change in how people in Japan are getting social interaction and treating their outings.

Sustainability of Small Spaces

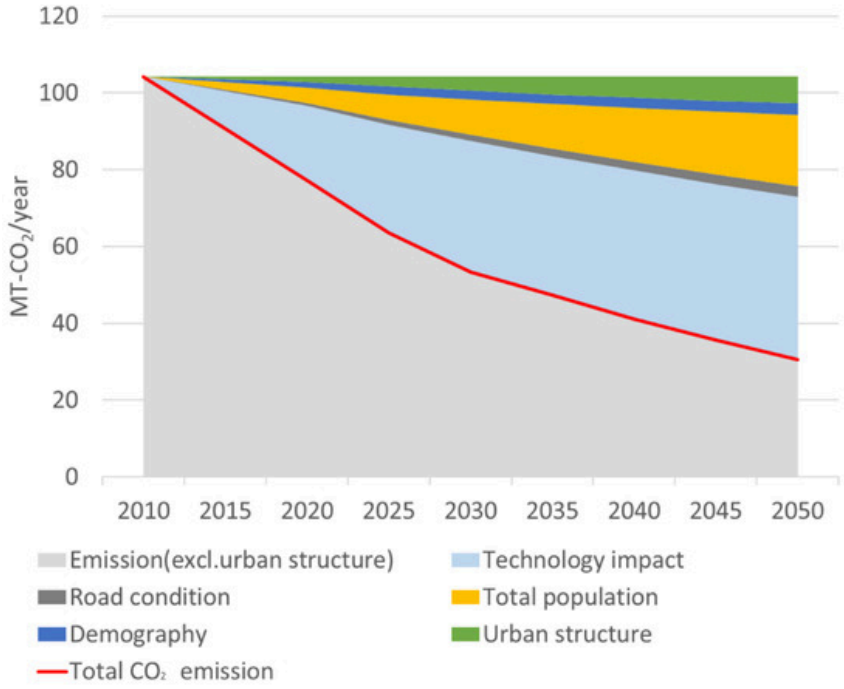
One of the major implications of small spaces is their long term sustainability. With much of the world's population being urbanized (92% of Japan's population), population density in urban areas will inevitably rise (Central Intelligence Agency, 2023). It has been suggested by some, such as Nelson (2018), that movement to smaller living spaces is essential to protect the environment. By reducing the need for sprawl and by embracing a more minimalist lifestyle, environmental impact could be greatly reduced (Nelson, 2018). Some also argue that the small living movement has been taken over by those seeking profits, sustainable space doesn't equal a sustainable tenant, and that shared living spaces are more efficient (Harris & Nowicki, 2020; Nelson, 2018). Although sustainability is not necessarily a primary reason in the decision to live in a smaller living space, it is being used as a tactic in marketing (Harris & Nowicki, 2020).

The appeal of living in a detached home with a yard is present in much of the developed world, and that is shown with the high ownership rates of homes among older generations in Japan. These homes, especially in the suburbs, are extremely unsustainable today, due to both the land area they take up and the reliance of the residents on automobiles. It is projected that as technology improves and Japan's population continues to shrink, assuming a scenario where the population compacts into urban areas, overall automobile emission would decrease by 70% (Kii, 2020). It is important to clarify that the majority of this is coming from technological improvements (40.6%), followed by the reduction in population (17.8%), then the urban structure (6.6%), as shown in Figure 2 (Kii, 2020). This reduction is less in large urban centers,

but more prevalent in smaller, local cities (Kii, 2020). Reliance on cars also causes environmental impact through accommodation, such as the requirement for parking lots (Cervero et al., 2017). The need for cars and their accommodations would be greatly reduced if more people were situated in urban areas, especially with access to public transportation. Additionally, smaller living spaces are more efficiently temperature controlled, assuming high quality construction and insulation (Nelson, 2018). The lack of storage space also may encourage a minimalistic and less consumerist lifestyle (Nelson, 2018). With such a small living space, a tenant has to think carefully about whether or not they need something before purchasing it, because they might simply not have enough space. Lastly, in a small space like a micro-apartment, especially when situated in an urban area, people are more likely to use public amenities (Nelson, 2018). For example, not everyone will be able to fit a laundry machine or home gym in their home, so they will have to go out and use a shared one, which is generally more sustainable.

Figure 1

Estimation of future CO2 emissions and contribution of the factors (the compact scenario)



Note. From *Reductions in CO2 Emissions from Passenger Cars under Demography and Technology Scenarios in Japan by 2050*, by M. Kii, (2020). In the public domain.

There are some questions about how sustainable micro-living is. Although distributors and investors in micro-apartments position it as a sustainable housing option, some argue that this is disingenuous and an example of greenwashing (Harris & Nowicki, 2020). One major issue, especially prevalent in Japan, is how many people are living in their own apartments. Although a small living space is more spatially efficient, it is not as efficient as shared living. Studies suggest that a small home with two residents could encourage environmentally friendly practices and shared usage of amenities, which would not happen in a single-person micro-apartment (Nelson, 2018). This is because amenities such as bathrooms, kitchens, and others are more likely to be shared when living with others (Nelson, 2018). There are a variety of

different ways to go about this, including shared homes, shared common spaces, or shared amenities within a building of separate living spaces.

Group homes are present in Japan, although it was outside the scope of this paper to discuss all types of alternative living spaces. Kottman (2022) interviewed a person who lives with over 60 other people in a shared community home in Japan. They shared common spaces, amenities, and supported each other and their families (Kottmann, 2022). This is much more efficient spatially (and likely in other ways), but when many young Japanese people are seeking private spaces, it seems like an unlikely widespread outcome. Additionally, no matter how environmentally friendly a building or space is, the tenant can defeat the purpose of it (Nelson, 2018). When an interviewee was talking about how their micro-apartment forced them to live more sustainably, Hida (2022) noticed they had a stack of disposable cups behind them because they had no space for dishes. While a compact space could encourage someone to live more sustainably, it could also cause them to live a more disposable lifestyle. Harris and Nowicki (2020) argue that the micro-living movement is being co-opted by investors to push it as trendy and more environmentally sustainable than it is to maximize profits. While there are clear sustainability merits of micro-apartments, it is clear that they are far from perfect and likely need a stark change in implementation to truly be the ideal dwellings of the future.

Conclusion

Japan's housing market dynamics and its changing demographics and culture are leading to a change towards smaller homes, especially among young people. With single households now being the most common household type (Ronald et al., 2018), landlords preferring to rent out smaller spaces (Yoshida, 2021), and the affordability and appeal of micro-apartments and other

small spaces (Soub & Memikoğlu, 2020), the market is pushing young people towards small rental spaces. Meanwhile, a lack of relationships and desire for them (National Institute of Population and Social Security Research, 2015), a changing perception of the home (Kottmann, 2022; Ronald et al., 2018), and a possible change in how people establish connections with one other (Arakawa, 2020) are pushing people towards these independent spaces. These smaller spaces offer potential for the future of sustainable housing, but without proper implementation with an emphasis on sustainability, micro-apartments and other small living spaces could set an underwhelming precedent for the future of housing.

Looking forward, many of the recommended future steps are mainly focused on city planning and how to properly implement small housing. Nelson (2018) states that neighborhood planning is a very important part of ensuring sustainability, suggesting that an emphasis on pedestrian and bicycle-friendly cities with strong public transportation goes a long way toward ensuring tenants will commute more sustainably. Dense, highly populated cities often struggle the most with traffic congestion, which isn't conducive with the goal of reducing car usage through density (Cervero et al., 2017). Some cities like Vancouver, however, struggle with traffic due to their lack of investment in roadways and friendliness in city planning toward pedestrians (Cervero et al., 2017). Traffic like this would be a more desirable outcome, because it discourages automobile use in the city. In terms of changes to homes, the best improvements would be those furthering the sharing of utilities and common spaces (Nelson, 2018). This is a challenge with people becoming more independent in Japan, but it would be an important step in becoming more sustainable. As the world continues to become more urbanized, Japan is an important reference point for other highly developed countries. If other countries follow Japan's demographic and societal trends, they could have a similar move towards smaller housing. It is

important for these other countries to look at what Japan is doing right and wrong (as well as for Japan to improve upon themselves), and try to develop the most sustainable, popular, and beneficial apartment and living spaces as possible. Further research is required on how to best implement ideas of co-housing into a place like Japan, where a move to independence has put an emphasis on individual space. It is important to find how to both build a sustainable living space, but also be an attractive option to tenants. While micro-apartments are rising in popularity and show promise in their sustainability, they are far from perfect and need to improve to best create sustainable cities.

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