LOW-INCOME HOUSEHOLD RESIDENTIAL MOBILITY
IN CHILE’S THREE METROPOLITAN CITIES

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ABSTRACT

In 2007, the Chilean Ministry of Housing and Urban Development (MINVU) incorporated the possibility of access to used housing as part of the Housing Solidarity Fund (FSV) destined to low-income households.

The results obtained in 2007 and 2008 in the metropolitan areas of Santiago, Valparaíso and Concepción show similar residential mobility patterns for the beneficiaries of FSVI funding. These include proximity to the original address, certain improvements in location centrality and the municipalities of origin and destination.

These elements have slowly led to the consolidation of socially concentrated urban conglomerates that require further analysis before predicting the future effects of the FSV program on Chilean cities.

Key words: Housing subsidies, low income households, mobility patterns

INTRODUCTION

In 2007, the Chilean Ministry of Housing and Urban Development (MINVU) began granting a new type of housing subsidy called Housing Solidarity Fund I (FSV I), designed for families from the most vulnerable 40% of households, according to the qualifying instruments of the Social Protection File (FPS) created by the Ministry of Planning (MIDEPLAN).

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The Solidarity Fund, as established in *Decreto Supremo 174 del 2005*, allows citizens to purchase a new or used house with a savings of approximately USD 385\(^3\), through government subsidies and, in some cases, short-term loans.

Citizens who wish to apply for the Housing Solidarity Fund must comply with the following conditions: being an adult; being a head of household, spouse or live-in partner (accredited through the FPS); not previously having received a government subsidy for the purchase of a house.

Applications must be submitted through a Real Estate Management Entity, which is a public or private, non-profit or for-profit legal entity\(^4\), which performs the following functions, in the case of housing: organizes the housing demand, provides assistance for housing purchases, and designs and executes social housing plans.

The Housing Solidarity Fund has received the most applications in urban areas of Santiago, Valparaíso and Concepción. The first city, which is Chile’s capital, has over 6 million residents, while the other two cities have populations of around one million people.

The Housing Solidarity Fund I operates through two modes: Construction on New Sites (CNT), which, as its name indicates, prepares new urban areas in order to create an organized community; and Acquisition of Existing Housing (AVC), which allows beneficiaries to purchase a new or used house from a private seller somewhere in the city.

Ever since this program was created in late 2009, the AVC system has granted over 17,000 subsidies in the Greater Santiago metropolitan area, while the urban areas of Greater Valparaíso and Greater Concepción have registered over 1,300 operations each. This means the program has created a housing relocation system within the city, with parameters similar to the ordinary Real Estate market. Before this program, residential mobility was determined by the locations chosen by the State for new urban projects, whereas the current program allows beneficiaries to use either the former system or the option of purchasing a used house within the consolidated urban area.

The FSV I program’s monitoring system allows MINVU to record information on each operation performed from the beneficiary’s former house (origin) and new house (destination), using a UTM map of coordinates with data from WGS 1984 Huo 19, which geo-references both addresses during the process of purchasing the new house.

1. DISTRIBUTION OF CASES

As can be observed in Figure 1 for the city of Santiago (which has an approximate surface of 66 square kilometers), the origin is slightly more widespread than the destination; in both cases, the greatest concentration occurs mainly in the Northwestern and Southern sectors of the city, with only minimal demand in the Northeastern sector—the traditional location of higher socio-economic segments.

\(^3\) 10 Unidades de Fomento, or U.F.

\(^4\) *Artículo 2° Decreto Ley Nº 174.*
This concentration is even clearer in the case of Greater Valparaíso, where destinations are located mainly in the municipalities of Valparaíso and Quilpué. In the case of Greater Concepción, the distribution of origins and destinations appears to be similar, in spite of a more scattered distribution at the point of origin.
In all three metropolitan areas, a few common elements may be observed in the process of selecting houses: they all tend to concentrate around the outskirts of the city (peripheral urban zones), and in all three cases the houses seem to “move away” from the historical downtown areas and towards newer, cheaper urban areas.

2. DENSITY OF MIGRATORY FLOWS

These origin and destination coordinates help calculate the Euclidian distance of their movement, which leads to the conclusion that, in spite of the large surface of these cities, residential mobility remains closer to the point of origin than the large city surface itself allows. In other words, people are moving to houses that are located close to where they used to live. In the case of Santiago, the average distance between origin and destination is 2.3 kilometers. Greater Concepción has a mobility of 2 kilometers (as compared to a surface of over 12 square kilometers), and Greater Valparaíso has a mobility of 3.7 kilometers (much farther than in the other cities, in spite of having a surface of only around 12 square kilometers).

Part of this mobility can be expressed using Kernel density maps, which uses soft surfaces to model the concentration of travel flows between origins and destinations: the darkest colors indicate the largest amount of times that a line crosses any one place within the city, using a search radius of 1,000 square meters to improve smoothness for these cases.

The Kernel Mobility density map of Greater Santiago (Figure 3) shows that the main relocations resemble the movement of a pendulum, from Northwest to Southeast, where the greater concentration of flows (dark blue color) occurs in the municipalities of Puente Alto, La Pintana and San Bernardo. Another concentration of flows is located in Maipú.

The dark green “islands” indicate four mobility groups, from North to South. The first one is located within the municipality of Quilicura, the second includes Renca, Cerro Navia and Pudahuel; the third in the area known as Cerrillos; and the fourth in Lo Espejo and La Cisterna.

The brighter colors indicate sectors in which mobility has practically expelled the population, which may be explained because these are families living in sectors where there no subsidies were granted through Housing Solidarity Fund I.
In the case of Greater Valparaíso, its greater longitude may be explained by movement produced by the relocation of the housing supply, mainly towards two opposite ends of the city, East of Valparaíso and South of Quilpué. In a pendular movement between both municipalities, more subsidies are received, and there also are a few cases in the higher area of Viña del Mar and, less significantly, on the coast off Concón.

In Greater Concepción, migratory movements are concentrated in two areas. The most important is located in the North, between Talcahuano and Hualpén, and the second sector is South of Concepción heading towards Chiguayante. There is a slight presence in downtown Concepción, and to a lesser extent in Penco and San Pedro de La Paz.

The previous figures reveal that the mobility pattern in the three metropolitan areas is centrifugal, that migratory flows move mainly from the center towards the outskirts of metropolitan areas, in areas with houses that usually cost less than 570 Unidades de Fomento\(^5\) (UF, or approximately USD 24,000). This is a much lower price than most houses being sold on normal city markets, which fluctuate between 900 and 1,500 UF (USD 37,800 to USD 63,000; Collect, 2008) for houses or apartments of the same characteristics—similar surfaces, with two bedrooms and one bathroom.

### 3. FREQUENCY OF SPATIAL MOBILITY

Although subsidies are granted preferentially in areas with low land prices, spatial distribution allows us to infer that this is not the main factor when choosing a new house, mainly because price is not established by the purchaser alone, since the State is funding this decision heavily.

\(^5\) The Solidarity Fund delivers 320 UF with an extra bonus of 200 UF for locations within the city.
The results by municipality reveal that people choose to live mainly in their municipality of origin; in the case of Greater Santiago 66.9% of all beneficiaries remained in the same municipality they applied in; in Greater Valparaíso 70.5% remained, and in Greater Concepción 77.1% remained.

When measured by frequency, the mobility patterns (Graphs 1-3) show that, in Santiago, the greatest concentration of residential options is located less than 1,000 meters from their origin. For Valparaíso and Concepción, these options are increasingly distant in spite of the lower number of cases.

**Graph 1: Frequencies of residential mobility, Greater Santiago, 2007-2009.**

**Graph 2: Frequencies of residential mobility, Greater Concepción, 2007-2009.**
4. CONCLUSIONS

Through the mode known as Existing House Acquisition, the Housing Solidarity Fund Title I has produced changes in the city’s housing dynamics, modifying urban scenarios that were previously unknown in the Real Estate market of cities, accustomed to the migratory flows of the middle-class and higher classes. Previous housing policies with social considerations sought mainly to relocate households to completely random territories, which were often quite unknown to beneficiaries; this occurred during the 1980s, when the shantytown eradication policy pushed many families to the Western and Southern borders of the city of Santiago. The policy during the 1990s did not directly aim to resolve the origin of this problem, and continued to build new houses on the outskirts of cities, especially to the South, in the cases of Santiago and Concepción.

There are some effects that FSV I has not yet been able to resolve, such as the relocation towards marginalized poor sectors within cities in which the State had already invested, or the fact that the program has not contributed to reducing the social and spatial inequality of our cities. Nevertheless, the inclusion of this new option of purchasing used housing has re-valued two new elements that benefit households: the inclusion of social networks in the decision-making process, and the possible improvement of the facades and surroundings of available houses.

The migration distances for this type of subsidy reveal that the destination of choice is related to people’s desire to live close to where they already live, thus retaining social networks and services they already possess, instead of beginning a new life somewhere else further away, which would force them to find new networks. By eliminating price as a decisive element in choosing a house, the energy of this search focuses on finding places nearby where people already live.

FSV I has created new zones within the city, generating a Real Estate market where demand may force supply to improve properties and surroundings, re-valuing both houses and neighborhoods. The
Solidarity Fund not only benefits the individual applicant, but also the seller, who continues receiving the full amount of the transaction from the State. In some cases, Social Real Estate Management Firms (EGIS) have created “available housing sales.”

The Housing Solidarity Fund’s purchasing mode (AVC) operates parallel to the Construction Fund for New Sites, a mode which facilitates the purchase of new houses for the same economic quintile. In terms of the distribution of subsidies, during 2009, 40 % of all beneficiary families chose to use AVC, 2% more than the previous year, which may indicate that this option –purchasing a used house– is becoming a factor that must be considered in governmental social housing policies. The promotion of the maintenance of family facades and surroundings generates benefits for both the seller and the dweller of the house; meanwhile, on a larger scale, it helps slow urban expansion and reinforces the use of the city’s existing services, equipment and infrastructure, re-valuing the entire urban area.

BIBLIOGRAPHY


