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Build it and they will come: whatever happened to social housing in Mexico

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Recent evolution of social housing policies in Mexico promoted deregulation of housing finance and a shift from top-down publicly controlled provision of social housing to a corporate model of social housing development based on subsidised homeownership for low- and middle income households. While innovation through mortgage-backed certificates mobilized private capital for the purchase of social housing, the housing policy did not provide the regulatory framework necessary to minimize market failure. In the aftermath of the global financial crisis of 2009, Mexico faced overproduction of social housing, bankrupt financial institutions and social housing developers and more than 5 million abandoned homes in Mexican cities. We argue that the results of the social housing experiment demonstrate a need for coordinated action to align fiscal, financial and regulatory instruments to create a more resilient system of social housing provision.

Keywords: Social housing; Mexico; housing policy; market failure; mortgage-backed certificates

1. Introduction

The discussion of resilient housing systems has become particularly important in the context of external shocks, often attributed to global economic changes, political instability and the globalization of financial markets. An example of this is the crisis that began in the mortgage markets of the United States between 2007 and 2008 with dramatic and sustained impacts on people and housing systems throughout the world (Bardhan, Edelstein, and Kroll 2012). These complex and interrelated crises exposed the vulnerabilities of housing markets and low-income households as well as the significant impact on fragile social housing systems. This article explores these issues in Mexico, focusing on housing policy evolution, the risks associated with deregulation of housing finance, the adoption of a corporate model for social housing and its failure to deliver adequate and affordable housing in recent years. It is important to note that social housing for low- and middle-income households in Mexico is supported through subsidies and low-cost mortgages to access homeownership, so the model is very different from the social rental housing provision in European and North American countries. The shortage of affordable housing is significant, particularly in rapidly growing Mexican cities where over 93 million people live, accounting for 74 percent of the population. Over 43.8 percent of the population lives below the poverty line and more than 7.6 percent live in extreme poverty (COEVAL 2018).

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The article argues that the important lessons from the social housing policy experiment in Mexico point to the need to build resilient social housing systems through better policy tools and sustainable provision of social housing for low-income people, not necessarily through homeownership (CECODHAS 2012; Tsenkova 2014). We explore the impact on the social housing system in the post-crisis period by focusing on the commercialization process of housing finance and the shift to a corporate model of social housing developers, which disregarded the necessary regulatory instruments to guarantee stability and protection against housing market failures. Finally, we document the impact on financial institutions, promoters of social housing and vulnerable people reflected in the large-scale abandonment of 5 million homes built under the social housing programs, which has long-term economic, social and environmental costs in Mexican cities.

2. Social housing policy evolution

Mexico has a long history of housing policies that have attempted to respond to the needs of low income households and the shortage of affordable housing, particularly in the rapidly growing urban areas. The earlier phases had a more limited impact and focused on public sector driven solutions, while the latter embraced partnerships with the private sector and innovation in housing finance. The corporate model of development experienced a spectacular growth since 2005, followed by a massive decline in production, investment capital losses and bankruptcies of large social housing developers. In the early phases the construction industry served as a stimulus for economic development during the so-called Mexican Miracle (1940–1970) of sustained economic growth, in which a considerable portion of the country's construction workers were employed in the construction of housing and infrastructure financed by the state (Ball and Connolly 1987). Within this framework, the public housing institutions covered the total costs of production and provided low-interest mortgage loans to low- and middle-income households, earning 3–6 minimum wages monthly. In the early 1970s, the Instituto del Fondo Nacional de la Vivienda para los Trabajadores (Institute for the National Housing Fund for Workers – INFONAVIT) and the Fondo de la Vivienda del Instituto de Seguridad y Servicios Sociales de los Trabajadores del Estado (Housing Fund of the Institute of Social Security and Services for State Workers – FOVISSSTE) were established and became instrumental in the financing of social housing through mortgage loans for salaried workers. These institutions capitalized on the combined mandatory savings of workers and their employers with the goal of financing mortgages for the purchase of new and existing housing. In the 1980s the national financial crisis required the restructuring of foreign debt, obligating the country to undertake structural adjustments demanded by the Washington Consensus. The government nationalized the banking system in 1982, and this guaranteed, among other things, the continued financing of these social housing policies (Marois 2014).

The growth of the social housing sector started with Miguel de la Madrid Hurtado (1982–1988), the first administration with neoliberal tendencies that modified Article 4 of *The Constitution* stipulating that 'every family had the right to enjoy decent and dignified housing' and after the 1986 earthquake decreed the establishment of the mechanisms necessary to accomplish this objective. During the 1990s the state housing funds experienced a substantial change in their operations as they shifted from housing construction to mortgage financing and from the low-income sectors to those with middle- and upper-middle-sector incomes (Barry, Castañeda, and Lipscomb 1994). Although more than 9 million houses – equivalent to 17 percent of the country's housing stock – were built in the next 20 years, this social housing system excluded the nonsalaried population, which generally resorted to constructing its own housing or moved to informal settlements (Gilbert and Varley 1991).

Housing was a priority area of public policy in Mexico for the past half century, but the accumulated shortage was estimated at 9 million units. Including projected demographic growth, 780,000 units had to be constructed on an annual basis and 400,000 existing houses renovated (Bredenoord and Montiel 2014). To meet this demand, the federal government since 2000 supported the expansion of a corporate housing model that delivered mass produced housing at urban periphery and proved to be unsustainable in the long term (see Figure 1). The housing boom began with the administration of Vicente Fox (2000–2006), who transformed the INFONAVIT from an institution producing social housing into a mortgage generator and linked social housing development corporations to the allocation of federal credits (CIDOC, 2008). Substantial fiscal incentives were granted for the acquisition of large tracts of land for housing developments through investment earnings derived from mortgage loans that rose from US $6 billion in 2000 to more than US$22 billion in 2006 (BBVA, 2011). The National Housing Program 2007–2012 projected a need for 16 million homes by 2030 resulting in an annual production of 650,000 with at least half targeting households that receive up to 4 minimum wages per month, which is below what the National Council for the Evaluation of Social Development Policy considers to be the poverty line. The social housing policy also addressed the poorest segments of the market with the 'Vivienda Digna' program.

Figure 1. New social housing built by GEO Housing Developments in Ixtapaluca, Mexico.

In the aftermath of the 2009 global crisis triggered by the US subprime mortgage lending, President Felipe Calderón signed the *National Housing Act for Living Better*. The actors involved in real estate development for housing committed themselves to effective collaboration to strengthen the sector.[1] The federal government invested the equivalent of US$150 million in the construction and maintenance of 800,000 housing units, the limited- purpose financial companies financed credits for low- and middle-income households (up to US$25,000), the financial institutions granted 150,000 loans, the construction material industry guaranteed prices for inputs, while the public and private institutions secured the production of affordable housing (Carballo-Huerta and Gonzalez-Ibarra 2009). The government invested close to US$10 million (equivalent to 1.5 percent of the GDP) in the financing of mortgages through the federal housing institutions, covering 80–90 percent of the social housing market and keeping mortgage interest below that of a commercial bank.

The administration of Enrique Peña Nieto (2012–2018) shifted the emphasis of social housing policies towards sustainable and integrated urban development, where housing development companies were incentivized to build higher density housing near urban zones and work centers. Coupled with this change in the planning and location of new housing, development strategies had to respond to fluctuations in housing demand affected by labour market adjustments and migration to pursue employment opportunities (over half a million persons a year), which created spatial imbalances in the local housing markets. Despite the complexity of such major adjustments to both policy and market changes, major social housing developers continued with the construction of the half a million houses annually projected on large suburban tracts of land secured in the past.

3. Financing social housing in Mexico: innovation and privatization

As part of the neoliberal model of deregulation of markets, national governments in Mexico transformed FOVISSSTE and INFONAVIT into mortgage lending institutions in the 1990s. At the moment when these institutions were out of the publicly controlled development and construction of social housing, the participation of private development companies strengthened. In effect, this privatization strategy empowered some of the largest construction companies to acquire a substantial share of the social housing production as well as consolidate their position as receivers of the INFONAVIT and FOVISSSTE mortgages that generated constant cash flow and demand for their product.

Another institution, National Housing Commission (CONAVI), played a very important role as the agency responsible for administering and providing federal subsidies for housing. It issued rules that regulate the distribution and granting of resources, establishing various criteria and mechanisms that impact significantly eligibility and target groups. In 2007 a federal funding programme for housing – ‘Esta es tu Casa’ (This is your House) – was implemented by CONAVI, providing credits to households with incomes less than five times the minimum wage for the purchase, construction or improvement of a dwelling. The programme subsidized the purchase of a plot and the self-construction on it. Mixed housing finance provided grants and loans with a 5 percent deposit. The grant provided US$1,000 for home improvement, US$3,000 for the self-construction of a dwelling and up to US$4,500 for the purchase of a new or existing home. The funding was implemented through ‘executive bodies’, such as municipalities, banks, or housing institutions. The maximum value of a property was set at US$20,000 (CIDOC (Centro de Investigación y Documentación de la Casa) 2008).

A major innovation in the financing of social housing was the adoption of mortgage-backed financial instruments, expected to mitigate housing shortages by allowing for the rapid recovery of capital and its recycling through new individual loans (UN Habitat, 2011). These instruments were based on the creation of a common fund or loan portfolio that issued stock certificates on the secondary mortgage markets (Monkkonen 2011). In the Mexican case, the Sociedad Hipotecaria Federal (Federal Mortgage Society – SHF) placed the mortgages in a fund (known as a 'Special Object Financial Companies') and then fully insured that fund, making it more attractive to investors (CNBV, 2011; SHF, 2014). Additionally, the creation of these instruments generated a cash flow that could be used to fund additional mortgages.

After 2005, for four years the financial system maintained an average growth rate of 10 percent driven by the diversification of banking products and capital from pension funds and investment companies. Apparently, 85 percent of the resources of the financial system (not counting the development bank) belonged to intermediaries that were part of financial groups. In addition to government financial institutions, interrelated operating companies were created that grouped issuers, investors, stockbrokers, subsidiary or support companies, and limited-purpose financial companies. The housing finance market based on this model had a spectacular boom between 2000 and 2008, largely because of the increase in the number of credits granted by INFONAVIT and, in smaller measure, by private banks and limited- purpose financial companies. Mortgage-backed financial instruments reached US$6 billion in 2006 becoming the largest market of this type in Latin America.

While INFONAVIT started with funding and developing 25,360 housing units per year in the initial period (1973–1976), its business grew to 475,000 housing finance actions in 2010 and reached 501,000 in 2012 (INFONAVIT, 2012). In 2004, it started participating in the Mexican Stock Exchange and mortgage finance was strengthened through co-financing, extending loans to lower income groups and allowing access to higher value homes. Even though public institutions involved in housing finance held a significant share of the national mortgage portfolio – INFONAVIT represented 60 percent and FOVISSSTE 10 percent – housing finance was diversified (Chiquier and Lea 2009). Construction firms, project developers, specialized and publicly supported finance institutions and municipalities were able to provide credits for housing projects. The new *Housing Law (2006)* and the *Social Housing Programme 2007–2012* provided a boost to the new finance system through combining several resources for social housing such as saving, subsidies and credit (mixed financing), which was a breakthrough in Mexico.

As a result of ambitious national government policies and financialization of mortgage lending, the construction sector reached 3 percent of GDP, making it the most profitable sector by 2005. Although close to 2,600 construction companies operated in Mexico, the social housing development industry was dominated by six corporations: Geo, Homex, Urbi, ARA, Sare, and Consorcio Hogar (DOF, 2015). Both mortgage securitization and the limited-purpose financial companies' expansion strategy benefited the expansion of housing finance and the establishment of a corporate model of social housing development. The state played a fundamental role in the privatization of housing finance, ultimately directing public resources to the formal sector and setting up the stage for public-private partnerships in social housing (UN-Habitat 2011). After the 2009 crisis, the housing subsidies became less generous, but nearly half of the new homes financed by INFONAVIT in recent years required a subsidy from CONAVI. Despite some decline in mortgage lending, INFONAVIT continued to approve mortgages to low-

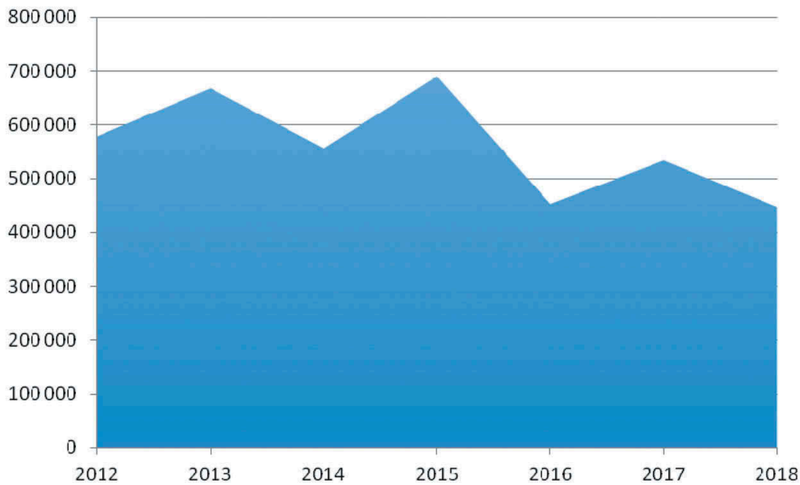

Figure 2. Mortgages granted by INFONAVIT 2012–2018.
Source: INFONAVIT 2012–2018, from portal.infonavit.org.mx

and mid-income households after the crisis insuring cash flow for newly built social housing schemes (see Figure 2). The largest corporations, which held a significant portfolio of mortgage-backed financial instruments in 2009, suffered massive losses of capital magnified by the network effect of the interconnected global markets (Sassen 2009). Reportedly, the National Banking and Securities Commission, whose task was to delegate, regulate, monitor and sanction the entities, physical and legal persons that make up the Mexican financial system, invested historic amount of money for housing loans and subsidies during 2015 to prop up the financial institutions.

4. Social housing developers: boom and bust

The new system of housing finance introduced a number of private agents and institutions. The largest housing development companies in Mexico for low-cost housing construction had years of sustained growth insured by a steady flow of subsidised mortgages (over 500,000 per year). Notwithstanding this boom period, the crisis that started in 2009 was further exacerbated by decline in national housing subsidies, shifts in demand triggered by a demographic transition and inability to adjust supply-based strategies to the marketplace. Some of the largest social housing developers had a spectacular exit from the price and value index of the Mexican stock exchange in mid-2013. Stocks had plummeted by 31 percent causing a loss in stock exchange value of US$356 million. In 2013 the value of the capitalization of the major housing corporations lost close to US$1.6 billion in less than a year, equivalent to a decline of 85 percent, which triggered a restructuring of liabilities with their creditors and reduction in operations by more than 50 percent (DOF (Diario Oficial de la Federación) 2015). These corporations had adopted a corporate model based on standardised construction on large land reserves, and Peña Nieto's social housing policy, based on compact developments near city centers, made this approach less relevant for future production. The principal social housing corporations experienced a decline in sales in the range of 46–85 percent annually, which complicated debt payments and put their operations in jeopardy.[2] Until the second quarter of 2014, Geo and Urbi were unable to pay the interest on stocks issued in foreign currency, and INFONAVIT announced an embargo on their participation under the *70–70 Program* where it paid 70 percent of the housing costs once 70 percent of the work was completed (Valenzuela 2017).

The corporate crisis of the housing developers would have been inconceivable during the real estate boom of the 2000s. The private model of social housing construction involved vertical integration (from the production of the concrete to the finished house), standardised product and construction technology based on lightweight blocks, the acquisition of large territorial reserves that permitted economies of scale, making it an international benchmark for efficiency (De la Rosa 2015). At the same time, the model promoted growth by permitting the reporting of construction in progress as finished, encouraging overproduction and an excess of land inventories. This, added to the dilution of the financial support of limited-purpose financial companies and the reduction of demand, increased the numbers of non-performing loan portfolios (Valenzuela 2013). The financial intermediaries' capacity to provide financing was drastically reduced by the severe deterioration of the performance of securitized portfolios and the change to a more compact housing scheme (Knowledge@Wharton 2006). In this context, INFONAVIT and FOVISSSTE began to raise the quality standards of housing and the surroundings of residential complexes. The rules of operation of subsidies were modified to incorporate environmental sustainability as well as density requirements and to generate incentives for a better location. These new policies contrasted with the previous planning strategy, based on a huge volume of production on large tracts of suburban land and on a financial model that required the maintenance of a high rhythm of activity in order to generate cash flow and cover liabilities (which increased three to four times between 2008 and 2012).

The collapse of the social housing developers was accelerated by the reduction of subsidies to mortgages by the federal government since 2012, but also because the financial scheme acquired characteristics similar to a speculative pyramidal structure (or Ponzi scheme) in which the payment of interest to investors came from the money invested or from the money of new investors.[3] Coupled with this there were fraudulent practices towards investors and shareholders by inflating the number of homes completed or sold. According to a LA Times report: 'The US Securities and Exchange Commission accused Homex, who was once the largest developer in Mexico, of reporting "false" sales of 100,000 homes, inflating their income by $US3,300 million dollars. It is believed to be the biggest fraud in the history of Mexico.' (Marosi 2017). It was never clarified that the collapse triggered a crisis in the construction sector, which increased unemployment and caused thousands of people to lose their homes. Derived from the approval of mortgages below the minimum requirements of economic solvency, the general economic crisis systematically caused the beneficiaries to fall into default and end up abandoning their homes as well as their patrimonial investment. The appraisal of the mortgages protected the interests of the investors, so that the monthly payments could reach up to 70 percent in ten years (2000–2010), increasing the monthly amounts (Soederberg 2014).

5. Build it and they will come?

Some of the unintended consequences of the social housing policy in Mexico and its failure to achieve its ambitions goals were manifested in the large-scale abandonment of social housing across the country (see Figure 3). In 2010 there were nearly 5 million uninhabited houses out of a national total of 35 million homes, which is about 14 percent (NEGI 2010). Up to 19 percent of the uninhabited housing was located in the northern states of Mexico and the lowest proportion was located in the Federal District of Mexico

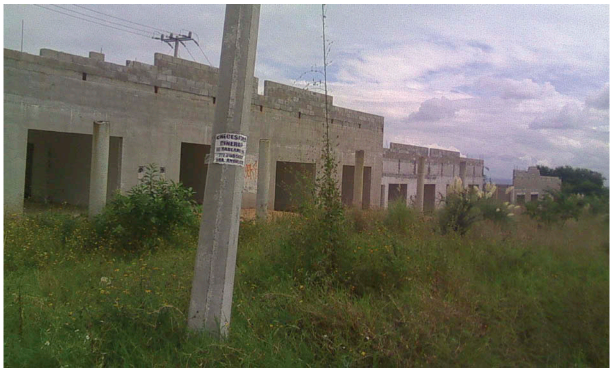

Figure 3. Abandoned social housing in Morelos, Mexico.

City (8 percent). The scale of abandonment increased since 2013 as people continued to walk away from their homes. The phenomenon was associated with several factors, including the global financial crisis and economic adjustments, international migration, the demographic transition and the violence and insecurity prevailing in some cities in the north (INFONAVIT, 2011). It was linked with location challenges for low-income households: long distances to work, a lack of services, low housing quality, and housing built in the wrong places. The failure of the corporate model of social housing development fuelled by financialization of mortgage lending left a long-lasting legacy that continues to stand as a testament of capitalism gone wild decades after the bankruptcy of the big housing development companies.

The abandoned houses – 200,000 owned by INFONAVIT alone in 2015 – were recovered to some extent through adjudication as collateral for the mortgage loans and then auctioned for sale to interested companies. Thus, between 2013 and 2014 there was a 40 percent increase in unoccupied homes, but the recovery strategy managed to reduce this number to 70,000 by 2017 (see Figure 4).

Municipalities with large numbers of uninhabited housing also received more public funds and built more new social housing (UN-Habitat 2011). The failure of social housing policy was apparent in the situation of major social housing developers. Since 2012 four of the major housing developers that benefited from federal policy subsidies and were producing 30 percent of all housing nationally (SHF (Sociedad Hipotecaria Federal) 2014), were confronted with cash problems and increasing debts, due to low sales, rising construction costs and cessation of mortgage payments of uninhabited houses. In addition, the social housing had significant shortcomings due to shoddy construction, non-existent connection to safe drinking water, sewer disposal and public roads. This increased environmental damage, the disintegration of urban and social structures, and insecurity. Mortgage default continued to grow as the economic crisis deepened and more people could not cope with mortgage payments as there were no ceilings on the increases in mortgage interest rates. The combined effect of these processes accelerated the abandonment of housing, generating a spiral of degradation as buildings deteriorated due to the poor quality of materials and facilities, problems in the services in the developments (water and electricity networks, drainage and poor paving) as well as the increase in crime and vandalism in many areas.

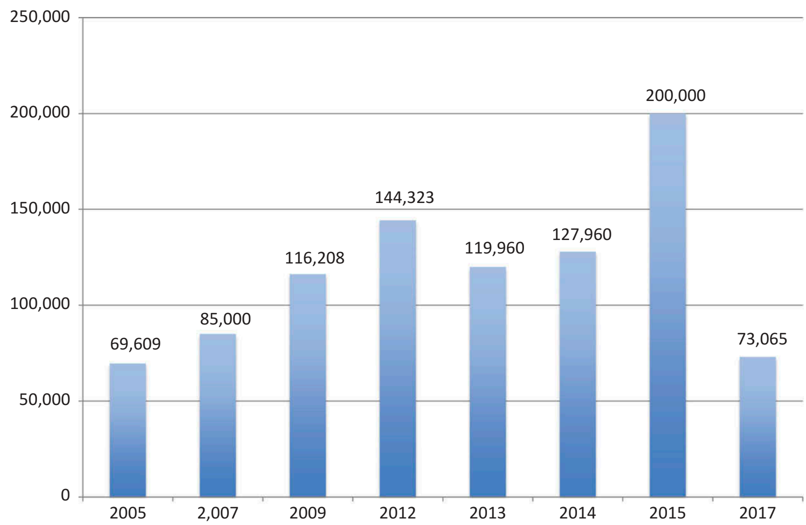

Figure 4. Uninhabited housing portfolio of INFONAVIT 2005–2017.
Source: Authors' estimates based on SHF e INFONAVIT DATA

The large-scale abandonment and the poor quality of social housing produced during the boom period convincingly demonstrated the crisis of the model and its inadequacy as a means of producing a city where access to affordable and adequate housing is a priority. INFONAVIT's financial plan 2011–2015 estimated that 25 percent of the houses it had built between 2006 and 2009 were vacant mostly because of their distant location. The problems that stood out were the 40 percent drop in the sales volumes of the main social housing developers, the accumulation of inventories and over construction, which added to the inability of these companies to refinance their bank debt.

6. Concluding comments

Housing policy is of paramount importance (Angel 2000). Public institutions and social housing developers in Mexico received billions of dollars to support affordable housing solutions of millions of people moving from rural areas to larger cities in search of an improved quality of life (Marosi 2017). The social housing system mobilized savings and offered subsidised mortgages to low- and middle-income households to ensure that they had a stake in their housing solution. However, the programmes resulted in a variety of large- scale projects that did not live up to their promise (Valenzuela 2017). During the spectacular boom of social housing production since 2006, hundreds of thousands of homes were built to accommodate the influx of new workers but they were reluctant to live in them. The major issues included unfinished or non-existent infrastructure, social isolation, building deficiencies, and irregular financing practices. Homex – one of the largest social housing developers – went from building an average of 5000 homes per year in 2002 to 57,000 homes for the next six years (Marosi 2017). This rapid expansion was fueled by a mass production model of affordable housing at an average price of US$25,000 built in one day. However, this profit maximizing strategy resulted in a paradox of large numbers of abandoned substandard homes in a country with a significant housing shortage.

While innovation in housing finance in Mexico mobilized private capital for investment in real estate and the purchase of affordable housing through social housing programs, it did not provide the regulatory framework necessary to minimize speculation (Aalbers, 2012). The result was overproduction, the accumulation of debt, the collapse of the market, bankrupt financial institutions and social housing developers. More than 5 million homes are abandoned and/or vacant in Mexican cities, while the shortage of affordable housing has grown exponentially. An important lesson was that a social housing provision system needs an adequate housing policy framework and strong partnership with the private sector to work.

The purchase of affordable dwellings through social housing programs led to significant exposure to market risks, where households were more vulnerable during economic recessions when employment income was not consistent and market prices were falling. This exposure to fluctuations in the owner-occupied housing market made the system more vulnerable to external shocks and placed significant limits on location-based responses that respond to the sustainability imperatives in cities. In general, the post-crisis period created an opportunity to test the institutional and economic resilience of financial institutions, social housing developers, and low-income households that ultimately assume the long-term risk and liability (Tsenkova, 2009). The results of the social housing experiments in Mexico demonstrate that there is a need for coordinated action to redesign the model and find solutions to the inefficiency of the market that has resulted in a high degree of inadequate, poorly serviced housing in undesirable locations and abandonment of housing developments.

The institutional landscape has undergone a significant transformation from top-down publicly delivered programmes to public-private partnerships based on the predictable expectation of private sector efficiency and effective risk management. The social housing sector was one of the engines of Mexico's economic development, since it hired substantial numbers of workers in the construction business, provided a boost to the real estate and mortgage markets as well as acted as an important political patronage resource. However, the low rating of social housing kept it from being a stock resource unless it was bundled with other, highly rated certificates to make it more attractive to investors in the global market. Mortgage-backed certificates provided such financial packages but with asymmetry regarding risk because, while the investors could easily sell the bonds, the borrowers could lose their property by simply failing to make three consecutive payments, thereby generating an important distortion in the real estate market and in the financing of social housing. The innovation in social housing finance through mortgage-backed certificates was attractive to the market because they could be rapidly bought and sold, making the guarantee of the property irrelevant. The credit and service agencies that acquired ownership of these instruments absorbed the losses and, in the Mexican case, went bankrupt.

The intervention of the state was fundamental in promoting social housing construction and mediating between the various circuits of capital, which unfolded unpredictably in the context of the global financial crisis. The model of mortgage-backed financial instruments responded to the needs of capital, but as a housing solution for the low-income population – a strategic question for Mexico since the social housing was sold to low- and mid-income households – was not a feasible option in economic downturns and crises. The commodification of social housing represents a serious setback in the provision of dignified housing for a population that is increasingly impoverished and has limited options. The findings presented in this article are a good argument for a comprehensive and sustainable housing policy, and particularly one that promotes the alignment of regulatory, fiscal and financial instruments to create a more resilient social housing system (Tsenkova 2014). An important factor in the implementation process will be the diversity and strength of the partnerships created between public and private institutions to build affordable and good quality housing for people on a limited income.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes

1. The consequences of the crisis of high-risk mortgages in the United States translated into an economic recession that generated a depreciation of the peso by 15 percent, thus increasing informal employment and unemployment and diluting workers' purchasing power. During this period, the rate of growth in Mexico declined to 1.3 percent in 2008.
2. When the real estate crisis began in Mexico, the rating agency HR Ratings downgraded Corporación GEO from AA- to HRD (E), the lowest credit rating granted to an issuer. Although the GEO Corporation had already entered into commercial bankruptcy since 2015, shareholders approved a plan for their creditors to capitalize most of their debt in exchange for a 91 percent stake in the company.
3. Among the losers in the housing debacle are companies such as Pacific Investment Management, the largest bond fund in the world. Other losers in shares, bonds, loans and derivative contracts related to Mexican housing include Sólida Administradora de Portafolios, Capital, Inbursa, Citibanamex, BBVA-Bancomer, Santander, Scotiabank, Nafin, JP Morgan, Morgan Stanley, Barclays, Citigroup and Bank of New York, Credit Suisse Group and Deutsche Bank, as well as funds Ashmore, Aria, Luxor, TCW, Pacific Investment and BlackRock.

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