LAST week, the Government announced new rules to cap the supply of so-called "shoebox" units - tiny residential units - in the market. The move suggests some discomfort with the proliferation of such units in recent years. The Government projects an increase in the number of shoebox apartments from the current 2,400 to 11,000 by 2015.

But why has this sub-sector of the housing market boomed? And what are the issues that arise if more such units are built?

The recent mushrooming of shoebox apartments has raised some concerns about the liveability and sustainability of such apartments, which generally refer to units having a gross floor area of less than 50 sq m.

Are shoebox units inhumane?

This article does not intend to debate the question of what should be a socially "optimal" housing size for the average person or family.

It will examine some possible factors influencing the recent increase in the number of shoebox apartments.

Our discussions focus on the supply, demand and demographic-related factors that affect the shoebox apartment market.

What potential spill-over effects will a rising trend of shoebox apartments have on the property market?

Rising land costs and shoebox developments

PROPERTY is made up of two components - land and building structure. In the world, supply of land is typically inelastic. In Singapore, land is largely state-owned; land is sold for development through the Government's tender exercises.

In a competitive market, bidding by a large number of developers in a tender process will drive up land prices to a level that dissipates excess profits of developers. When land prices increase, developers will have to increase property prices in order to earn profits.

If the marginal costs of construction for large units and for small units are not significantly different, developers adopting the shortest "time-to-market" strategy will build apartments with large floor areas.

However, if shoebox units were to be built, developers will have to find more buyers to purchase the units to be built on land with the same permitted density.
Shoebox units are priced at a premium on a per unit floor basis; absolute prices of shoebox units are smaller relative to large apartment units. The price differential strategy is usually found in markets with segmented demand.

Who buy shoebox units? Are they for investment or owner occupation?

Shoebox units are usually built on land located near the city centre, where per square foot prices of the land are high.

Renters, comprising mostly expatriates working in the Central Business District, will choose to live in shoebox units on the city fringes.

Attractive rental yields draw strong investor demand for shoebox units, especially those located near the city areas (core central region).

The new Additional Buyer's Stamp Duty that significantly increases transaction costs for high-end residential properties could channel some cash-constrained speculative demand to the shoebox market.

Younger couples, who have limited equity to make down-payment, form another potential segment of the shoebox market.

This includes the "sandwiched" class of buyers, who are ineligible for subsidised public housing on one hand and priced out of the private market on the other hand, when strong housing price increases spill over to the suburban market in recent years.

These young couples, who buy shoebox units for occupation purposes, are more price-sensitive and they do not have strong preference to live near the city areas. The rising number of shoebox apartments in the suburban areas could have been built by developers to meet the demand from this group of young buyers.

The third segment includes older homeowners, who downgrade to shoebox units as a way of cashing out equity gains accrued to their existing houses. The housing "wealth" is accrued to the households due to appreciation in housing prices.

Demographic changes and consumption preference

CHANGES to population demographics in Singapore due to an ageing society, low fertility, dwindling family size and increase in foreign population have caused shifts in preferences for housing types. With high housing prices, the purchase of apartments with large floor space is no longer a necessity for many households.

Older households, whose houses have appreciated in value, will seize the opportunity to cash out their housing wealth. Empty-nest households will also downgrade to smaller apartments when their children are grown up and form their own families.

Younger households, who face "liquidity" constraints as they embark on their new careers, are likely to choose shoebox apartments so that they can still indulge in other lifestyle consumption, such as holiday trips, cars and expensive audio-visual systems.

Possible implications
DO SHOEBOX apartments cause inefficient use of land resources? In a competitive market, high land costs are likely to eliminate inefficiency, in the economic sense, in land use.

It is, however, difficult for the market to resolve the social "optimal" issue in terms of minimum floor space for the shoebox units. Stories of large families squeezing into a small house in kampungs were common in the old days.

Thus, the issue of living space is a complex and subjective one, driven by differing factors and circumstances.

What possible impact do shoebox apartments have on condominium living and housing prices? By sub-dividing space enveloped within buildings into more, smaller-sized units, density that is measured by number of people living in the same space will increase.

If public amenities and facilities, such as swimming pools and fitness centres, and other common space are not adequately expanded to meet the demand, overcrowding and overuse of facilities could arise. This is a problem known as the "tragedy of the commons" in environmental goods.

If shoebox units are transacted at higher price premiums and generate more market volatility, the price spillover could affect other segments of the market if small-unit effects are not separated from the price information.

Capping supply

CAPPING the supply of shoebox units for non-landed developments reduces "negative externalities" associated with overcrowding within developments and congestion around neighbourhoods and towns outside the central area. It also indirectly alleviates price pressure brought by buyers of shoebox units on the broader housing market.

This supply-side control mechanism is just a guide. Market forces will, however, determine an optimal housing mix that gives the highest economic returns.

This article discusses some possible hypotheses that explain the social and economic behaviour in the shoebox apartment market.

We do not claim to have answers to all the questions. More empirical data on buyers of shoebox units and transaction prices, if it could be collected, will help to verify some of the causal effects to be discussed in the future.

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This is the last in a six-part series by NUS academics on issues of topical interest.