

Economics

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A new model — Modular temporary housing

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Take a pilot from 50 years ago and put him/her in a cockpit of a modern jet, and that pilot will be totally lost. Take a construction worker from the same period and land him/her in any currently active construction site, and that person will fit in immediately. Technology is changing at the speed of light but in the construction industry there is little new under the sun. No wonder then that productivity growth in the sector (Chart) is miles below what we see in the rest of the economy (which is nothing to write home about to start with).

Despite the current slowing in housing activity and positive steps to slow the pace of population growth, the housing affordability crisis is not going to be resolved any time soon. In fact, it might get worse given the current subpar rate of housing starts — mostly on the multi-unit front. Under the current model, the industry simply does not have the capacity to meet demand fast enough. Falling interest rates will certainly help, but we need much more than that. We need a different model.

Chart: Construction productivity: subpar



Source: Statistics Canada, CIBC

The current model

Traditional building models start with a developer assembling private raw (un-serviced/remote), vacant, or occupied residential or commercial property. They may also purchase public land at auction, usually land declared surplus to government needs. To achieve the density and economies of scale that the developer seeks to achieve, frequently land assembly is required. That usually involves years of negotiations.

Once the land is secured, developers apply for permits and zoning changes to build residences on that land. The auction/tendering process, planning, permitting, zoning, and environmental reviews also take years, varying with the municipality, status and current use of the land involved.

In addition, a higher cost of capital and uncertainty surrounding future population growth are currently prompting many developers to pause committing to new projects.

Capital is more expensive than it has been in close to a generation, and many developers seek greater clarity on future market demand, and on the pace of the implementation of promised regulatory processes at all levels of government.

The industry is very clear that amending the regulatory regime and fees and levies structure on development is urgently needed before consideration of the millions of new units required to restore “affordability” in the market.

The practical implication of all the above is that land is becoming increasingly unproductive. While precise data is scarce on the land secured for, but awaiting development in this rapidly evolving market, it is significant and growing in Canada. The development pipeline is clogged, as many developers are sitting on that land and waiting for greater market clarity for large, long-term capital investments. A large share of these lands awaiting development produce minimal or zero revenue, but accrue taxes and maintenance fees.

The land cost through assembly as well as construction must be carried by the builder and incorporated into the price of the residence — land acquisition and building. Depending on the density of the development and location in a municipality (and its carrying cost), that can represent upwards of 30% of the cost for finished multiple unit dwellings.

A different model

What if the upfront cost of acquisition was removed from the cost equation of shelter, and replaced with a lease rate? What if the developer was able to preserve the value of their land investment by retaining the leased land for future development in 5-10-15 years forward?

Under such a scenario, the landowner will receive a lease rate in the form of: revenue from rents; government subsidy or grant; tax deduction through a donation in lieu to operating non-profit of modular community; and/or municipal concession on future municipal development charges and taxes. Clearly a much better arrangement than sitting on land that generates cost and no revenues.

The modular solution

The cost of the modular, or 3D printed construction homes, meeting all building codes and sustainability requirements, and servicing, is sufficiently low to construct, maintain, and disassemble at the conclusion of 5-10 year leases, freeing up the land for longer term development afterwards.

That cost is sufficiently low to house temporary workers and students, at affordable rents and sustainable and dignified shelter for the homeless, and asylum seekers, before consideration of additional government subsidies.

The proposed modular model is to build homes, preferably a community of homes with support services, clustered on school land, or other public or private lands with high demand for affordable housing for temporary residents.

The land can be serviced — in accordance to code — without the construction of full below ground sewers, either connected to existing systems, or with their own free standing tanks.

A designated operating agency (school, community non-profit, municipality, or related agency) leads, in conjunction with a facilitation team of the builder, negotiates a lease rate for the land, and finances the construction (CMHC and/or private lenders). Concurrently, negotiations would be undertaken with the municipality to secure the “fast track” approval path for these “temporary structures”.

Beyond the lease rate, the cost-effectiveness of the concept also depends on the process and timing of municipal approval of these projects that minimizes the ‘soft costs’ of the project, and the maximizes the period that the homes can be occupied and earn rental income during the period of the lease. Transparency in the expedited progress will provide confidence for landowners and non-profit partners.

The aim is to facilitate whole communities to be created within months of approval, incorporating support services, and disassembled, with the land returned to its original condition at the end of the lease.

Clearly the current model is not working. We need a new approach to effectively utilize vacant unproductive land. The temporary modular approach can be a game changer.

- Note: This article was written with input obtained from “Integrative Trade and Economics”.

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