



GLOBAL PROGRAM
RESILIENT HOUSING

Striking a Balance: Toward a Comprehensive Housing Policy for a Post-COVID Colombia

SEPTEMBER 2021



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Abbreviations and Acronyms

ABC	Savings, subsidy, credit <i>Ahorro, bono, crédito</i>
BIM	Building information modeling
CDVD	<i>Casa Digna, Vida Digna</i>
CCF	Family Compensation Fund <i>Caja de Compensación Familia</i>
CEED	Buildings Census <i>Censo de edificaciones</i>
CEPAL	Economic Commission for Latin America <i>La Comisión Económica para América Latina</i>
CNPV	National Census of Population and Housing Units <i>Censo Nacional de Población y Vivienda</i>
CONFIS	Advisory Council of Fiscal Policy <i>Consejo Superior de Política Fiscal</i>
CONPES	National Council for Economic and Social Policy <i>Consejo Nacional de Política Económica y Social</i>
COVID-19	Coronavirus disease 2019
DANE	National Department of Statistics <i>Departamento Administrativo Nacional de Estadística</i>
DNP	Ministry of Planning <i>Departamento Nacional de Planeación</i>
DPS	Department of Social Prosperity <i>Departamento de Prosperidad Social</i>
FRECH	Reserve Fund for the Stabilization of the Mortgage Portfolio <i>Fondo de Reserva para la Estabilización de la Cartera Hipotecaria</i>
FUL	Free-use loans
GDP	Gross domestic product
GEIH	General Integrated Households Survey <i>Gran Encuesta Integrada de Hogares</i>
GPRH	Global Program for Resilient Housing
HCI	Human Capital Index
HCP	Human Capital Project
ICT	Colombian Housing Institute <i>Instituto de Crédito Territorial</i>
INURBE	National Institute of Social-Interest Housing and Urban Reform <i>Instituto Nacional de Vivienda de Interés Social y Reforma Urbana</i>
I-O	Input–Output [matrix]
LTi	Loan-to-income
LTV	Loan-to-value
MCY	<i>Mi Casa Ya</i>
MMW	Monthly minimum wage
MW	Minimum wage
MPI	Multidimensional Poverty Index

NPV	Net present value
OECD	Organisation for Economic Co-operation and Development
OPHI	Oxford Poverty and Human Development Initiative
PDET	Development Programs with a Territorial Approach (in municipalities specially affected by the armed conflict) <i>Programas de Desarrollo con Enfoque Territorial</i>
PEP	Special Permission for Migrants <i>Permiso Especial de Permanencia</i>
POT	Territorial Development Plan <i>Planes de Ordenamiento Territorial</i>
RUTEC	Single Registry of Foreign Workers in Colombia <i>Registro Único de Trabajadores Extranjeros en Colombia</i>
SAM	Social Accounting Matrix
SDG	Sustainable Development Goal
SISBEN	Unified Vulnerability Assessment and Identification for Social Assistance <i>Sistema de Identificación de Beneficiarios de Programas Sociales</i>
SSN	Social security network
UNDRR	United Nations Office for Disaster and Risk Reduction
UNGRD	National Unit for Disaster Risk Management <i>Unidad Nacional para la Gestión del Riesgo de Desastres</i>
UPAC	Unit of Constant Purchasing Power <i>Unidad de Poder Adquisitivo Constante</i>
VIS	Social-interest housing <i>Vivienda de interés social</i>
VIP	Priority-interest housing <i>Vivienda de interés prioritario</i>
VIPA	Housing for Savers <i>Vivienda para Ahorradores</i>
WASH	Water, sanitation, and hygiene

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Introduction

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10 Years of the Ministry of Housing, Cities and Territory

Government initiatives to reduce the housing deficit in Colombia go back more than a hundred years, but it was only after the creation of the Ministry of Housing as an independent agency, a decade ago, that national housing policy took on the relevance that it has today (Ministry of Housing 2014). Since then, Colombia has made substantial progress. The country reduced the urban housing deficit from 31.8 percent in 2010 to 21.4 percent in 2019,¹ with a significant contribution both to poverty reduction and to GDP and employment growth.

Building on the progress made by previous governments, since 2018 the national government has promoted a comprehensive, inclusive, and sustainable housing policy, which has led to notable improvements, and enabled significant progress towards achieving the Sustainable Development Goals (SDGs) and implementing best practices in the region.

In just two and a half years, great results have been achieved. Between August 2018 and June 2021, more than 140,000 families fulfilled the dream of owning their own home, with the help of subsidies from the national government for the purchase of low-income housing (*vivienda de interés social*, or VIS) and middle-class housing. Construction began on about 270,000 urban social-housing units throughout the country; over 10,200 hectares of land were made available for the construction of housing solutions through the land availability program; and more than half a million families have benefited from formal titling efforts, as well as from home and neighborhood improvements.

These results have been possible because the national government has worked toward the consolidation of an integrated and comprehensive housing policy – making the provision of new housing compatible with housing improvements, offering instruments for both purchase and leasing, and providing housing solutions in urban and rural areas. Although it maintains supply-side programs, such as the newly created free rural housing program, the Ministry focuses its programs on demand-side interventions.

The Transition Has Already Begun: Progress toward an Integrated Housing Policy

The past two and a half years have been full of positive results and unimaginable challenges, including the COVID-19 pandemic. In this context, national housing policy in Colombia has started to undergo a transition towards a truly integrated approach, one which addresses several of the challenges discussed in this report.

¹As measured by the 2020 methodology of the National Administrative Department of Statistics, or DANE (DANE 2020b).

One of the key aspects of this transition is the main thesis developed in this report: the need to intensify housing policy's focus on the qualitative housing deficit after years of concentrated efforts to reduce the quantitative deficit. This need has informed the creation of *Casa Digna, Vida Digna*, Colombia's national retrofitting and neighborhood improvement program, which has benefited more than half a million of households since its creation in 2018.

In addition, in line with other specific recommendations in this document, the targeting and allocation times of housing subsidies have been improved. Beneficiaries can now concurrently use subsidies and support from the Family Compensation Funds (CCFs); and today, most of the acquisition subsidies of programs such as *Mi Casa Ya* are allocated to households in the lowest deciles of the income distribution. Finally, in 2018, Colombia's national government launched *Semillero de Propietarios*, one of the most ambitious rental-housing strategies ever implemented in the country.

To consolidate a comprehensive housing policy that is responsive to the accelerated urbanization process of the last decades and to the need for a more effective and sustainable use of land, Colombia's National Housing Policy is coordinated with local policies to address the development of housing, public space, and social and economic infrastructure. This involves the provision of technical assistance by the Ministry to municipalities on the development of Land Use Master Plans (*Planes de Ordenamiento Territorial*, or POT), which are the roadmaps for municipalities and districts toward organized and sustainable urban growth.

A holistic approach to housing: *Casa Digna, Vida Digna*

The initiation of the *Casa Digna, Vida Digna* (CDVD) program in 2018 demonstrated the government's commitment to reaching the most vulnerable populations and to crafting a truly integrated housing policy, with strategies focused on qualitative as well as quantitative deficit. A housing retrofitting and neighborhood improvement initiative (see Chapter 3 for details), the program has been one of the administration's main efforts since 2018. CDVD is unique: it is customized to serve the particular needs of each household, and part of its strategy is the promotion of land and title regularization. The program is designed to reach the most vulnerable families in the country, especially those living on public property or without property rights.

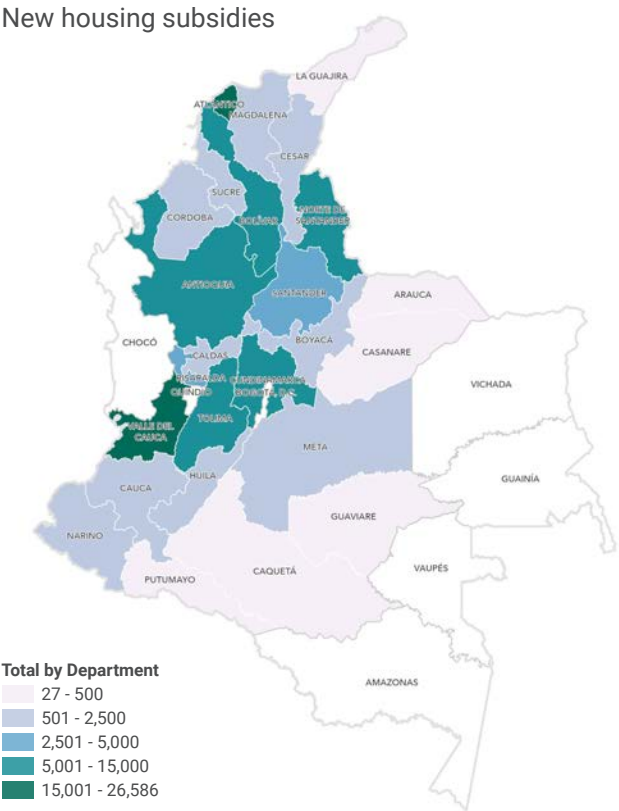
As of April 2021, CDVD has shown excellent results. The program has served over 550,000 households with the support of local governments, the CCFs, the Department of Social Prosperity (DPS), and the Ministry of Agriculture and Rural Development.

CDVD, and Colombia's housing policy more broadly, is based on a holistic approach, recognizing that the security of tenure is related to the legalization of informal urban settlements. Often, these neighborhoods have been constructed without complying with regulations, without urban planning processes, and without the basic and necessary conditions to ensure residents' quality of life. The urban legalization team at the Ministry supports local governments by providing technical support in prioritized municipalities. Estimates show that just 7.5 percent of Colombia's municipalities (83 localities) are home to 60 percent of its informal settlements. These local governments have received virtual and face-to-face trainings, as well as work sessions to support them in formalizing or relocating families in these neighborhoods.

The differing needs between neighborhoods, between regions, and between cities of varying sizes is now also being addressed by initiatives such as the National Rural Housing Program, created in 2020, which aims to address housing policy's longstanding struggle to reach rural areas.

RESULTS FROM THE *MI CASA YA* PROGRAM

New housing subsidies



MI CASA YA HAS SIGNIFICATIVELY INCREASED THE SUPPLY OF LOW-INCOME HOUSING WITH HIGH-QUALITY STANDARDS IN COLOMBIA.



THIS PROJECT, WHICH INCLUDED A SCHOOL, BENEFITED 1,440 CHILDREN IN THE ACANTO PROJECT IN SOACHA, CUNDINAMARCA



FOR THE GOVERNMENT OF COLOMBIA, *MI CASA YA* IS A STRATEGIC PROGRAM. AS SUCH, THE BUDGET FOR SUBSIDIES IS ENSURED UNTIL 2025. THIS PROVIDES PREDICTABILITY FOR PRIVATE INVESTORS.



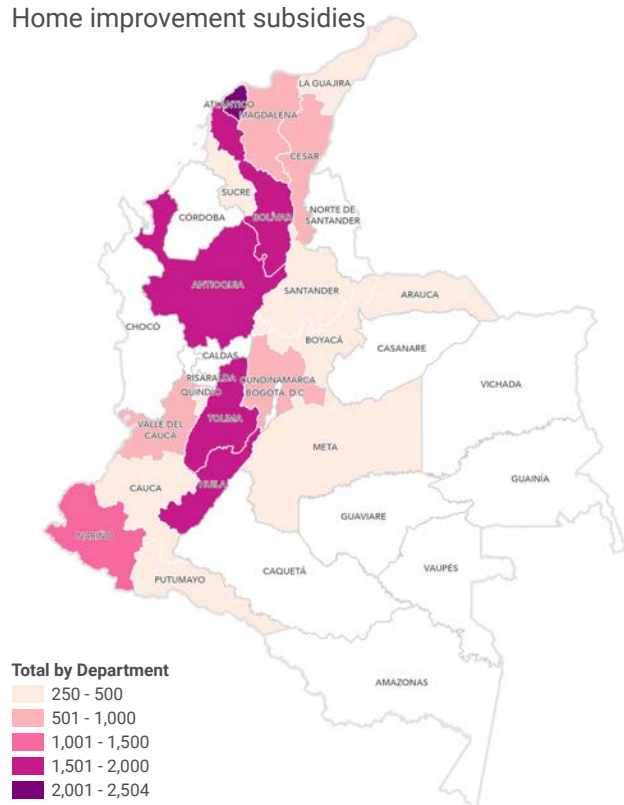
THE SUBSIDIES FROM *MI CASA YA* HAVE REACHED MORE THAN 255 MUNICIPALITIES IN THE COUNTRY SINCE AUGUST 2018, ALLOWING MORE COLOMBIANS TO BECOME HOMEOWNERS.



MI CASA YA PROJECTS ARE LOCATED IN URBANIZATIONS WITH PLANNED URBANISM AND ACCESS TO URBAN AMENITIES.

RESULTS FROM THE CASA DIGNA, VIDA DIGNA PROGRAM

Home improvement subsidies



MINISTER MALAGON WITH BENEFICIARIES FROM THE CASA DIGNA, VIDA DIGNA PROGRAM.



CASA DIGNA VIDA DIGNA IMPROVES THE LIVING CONDITIONS OF VULNERABLE HOUSEHOLDS. SINCE 2010, THE QUALITATIVE HOUSING DEFICIT IN COLOMBIA DECREASED BY AROUND 9 PERCENT.



THE RESILIENT AND INCLUSIVE HOUSING PROJECT WILL DELIVER 12,706 HOUSING IMPROVEMENT INTERVENTIONS IN URBAN AND RURAL AREAS.

"Housing policy is a collective enterprise. Open dialogue and coordinated efforts between government and citizens are essential to ensure its success."

Jonathan Malagon, Minister of Housing, City and Territory.



A PROGRAM BENEFICIARY IN THE CITY OF VALLEDUPAR.

A consolidated housing policy: Rural housing solutions

Beyond promoting housing acquisition and financial inclusion in urban areas, current housing policy has also aimed to provide housing solutions in rural areas. In 2020, the Ministry of Housing in Colombia assumed responsibility for housing policy in rural areas. Under this mandate, in October 2020, the Ministry issued Decree 1341, which regulates social and rural priority housing, transitioning from the previous collection of atomized rural housing programs toward a comprehensive national public policy for housing in rural areas.

The current National Development Plan for 2018–2022, “Pact for Colombia, Pact for Equity,” sets the goal of constructing 10,299 rural houses by the end of 2022. As part of the new rural housing policy, the program *Vivienda Social para el Campo* (Rural Social Housing) calls for municipalities to co-finance housing solutions; out of the 32 departments in the country, 28 are participating in the first call for proposals.

In its first stage, *Vivienda Social para el Campo* will benefit 5,800 rural households in 99 municipalities, providing new solutions for adequate housing. These housing solutions will be adapted to the sociocultural, climatic, and geographical needs of the regions. Although this approach creates an additional challenge in project execution, it is necessary to provide adequate housing for these communities. The 5,800 beneficiary households will not make monetary contributions; rather, the new homes will be 100-percent subsidized by the Ministry and the local governments.

Of the 99 beneficiary municipalities, the 65 with the greatest socioeconomic and rural housing needs will receive co-financing from the Ministry of 80 percent of the value of the projects. The remaining 34 municipalities will receive Ministry co-financing of 50 percent of the value of the projects. The categorization of municipalities into these two groups is based on the Rural Housing targeting indicator formulated by the Ministry, which determines the maximum level of co-financing according to the socioeconomic conditions and the housing deficit of each municipality.

The new rural housing policy goes beyond reducing housing deficit in rural Colombia. Crafted with the participation of multiple entities from across the country, it recognizes the crucial ways in which cultural and climatological differences can bear on housing solutions in rural areas. Furthermore, the policy represents a great step forward by recognizing transportation costs as a factor in the granting of rural housing subsidies – a major advance in a country where geographical barriers often hamper the inclusion of remote regions in the national housing policy agenda.

Toward a more progressive housing acquisition policy

The program for the Promotion of Access to Social Interest Housing, *Mi Casa Ya*, grants subsidies for down payments on newly built housing to households with incomes below four minimum wages (Col\$3.6 million) (see Chapter 3). The success of the program is remarkable (figure A); yearly subsidies have increased substantially, benefiting more than 154,000 households.

To make housing acquisition even more attainable for lower-income families, the Ministry permitted households to combine down-payment subsidies from multiple sources. Decree 1533 of 2019 of the Office of the President authorized the concurrent use of subsidies from other sources, such as Family Compensation Funds (CCFs),² authorizing beneficiary households to access the family housing subsidy granted by the various entities that participate in the National System of Social Interest

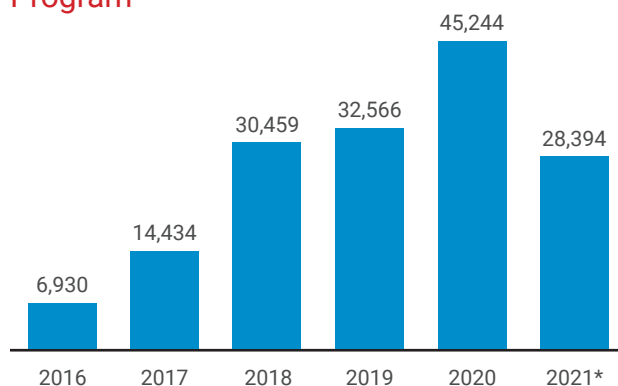
² Family Compensation Funds, or *Cajas de Compensación Familiar*, are social security networks that benefit formal workers and, among other benefits, offer housing subsidies to its members.

Housing. For example, the down-payment subsidy granted by the CCFs can now be added the *Mi Casa Ya* subsidy, allowing beneficiaries to benefit from total subsidies of up to 50 minimum wages (Col\$45 million). Since the beginning of the concurrence scheme in 2018, over 18,035 subsidies have been granted through the CCFs. As of June 2021, 34 percent of subsidies are delivered under this scheme.

Likewise, subsidies from municipal authorities have been allowed to be used jointly for down payments. For instance, the District of Bogota, through Decree 122 of 2020, grants an additional subsidy of 20 minimum wages for female heads of households, which can be combined with both *Mi Casa Ya* and other subsidies, such as CCFs subsidies. Thanks to these measures, low-income households can now benefit from subsidies of up to 60 minimum wages, significantly improving their access to new housing.

Due to these measures, since the announcement in 2020 of a post-COVID economic reactivation program based on housing subsidies, the national government has been able to allocate more than 55,000 VIS subsidies. Of these subsidies, 76 percent went to households with incomes between zero and two monthly minimum wages, making the current housing acquisition strategies more progressive than ever before.

Subsidies Granted through the *Mi Casa Ya* Program



* Data for 2021 covers January 1 through June 25.

SOURCE: Ministry of Housing.

Toward a policy for subsidized rent: *Semillero de Propietarios*

An additional effort to close the gap in housing access for historically marginalized populations is *Semillero de Propietarios* (see Chapter 3), a social leasing program that aims to establish a path to homeownership for lower-income households. *Semillero de Propietarios* ensures decent housing conditions, while also helping formalize neighborhoods and qualifying households to receive financing. To facilitate the next step toward homeownership through financial inclusion, at the end of their lease, *Semillero de Propietarios* beneficiaries can also access *Mi Casa Ya*.

For many households, the primary barriers to accessing housing are insufficient money and insufficient capacity to borrow. These are the challenges that *Semillero de Propietarios* seeks to solve simultaneously. The program empowers beneficiaries to accumulate formal savings and create credit history, and therefore to access formal credit; savings are used as an instrument for more families to achieve homeownership, encouraging the financial inclusion of beneficiaries.

Semillero de Propietarios offers two types of subsidies that respond to two different realities experienced by beneficiary households. The first modality subsidizes rent and seeks to serve households that live in informal and often poor-quality housing. The second modality rewards and promotes savings in households that have a small savings capacity. Households can make monthly payments into a special savings account until they reach a minimum of 4.5 monthly minimum wages. At that point, the household can apply to *Mi Casa Ya*.

With *Semillero de Propietarios*, the national government is thus improving living conditions and enabling households to satisfy their housing needs through rent, while working toward the ultimate goal: for beneficiaries to become owners.

Recently, *Semillero de Propietarios* has gotten a boost from the new Housing and Habitat Law (see below), which implements two changes in the rental market to increase the housing supply and improve the efficiency of the social rental program. First, the Law expands the supply of housing available for rent through the program by allowing the subsidy to be applied to existing housing with commercial value higher than the VIS price cap. Second, it reduces the required dwelling time of households that benefit from subsidies, from 10 to five years. This change increases the potential housing stock available on the rental market and relaxes the mobility restrictions for homeowners, allowing them to decide to relocate to a better location and exploit the financial assets they have acquired. The Law's implementation is expected to reduce the median amount of money spent on rent as a percentage of households' monthly income, either because they will be able to buy a house sooner or because the expanded rental market will reduce housing costs.

Toward a sustainable occupation model: Urban and territorial planning

The Ministry has designed a strategy to provide beneficiaries of the National Housing Policy with recreational and community public spaces, both for leisure and to further support vulnerable populations. In coordination with other national and local government entities, the Ministry is working to construct and equip community spaces, such as schools, daycare centers, and public parks. Between August 2018 and July 2021, 60 urban infrastructure projects were built and delivered, benefitting 46,847 households.

Additionally, the Ministry has created the Land Availability program to facilitate the availability of urban land in municipalities with high demand for housing and low supply of land. The program promotes the formulation and implementation of urban planning instruments that enable re-densification (partial plans and macro projects of national social interest). The National Development Plan 2018–2022 set a goal of 16,000 hectares of land to be made available for the development of projects, primarily housing and complementary uses. To date, the program has reported 13,155 hectares available – 82 percent of the four-year goal.

Beyond setting the development agenda for the government, the National Development Plan also highlights two critical urban and territorial planning issues that need to be addressed: the need to update municipal land-use plans and the absence of urban land for affordable housing.

To address these difficulties, the Ministry of Housing and Cities provides technical support to municipalities and districts in the process of reviewing and implementing their land-use plans. Recognizing that the requirements and needs of the municipalities are unique, since 2019, the Ministry has implemented a strategy that includes two lines of action. The first provides comprehensive support for each stage of the process, and the second focuses on the incorporation of risk management in land-use plans.

Today, we are working with more than 120 municipalities on this process, with the goal of supporting at least 150 municipalities for the period 2018–2022.

Housing and Habitat Law: Improving access to decent housing

Since 2018, the national government has worked to modernize and improve the norms, laws, and regulations of the housing system. This work has coalesced in the new Housing and Habitat Law (Law 2079, enacted January 14, 2021), which fosters access to decent housing in both urban and rural areas by reducing the regulatory burden. It also promotes the orderly, planned growth of cities and reduces bureaucratic procedures that regulate the approval of land for development.

The Law further deepens access to housing subsidies, including those announced within the framework of the national government's post-COVID economic recovery program. For instance, households that have received a family housing subsidy for retrofitting in the past are now able to access a family housing subsidy to acquire a home. The Law also promotes the financing of rural housing, while recognizing the heterogeneity of populations and regions: it includes a mechanism for increasing the value of rural subsidies based on the location and particularities of each municipality.

Reducing barriers to housing finance

The Housing and Habitat Law has also improved access to financing. It allowed the National Government to increase the maximum term for mortgages from 30 to 40 years – a measure that responds to changes in market dynamics, and that particularly benefits low-income households and younger homeowners by enabling them to make smaller monthly payments. Restrictions on the sale of subsidized properties have been eliminated as well (except in the case of free housing projects), enabling these homes to be used as collateral. The Ministry also increased the DSTI (debt-service-to-income) ratio from 30 percent to 40 percent for social housing. This puts mortgage payment amounts more in line with rent payments, allowing low-income households to access credit without significantly increasing the proportion of their income spent on housing.

Furthermore, the recently launched *Jóvenes Propietarios* promotes access to housing credit for young adult borrowers under age 28. This program includes preferential financing conditions for VIS home loans, collaterals for mortgage loans that are 100-percent subsidized by the national government, and personalized support to the beneficiaries throughout the process. Young people will be able to access preferential interest rates, in addition to lower down-payment requirements for the purchase of affordable housing.

Action on the COVID-19 Pandemic: Mitigation Measures and the 200,000-Subsidy Strategy for Economic Reactivation

Most of these strategies had significantly advanced already when the COVID-19 pandemic, an event for which no country was prepared, hit in 2020. The emergency stressed the importance of a national integrated housing policy and highlighted housing's crucial role as the first line of defense for families during lockdown periods. Housing programs have therefore taken on a special role, both to prevent the spread of COVID-19 (the mitigation phase) and in the subsequent economic recovery phase.³

Following the first wave of contagion, in March 2020, Colombia's government quickly mandated preventive isolation to protect the population. The measures effectively reduced contagion. However, as expected, they resulted in an inevitable slowdown in the national economy. Notably, GDP fell by 15.8 percent in the second quarter of 2020 in comparison with the previous year. The trend continued for the remainder of the year, with a contraction of 8.5 percent in the third quarter and 3.6 percent in the fourth quarter, causing significant effects in all sectors, including housing.

Construction slowed drastically. Launches of new development projects, the granting of construction licenses, project initiations, and home sales – which at the beginning of the year had registered a growth trend that suggested a promising 2020 for the sector – contracted significantly, especially in the second quarter.

³ For a detailed presentation of measures taken both in housing and water policy, see Duque et al. (2021).

During the initial phase of the pandemic, the priority was to minimize the impact of quarantine measures on households, especially the most vulnerable. In pursuit of that goal, the policy response involved several fronts of action and included measures such as additional transfers through conditional cash-transfer programs. The main objective of these initiatives was to assist the most vulnerable households in meeting their basic expenses at a time when their income vulnerability was exacerbated by preventive measures.

In the housing sector, bold strategies were designed to guarantee that families could stay at home during lockdown, while simultaneously mitigating the impact on their income. The first course of action was a series of extraordinary measures for the protection of tenants and landlords. In Colombia, there is a double vulnerability in the rental market. About 5.6 million households (39 percent) live in rental housing; on the other hand, 85 percent of the households that receive income from rentals belong to low-income populations, and revenue from this rent represents about 30 percent of the total monthly income of these households.

In the face of this complex situation, the government instituted measures that encouraged, within a framework of responsible solidarity, payment agreements between the parties. In addition, evictions were prohibited, price readjustments of rental fees were frozen, penalties and interest were eliminated if a payment agreement was reached, and the term of leases was extended, among other measures.

Additional actions were taken to protect homeowners who were still paying off their mortgage loans and who could face penalties due to the economic difficulties associated with the pandemic. Financial relief for housing loans was established, and provisions were made to protect beneficiaries of housing subsidies. These included grace periods for home loan and home leasing operations, without affecting borrowers' credit histories or generating reports in the credit bureaus. Furthermore, as an exceptional measure, the government ruled that the renegotiation of loans would not imply the loss of the interest-rate subsidy granted by the national government.

A third front in the battle to mitigate the pandemic's effects had to do with job protection in the construction sector. In a joint effort with all the relevant actors, biosafety protocols were established for the prompt resumption of activities, always guaranteeing the health of the workers. As a result, construction was the first non-essential activity to implement biosafety protocols and to restart activities. Complementary measures included the extension of the validity of construction licenses for nine months, which guaranteed the continuity of housing projects that had been suspended. Extended work hours were permitted so developers could make up for lost progress, in compliance with current labor regulations. Finally, the validity of workers' certifications for working at heights was extended.

In less than two months, almost 100 percent of building construction projects nationwide had resumed activities, protecting both the health and income of hundreds of thousands of workers. As a result of the mandatory preventive lockdown, employment in the building sector fell from 840,000 in March 2020 to 486,000 in April 2020; however, just three months later, employment figures had fully recovered, with 869,000 workers employed in the building construction sector by July. In fact, the sector closed 2020 with over 1 million workers, employment levels that had not been seen in the country in the previous five years.

In short, timely government action, in coordination with local governments and the private sector, both protected households from the possibility of losing their home and enabled the safe resumption of economic activities.

Once the mitigation phase was over, the national government moved towards a strategy for the recovery of the national productive apparatus, in concert with measures to protect the population from COVID-19. Colombia's government was committed to an ambitious strategy of reactivation that relied on the housing sector. To that end, 200,000 additional subsidies for the purchase of new housing were made available across the country, to be delivered between 2020 and 2022. The housing sector is a natural candidate to lead economic recovery, given its capacity to generate added value and employment, as well as its multiple productive linkages with other subsectors of the economy (see Chapter 6). In addition, it is a sector that manages to tackle two objectives of public policy: social equality and economic growth.

Of the 200,000 subsidies, half are earmarked for the purchase of VIS housing units and the other half for the acquisition of non-VIS homes with a value of up to Col\$500 million, targeting the middle class. The 100,000 households benefiting from VIS subsidies receive down-payment support of up to 50 monthly minimum wages (Col\$45 million), which reduces the amount of savings they require to access financing. Additionally, they receive a subsidy to their monthly mortgage payment for the first seven years of their loan. Each of the 100,000 households buying their home with non-VIS subsidies will also benefit from a reduction in their monthly loan payment, for a constant value of about Col\$454,000 during the first seven years of the loan.

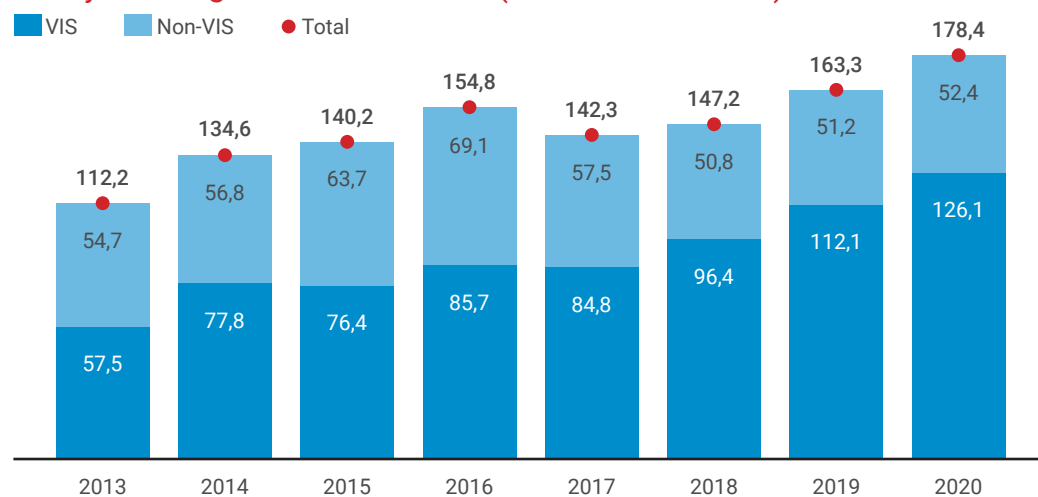
Since May 2020, when the initiative was announced, more than 60,000 VIS subsidies have already been allocated to low-income households. This represents a substantial increase in the allocation rates of housing subsidies. While in 2016 an average of 133 subsidies were assigned per week – a figure that rose to 595 in 2018 – currently more than a thousand subsidies are being assigned weekly. Even more impressive is the progress in reaching the most vulnerable Colombians: about 77 percent of VIS subsidies (Col\$1.8 million) have been assigned to the lowest-income households (those with incomes below two minimum wages). Additionally, about 20,000 subsidies have been assigned for the purchase of non-VIS housing.

In addition to the 200,000-subsidies strategy, the national government launched a special line of collateral for mortgage credit, through which the government will back mortgages and housing leases for up to Col\$3 billion. The collaterals are completely subsidized for lower-income households and constitute a complementary strategy to facilitate access to housing for the most vulnerable, who face greater barriers to financial access.

Together, these reactivation measures are expected to mobilize more than Col\$80 billion in business activity between 2021 and 2022, increase the construction sector's contribution to GDP by an additional 8 percentage points per year, and reach 1.3 million workers directly employed in the housing sector (the construction of buildings and real estate activities). Since this sector has productive linkages with 34 other subsectors, the benefits of the 200,000 subsidies reactivation strategy will spread broadly across the economy. Thus, housing is positioned to be the main protagonist of the economic reactivation of Colombia.

The results of the governments' housing initiatives for economic recovery are tangible. Colombians are increasingly interested in purchasing a home, and housing sales are reaching historic highs. Even amid the greatest economic challenge in our history, 2020 was the best year in history for home sales in Colombia. In total, more than 178,000 units were put on the market; 126,000 of them were low-income housing, a segment which also reached record figures (figure B). In 2020 alone, 125,000 more housing units were started and 181,000 were launched. The VIS segment stands out in this regard, with close to 92,000 homes started and around 136,000 launched – a growth of 15.6 percent and 11.8 percent, respectively, compared to 2019.

Yearly Housing Sales in Colombia (thousands of units)



SOURCE: Ministry of Housing, Cities and Territory with data from *Galería Inmobiliaria*.

Despite these positive results, more is required to make housing solutions more accessible for Colombians, even as the housing sector serves as the catalyst for the country's economic recovery from the effects of the COVID-19 pandemic.

New Directions for Housing Policy

The strategies mentioned above are already making remarkable progress toward a more integrated approach for housing policy. The housing sector's policy response to the COVID-19 pandemic has demonstrated both the importance of such an approach and the effectiveness of the strategies pursued since 2018. However, a forward-looking policy must pursue strategies that respond to emerging challenges as well as current ones. The housing agenda should therefore include topics such as sustainable housing and policies centered on the migration crisis, two fronts of action that have on taken special relevance.

Sustainable housing

Colombia has already made progress on the sustainable construction and housing agenda. The current National Development Plan reinforces the regulations proposed in the National Policy of Sustainable Building (DNP 2018b), as well as the actions related to sustainable construction in the Sustainable Development Goals. As part of these efforts, Colombia has actively participated in the discussions facilitated by the *Unión Interamericana para la Vivienda* and the Urban Housing Practitioners Hub, which have provided access to successful experiences and good practices from sustainable housing programs across Latin America.

It is well known that the construction sector has a high environmental impact. In Colombia, construction activities generate 30 percent of CO₂ emissions, consume 40 percent of the country's energy, and produce waste equivalent to more than 20 percent of their input materials (DANE 2020g). Furthermore, the residential sector is a major consumer of water and energy. The Superintendence of Public Utilities estimates that residential activities are the largest consumer of water in urban areas, accounting for 79 percent of the total, while commercial activities only account for 11 percent, industry for 5 percent, and the public sector for 3 percent (DNP 2018b).

To mitigate these effects, Colombia has implemented financial infrastructure and incentives to foster sustainable housing, and launched initiatives to increase the use of sustainable housing certifications

and to increase the training on sustainable housing. Currently, the Ministry is designing a policy that would provide additional subsidies to promote sustainable housing in the VIS segment. It is still in the preliminary stages, but this kind of sustainable housing incentives will take on an even more prominent role in years to come.

Housing Policy and the Venezuelan Migration Crisis

The Venezuelan migration crisis in Colombia has introduced new challenges for the government's housing policy. With the recent influx of Venezuelan migrants, as many as 1.7 million now live in Colombia, according to *Migración Colombia*. Moreover, the 2018 National Population and Housing Census (DANE 2019a) indicates that 58.3 percent of the migrant population suffers from housing deficit. In this context, the World Bank's *Resilient and Inclusive Housing Project* aims to foster housing programs in Colombia that improve the living conditions of both migrants and Colombian nationals. Granting the Colombian government a loan of US\$100 million with an additional donation of US\$36.7 million, the project is a major step forward for the inclusion of migrants in Colombian housing policy (World Bank 2021b).

These resources will be key in the coming years to address housing needs for low-income households and improve living conditions for all Colombians, but also to achieve specific goals for Venezuelan migrants. The *Resilient and Inclusive Housing Project* funds three programs: temporary rental subsidies for migrants, housing upgrading, and neighborhood upgrading. As many as 10,276 rental subsidies will be granted to Venezuelan migrants under Decree 057 of 2021, the regulatory framework defined by the Ministry for emergency rental subsidies. These subsidies will cover 100 percent of rent paid by Venezuelan migrants for up to 12 months (for rental payments below 40 percent of the monthly minimum wage).

The project also allocates resources for 12,706 housing improvements in rural and urban areas, including 1,162 improvements to homes that are rented by Venezuelan migrants. These retrofitting projects will adapt housing spaces (independent apartments) intended to be rented out to migrant families. Specifically, the initiative seeks to support Colombian families willing to rent an additional unit to Venezuelan migrants by funding home improvements with a value of up to 18 minimum wages (US\$4,420) in urban areas and up to 22 minimum wages (US\$5,402) in peri-urban and rural areas.

Finally, the project will improve neighborhoods for both Colombian and Venezuelan nationals, fostering programs that improve urban conditions through the construction of social infrastructure and public spaces for low-income households. During its six years of operation, the *Resilient and Inclusive Housing Project* aims to carry out 11 comprehensive neighborhood improvements and build at least 28 parks and six fully equipped facilities. The new infrastructure will benefit an estimated total of 223,705 households (709,592 people), 33,556 of which are migrant households (120,130 migrants).

The Future of Housing Policy: A Collective Endeavor

Looking to the future of housing policy, in November 2019, the Ministry launched the program Cities 4.0. The program is part of an initiative to update the National Urban Policy for Cities, and was designed in line with the recommendations of the New Urban Agenda. Given that public policy is developed at the regional level, the program is an invitation to governors and mayors to think about the cities of the future, and to build autonomous, sustainable, well-planned, and modernized urban environments. The Ministry has adopted the term *biodivercities*, coined by the Ministry of Environment and Sustainable Development, to describe those localities that embrace the environmental measures

and consider the development of public space and complementary social infrastructure. Housing policy, after all, does not stop with the construction of buildings: it is the development of complementary services such as health, educational, and recreational infrastructure that make housing policy complete.

As we strive to bring this vision of Colombian cities to fruition, achieving adequate housing for all continues to be a central task of housing policy. More than 5 million households in Colombia still suffer from housing deficit. In the years to come, housing policy must be updated to reach a more comprehensive approach capable of addressing the many challenges that persist. Housing purchase policies will continue to play a central role in providing opportunities for low-income households, and as a countercyclical strategy. However, new approaches – home improvements, rental housing programs, neighborhood upgrading, self-construction – will undoubtedly grow in importance. Similarly, expanding current strategies for the rural sector will be crucial as Colombia works to replicate in rural areas the success already achieved in urban areas. These new directions constitute the next steps toward eliminating housing deficit in the country.

The formulation and implementation of public policy is an ever-changing process that must respond to challenges that arise over time. This administration has worked to consolidate good practices and successful programs that guarantee access to quality housing. The current administration has enabled better targeting of housing policy and faster allocation of subsidies to reach as many households as possible, regardless of gender, ethnicity, or income level.

The lessons learned in recent years continue to inform public policy. Ongoing dialogue with partners – communities, developers, banks, stakeholders, other countries in the region, multilateral institutions, and non-governmental organizations – has enriched the design of housing policy, and has been vital to overcoming the fiscal, planning, and implementation challenges that come with public policy.

Housing policy is a collective enterprise. Open dialogue and coordinated efforts between government and citizens are essential to ensure its success. We hope that the experiences and recommendations presented in this report will contribute to building a successful housing policy, not only in Colombia but across Latin America.

Jonathan Malagón

Minister of Housing, Cities and Territory

Carlos Ruiz

Deputy Minister of Housing





Executive Summary

About this Report

This study offers a comprehensive history and thorough analysis of housing policy in Colombia.¹ Its emphasis on the upgrading approach – i.e., home retrofitting and holistic neighborhood improvement – is a novel paradigm for the country. This document is intended to be used as a technical support for the development of a more balanced housing policy in Colombia and, in the coming years, for other Latin American countries as well. As Colombia reckons with the severe social and economic impacts of the COVID-19 pandemic, a successful housing policy will be a crucial factor in its recovery and beyond.

Socioeconomic and Housing Context

More than 36 percent of Colombians experience a housing deficit. This is the result of – among other factors – the country's high levels of income inequality and labor informality, its significant and rapid urbanization and large rural population, and historical approaches to housing policy. Colombia has urbanized at a very high rate: between 1964 and 2018, the urban population quadrupled, to 36 million. This has increased pressure on both the government and municipalities to find housing solutions, with particular pressure on agglomerated municipalities, big cities, and municipalities of between 20,000 and 100,000 residents. To address this deficit, the Colombian government devotes 4.1 percent of its social-sector expenditure to housing, a figure comparable to other countries in the region but relatively low in terms of GDP.

Housing deficits may be measured *quantitatively* (referring to shortfalls in the housing space available) and *qualitatively* (referring to deficiencies in the material and social conditions of households). Colombia's deficit is predominantly qualitative, and is more pronounced in rural areas and small municipalities. The components driving the qualitative deficit are diverse, suggesting a wide range of critical issues, especially in rural areas.

¹ Other than the foregoing introduction, the findings, interpretations, and conclusions expressed in this report do not reflect the views of the Colombian Ministry of Housing or the Government of Colombia.

POPULATION LIVING IN URBAN AREAS

1964:

 9 million.

2018:


 36 million.

75%

Total urban area growth between 1990 and 2015.

THE IMPACT OF INTERNAL MIGRATION ON HOUSING DEMAND

30%

Residents in agglomerated cities that were born in the same municipality.

60%

Residents in other cities that were born in the same municipality.



THE HOUSING DEFICIT IN COLOMBIA

36.6%

of households experience housing deficit.

73.2%

of the housing deficit is qualitative.

Urban households in deficit: **1 in 4.** 
Rural households in deficit: **4 in 5.** 

GOVERNMENT EXPENDITURE ON HOUSING

Colombia: 0.5% of GDP.

Latin America: 0.4–0.8 of GDP.

OECD: 0.68% of GDP.



THE HOUSING DEFICIT IS PREDOMINANTLY QUALITATIVE, AND IS MORE PRONOUNCED IN RURAL AREAS AND SMALL MUNICIPALITIES.

Housing deprivations are also correlated with informality of labor and with low income levels, both of which are more frequent in rural areas. Colombia's poverty levels overall have varied in recent years, with indicators in the Multidimensional Poverty Index (MPI) surging from 2016 to 2018 and decreasing again in 2019. The Monetary Poverty Index deteriorated between 2017 and 2019, reaching a low of 42.5 percent in 2020 due to the economic crisis generated by the global pandemic. In 2019, 70 percent of Colombian households had a monthly income lower than the average, and 30.9 percent of families earned less than the monthly minimum wage of US\$208. Rural households have average monthly earnings 60 percent lower than their urban counterparts.

COVID-19 and Housing

COVID-19 is likely to further compromise the success of poverty-reduction efforts that were already losing ground, and will undercut families' ability to improve their housing conditions. Deprivations such as inadequate walls, inadequate floor materials, and overcrowding will increase as a result of household relocation. A

FAMILY INCOME IN COLOMBIA: 2018

US\$551

Average monthly income.

US\$208

Monthly minimum wage.

70%

of households earning less than the average.

26%

of households earning less than the minimum wage.

56.2%

of households earning their income through informal means.

57%

of rural households earn less than urban households.

reduction in household income, especially among poorer Colombians, will make housing improvements a lower priority compared to securing food and healthcare. Utilities deprivations will increase as people become unable to pay for services. COVID-19 has already put pressure on renters and exacerbated the housing situation of many vulnerable and low-income groups, such as Venezuelan migrants who have sought shelter in Colombia. There is also strong evidence of a relationship between housing deprivations and COVID-19 infections, with transmission rates being higher in areas more affected by housing deficit.

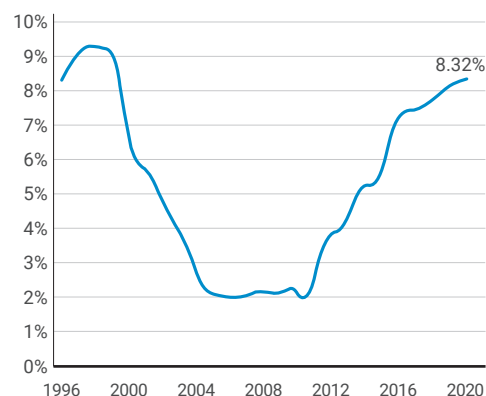
To mitigate the economic impacts of COVID-19, the government of Colombia has focused its efforts on providing incentives in the labor market and expanding conditional cash-transfer programs. In the housing sector, additional subsidies for social and non-social housing were approved, and temporary prohibitions on home evictions were implemented. However, it is critical for Colombia to develop a comprehensive housing policy that takes into account the long-term effects of the pandemic.

Housing Affordability in Colombia

In the past 20 years, Colombia's mortgage market has grown steadily and diversified its products and sources of funding. However, both the supply and the market for mortgage products are still very concentrated. Five banks hold 75 percent of the national portfolio, most of which consists of loans to high-income families. Only 10 percent of the total mortgage portfolio is held by the 54.8 percent of the population whose income is lower than two monthly minimum wages – the population with the greatest housing needs.

Those households who can access mortgages tend to make larger down payments than required and pay off their loans, on average, in almost half the average issued term. One result of this cautious behavior is that, at 11.5 percent for non-social housing in 2019, mortgage interest rates are comparatively high in Colombia, both regionally and internationally. In recent years, these rates have gone down, mortgage term lengths have increased, and the growth in housing prices has slowed; still, the purchasing power of low-income households has declined. Nevertheless, buying social-interest housing is still a better financial decision for low-income households than renting, which consumes a higher percentage of

MORTGAGE PORTFOLIO AS A PROPORTION OF GDP

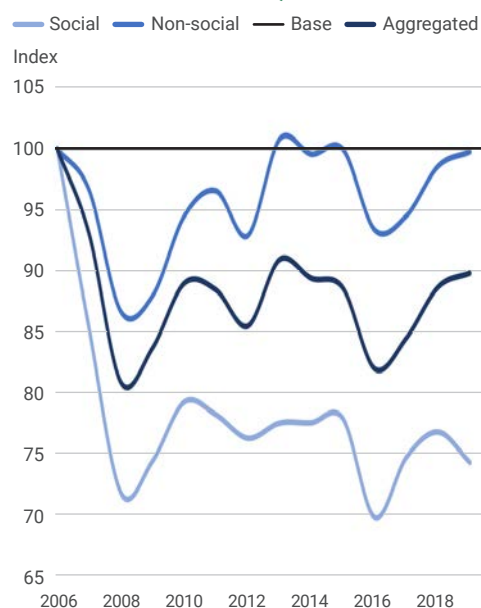


75%

of mortgages are held by **5 banks**.

The average citizen has lost **10.9 percentage points** of housing buying capacity between 2006 and 2019.

AFFORDABILITY INDEX, 2006–2019



monthly income. Despite government efforts to promote homeownership, however, the proportion of Colombian families living in rental properties has increased steadily over the last 30 years; at 39.8 percent, the homeownership rate is low for the region. On average, homeowners across income groups experience a greater incidence of housing deficits than do renters.

Approaches to Housing Policy

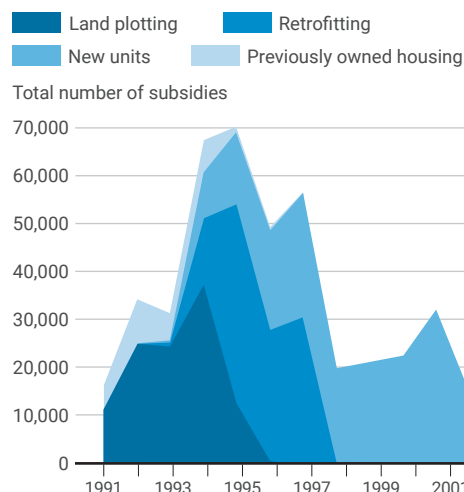
In the last 30 years, Colombian housing policy has been dominated by the development of the mortgage system, demand-side subsidies, and financial instruments to promote homeownership. Policy interventions also included direct housing construction, upgrading programs, rural housing policies, and complementary private social-security solutions.

A shift toward demand-driven housing policy took place from 1991 to 2002. During this period, the government introduced the ABC (*ahorro, bono, crédito*, or savings, subsidy, credit) policy, by which the private sector would build homes and sell them to the subsidized poor. From 2003 to 2011, the demand-side population was segmented into special (often vulnerable) groups, and the government introduced a bidding process for developers that saw a high level of unfinished projects. Subsidies were granted mainly in the form of preferential interest rates. In 2012, the free housing program was significantly expanded, but ultimately benefited only 2.5 percent of families with a housing deficit. The current housing policy regime developed small-scale retrofitting and rental programs; it also incorporates a rural housing policy and doubles down on ABC subsidies.

Broadly, two approaches to housing policy have been taken by successive Colombian governments: home acquisition, and upgrading and retrofitting.

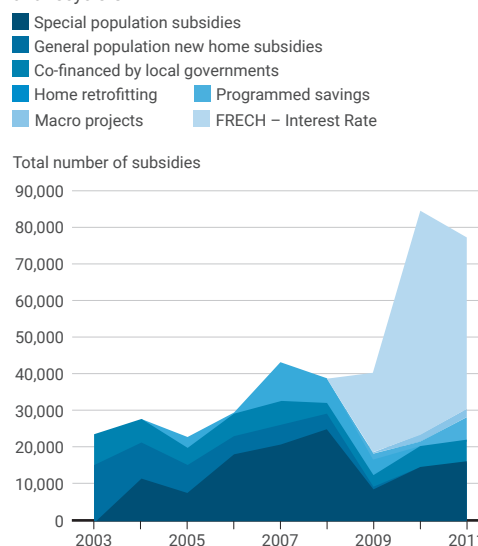
The *home-acquisition approach* seeks to increase homeownership through financial inclusion and subsidies. Acquisition policies have historically been the preferred approach in Colombia, and have been operationalized through a range of programs: FRECH and FRECH II, offering interest-rate subsidies; VIPA and *Mi Casa Ya*, which combine interest-rate and down-payment subsidies; and *Semillero de Propietarios*, a rental subsidy that enables the poorest Colombians to save for eventual acquisition. Going forward, CONPES 3977 will define sub-

SUBSIDIES FOR SOCIAL HOUSING IN COLOMBIA, 1991–2002



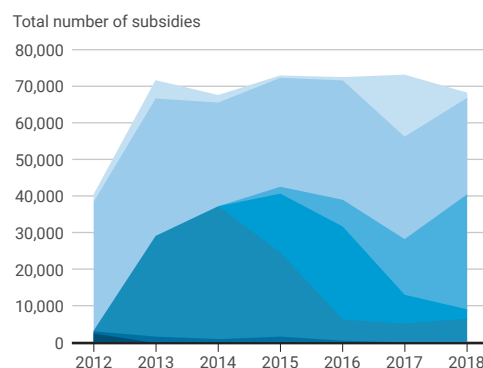
SUBSIDIES FOR SOCIAL HOUSING IN COLOMBIA, 2003–2011

Special populations are victims of terrorist attacks, natural disasters, or displacement; councilmen; and recyclers.



SUBSIDIES FOR SOCIAL HOUSING IN COLOMBIA, 2012–2018

Programmed savings, Free Housing 1 and 2, Mi Casa Ya, FRECH – Interest Rate, VIPA – VIP for saving families, and Other.



sidies for the ABC program and rental subsidies until 2025, and additional budget allocations have been approved in 2021 as a countercyclical measure.

The *upgrading approach* recognizes self-construction as the method by which many low – and middle-income households acquire housing, and designs policies to improve housing conditions for these families through home retrofitting and holistic neighborhood upgrading. While it has been inconsistently applied in the past, home retrofitting has in recent years become Colombia’s primary strategy for addressing the qualitative housing deficit; subsidy allocations for retrofitting since 2018 are the highest in three decades. *Casa Digna, Vida Digna* (CDVD), a priority program designed in 2018, implements home retrofitting, land and title regularization, and slum upgrading. In 2019, the Ministry of Housing and local authorities financed 11,650 home retrofitting projects in 13 cities. The Department of Social Prosperity (DPS), which is responsible for coordinating social policy for vulnerable populations, also has programs for home-retrofitting subsidies, neighborhood upgrading, and the construction of social infrastructure.

Additionally, Colombia’s non-profit social security networks collect, distribute, and pay salary contributions destined for household subsidies. These subsidies complement both the acquisition and upgrading approaches, although most of the funds distributed are for the purchase of new housing rather than previously owned homes or retrofitting.

The Case for an Integrated Approach

Over the past several decades, Colombia’s acquisition approach to housing policy has focused on large cities and the quantitative housing deficit, successfully halving the quantitative deficit in urban areas between 2005 and 2018. However, the qualitative deficit and deficit in rural areas have become more severe, underscoring the need for a housing policy that complements the acquisition approach. Overall, Colombia faces five major challenges that impact the housing sector, detailed below.

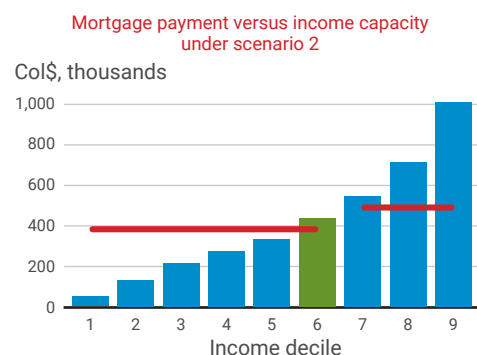
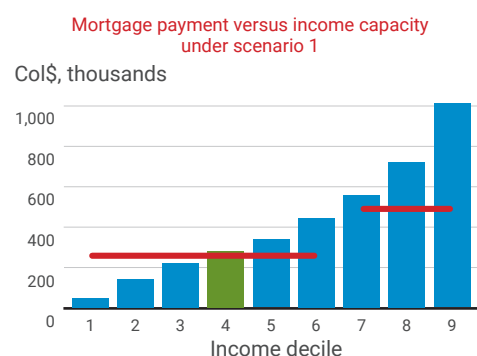
Barriers to access for low-income households. The poorest Colombians, who are characterized not only by low income but also by a high degree of informal employment, suffer most acutely from housing deprivations, with a deficit rate over 50 percent. Since 2018, the government

LOAN SIMULATION FOR LOW-INCOME HOUSEHOLDS

VARIABLE	SCENARIO 1	SCENARIO 2
Social housing unit price (MMW)	96	96
Government subsidy (MMW)	20	30
CCF subsidy (MMW)	30	0
Savings (MMW)	6	6
Interest rate	11.6%	11.6%
Interest-rate subsidy	4%	4%
Monthly mortgage payment (Households with income below 2 MMW)	US\$68.80	US\$103.20

ACCESS TO LOANS BY DECILE

— Monthly mortgage payments that households in each decile would have to make
 ■ First decile that meets the minimum income capacity



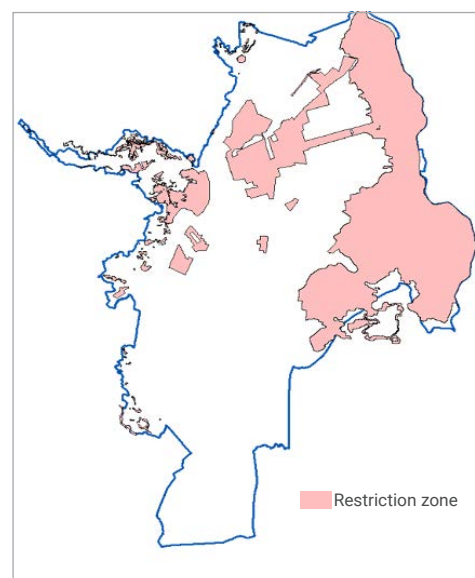
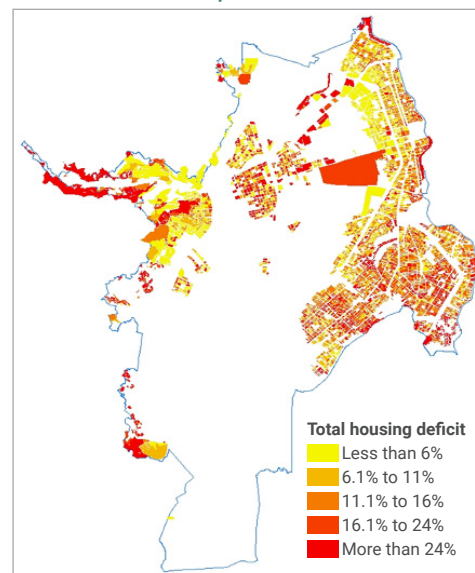
has worked to better target acquisition subsidies toward these households – many of whom are simply too poor to access housing – and significantly increased the number of subsidies granted to the lowest-income families. However, to enable these groups to purchase new houses, subsidies would have to cover the total (or almost the total) value of the housing unit – a fiscally untenable policy.

Dynamics leading to informal neighborhoods and slums. Demand for land and housing has vastly exceeded the capacity of the overburdened financial and construction sectors to supply formal housing. The result has been an ongoing surge in informal neighborhoods: in 2007, 56 percent of Colombia’s housing was informal. Around 1.2 million Colombians currently live in such neighborhoods, often occupying substandard housing with inadequate access to services. Since acquisition-focused policy relies on the availability of formal housing, it does not always consider the needs of people living in informal housing.

Need to improve access for rural areas and smaller municipalities. These areas are not as profitable for the private-sector developers on which Colombia’s housing market relies. This helps explain why smaller municipalities experience housing deficits four times greater than those of larger cities, and why four-fifths of rural households suffer from deficits. As subsidies are demand-driven, they are overwhelmingly concentrated in major cities and urban agglomerations, as are formal construction projects. In addition, Colombia’s rural housing policy experienced various administrative issues. Any policy addressing the housing deficit needs to target these areas.

Land-use restrictions and the regulatory framework. Overly restrictive land-use planning schemes in major cities – especially when plans are not aligned with those of neighboring municipalities – have caused an accelerated process of suburbanization in agglomerated cities. New housing, especially social housing, is decentralized; residents are often located far from the urban core, where cities struggle to provide services. Risk-management policies have hamstrung urban and home upgrading efforts, particularly in the areas most in need. Neighborhood legalization requirements for upgrading programs have restricted retrofitting efforts, and title informality and incremental construction of informal housing constitute further barriers.

UNIFIED RESTRICTION ZONE AND HOUSING DEFICIT, CALI



The current Venezuelan migration crisis and the housing challenges that migrants face. The significant influx of displaced Venezuelans has increased housing demand in Colombia among a population largely excluded from housing programs. Venezuelan migrants have lower incomes and higher levels of housing deficit than their Colombian peers, and, with a rental rate of 88.4 percent, are more than twice as likely as Colombians to be leaseholders. But migrants often hold irregular immigration status and are informally employed, making it all but impossible for them to benefit from current social-housing policies. To address these challenges, the Ministry of Housing and the World Bank have initiated a project to provide rental subsidies, implement neighborhood upgrading programs, and retrofit units that will be rented to migrants.

Cost-Effective Policy Solutions

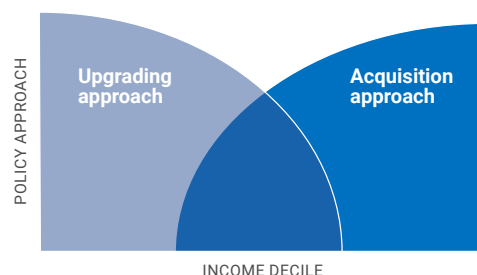
Colombia's housing deficit results from a complex combination of challenges, and cannot be eliminated using a single policy approach. Although the acquisition approach has successfully reduced urban quantitative deficit in recent years, current conditions call for a more balanced housing policy. Greater investment in the upgrading approach can help address the qualitative deficit and reach more geographic areas and vulnerable groups, including rural communities and the poor. To find the right combination of approaches, it is necessary to understand their cost-effectiveness – particularly in light of Colombia's severe fiscal constraints and the economic fallout of COVID-19.

While ABC or free housing programs can solve all deficit components with a single intervention, upgrading approach policies are more cost-efficient. The estimated cost of eradicating the quantitative housing deficit ranges from US\$16 billion for a cost-effective subsidy scheme to US\$30 billion through free housing alone. Eliminating the qualitative deficit would cost between US\$3.5 billion and US\$80 billion, and would be achieved most cost-effectively by offering subsidized microcredits to finance home retrofitting.

Beyond Housing: The Co-Benefits of a Balanced Housing Policy

Housing policy should aim to achieve a number of policy objectives – not only (i) reducing the housing deficit, but also: (ii) reducing poverty and building the middle class; (iii) boosting human capital accumulation through healthcare

REACH OF THE TWO POLICY APPROACHES BY INCOME GROUP



Upgrading approach

Supplies housing solutions that address qualitative deficit and housing deficit in rural areas.

Requires that the household has a house that needs improvements.

Acquisition approach

Supplies housing solutions that address the quantitative deficit and housing deficit in urban areas.

Relies on beneficiaries having access to financial markets and on the supply of affordable housing projects in the private market.

Excludes rural areas, low-income groups, and urban areas with insufficient housing supply.

THE NET PRESENT VALUE OF ELIMINATING THE HOUSING DEFICIT

US\$16 – 30 billion

Quantitative deficit in urban and rural areas.

US\$3.5 – 80 billion

Qualitative deficit in urban and rural areas.

and education gains; (iv) increasing economic output; (v) increasing employment demand; and (vi) benefiting vulnerable populations. While the balanced policy recommended in this report directly addresses objectives (i) and (vi), it also offers a range of co-benefits in poverty reduction, human capital accumulation, and economic expansion.

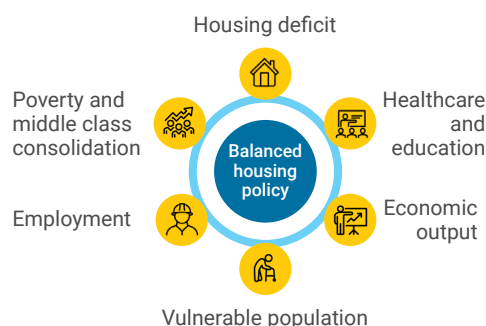
Poverty reduction. In 2018, poverty in Colombia increased for the first time since 2011, largely driven by an uptick in housing and utilities deprivations. In 2019, the Multidimensional Poverty Index improved overall in comparison to the previous year, but housing deprivation components remained stable, or even deteriorated. A large proportion of households that are one deprivation below the poverty threshold suffer from a housing deprivation. Improvements in housing could therefore have a significant effect on reducing Colombia's overall poverty indicators, and may do so cost-effectively. Interventions with the greatest impact are WASH (water, sanitation, and hygiene) solutions and upgrading of walls and floors – improvements that can best be achieved through home retrofitting programs.

Human capital accumulation. Colombia currently scores just above the mean both regionally and globally on the Human Capital Index, but home and neighborhood upgrading can boost human capital through better health and education outcomes, and the improved availability of social services. There is a significant correlation between housing deprivations and human capital variables such as school attendance, standardized testing scores, and illness. Combining adequate social housing with the provision of neighborhood infrastructure and necessary services could see significant spillover effects on human capital accumulation.

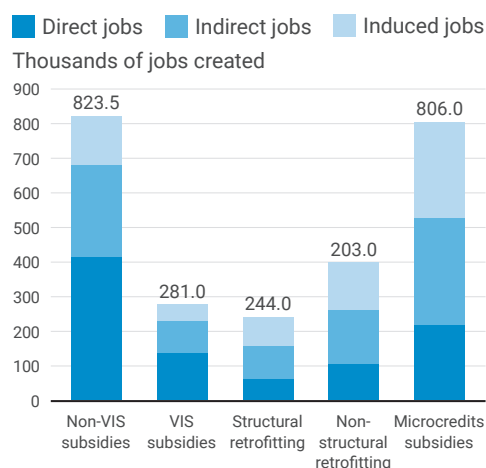
Employment generation and economic stimulus. Through its generation of employment and its role in capital accumulation, the construction sector can play a major part in stimulating the economy or helping it recover from a crisis such as COVID-19 – especially if it is incentivized through a well-designed housing policy. Construction currently accounts for 1.5 million jobs in Colombia; if retrofitting investments are leveraged through microcredits, the sector could create as many as 807,000 jobs, particularly benefiting low-income, unskilled workers.

Upgrading and retrofitting approaches can help achieve these policy objectives and realize co-benefits more cost-effectively than policies supporting home acquisition, which tend to address a narrower range of objectives.

OBJECTIVES OF SOCIAL HOUSING POLICY IN COLOMBIA



EMPLOYMENT CREATED BY INVESTING US\$1 BILLION IN DIFFERENT HOUSING PROGRAM ALTERNATIVES



Recommendations

In developing a comprehensive housing policy, Colombia should focus on four strategies designed to maximize the effectiveness of social-housing policies and expenditures, committing to them a budget of US\$1 billion.

Improving financial instruments for home retrofitting based on subsidized microcredits. Microcredits can be a powerful tool for reducing the housing deficit when a large proportion of the population cannot access mortgage finance, but Colombia currently does not have a clear institutional framework for their use in the housing sector. The government can structure microcredits for the housing market in three ways: (i) supplementing households' payments to the financial institution directly; (ii) incentivizing lending by defining a guarantee scheme with the *Fondo Nacional de Garantías* to reduce the risk for financial institutions; and (iii) reducing household borrowing costs by subsidizing second-tier development banks to set a re-discounted interest rate.

Prioritizing direct retrofitting interventions in urban areas. This strategy, to be implemented by the Ministry of Housing in coordination with local authorities, would prioritize five housing deprivations: inadequate wall materials, poor floor materials, lack of access to adequate space for cooking, unstable roofing, and poor water and sanitation conditions. This type of intervention offers excellent economies of scale and can be targeted where it is needed most. The granular census and housing information available in Colombia enables governments to engage in micro-level planning, prioritizing the communities with the greatest housing needs and precisely estimating the costs.

Financing for rural households. Rural households account for 46.2 percent of the national housing deficit. When allocating subsidies, therefore, the Colombian government should prioritize municipalities with a greater proportion of rural households. More efficient construction methods for rural housing should be adopted to reduce production costs and expand the number of beneficiary families.

Neighborhood upgrading as an essential part of retrofitting projects. Neighborhood improvement projects can address the effects of rapid, disorganized urbanization. In Colombia, the program *Casa Digna, Vida Digna* already combines home retrofitting with neighborhood improvement projects that give residents access to public services. However, such holistic approaches are costly – and their implementation increasingly falls to under-resourced local governments. A subsidized interest rate on loans to municipal governments is proposed to enable cities to undertake large-scale neighborhood upgrading projects.

A different set of strategies are required for the *rental market*, which has come under enormous pressure as a result of the Venezuelan migrant crisis and economic fallout from COVID-19. Three different approaches are proposed to subsidize rental housing. Two solutions aim to alleviate the housing crisis for Venezuelan immigrants: increased access to the existing Family Housing Subsidy (by relaxing application requirements or resolving migrants' legal status), and subsidies for home improvements undertaken by Colombian households that would make new spaces available for rent. For families affected by economic hardship resulting from COVID-19, a temporary system of voucher-like rental subsidies is proposed.

Finally, specific actions are recommended for Colombia's housing policy, under four over-arching themes.

Simplify institutional arrangements and improve coordination to facilitate the upgrading approach:

- Unify retrofitting resources under the Ministry of Housing and guarantee sufficient fiscal resources for the program.

- Improve coordination between water and sanitation and housing policies within the Ministry of Housing.
- Improve WASH capacity.
- Improve both existing information within the system and the use of new technologies.
- Include the social component through alliances with CCFs and local governments, and through the creation of a specialized unit in the Ministry of Housing.
- Improve subsidy allocation and construction times.
- Simplify the process of neighborhood validation.

Develop new financial instruments and resource streams to fund retrofitting, rural housing, and neighborhood upgrading:

- Develop an ecosystem for formal home retrofittings.
- Develop new financial products for retrofittings by publicly owned financial institutions to foster the housing policy ecosystem.
- Allow companies to charge fees on their investments in in-home connections to WASH services, and create a system of guarantees in case of non-payments.
- Create more incentives for CCFs to invest in home retrofittings.
- Adopt retrofitting as the central strategy for rural housing and augment its baseline funding.
- Evaluate the creation of a financing instrument that would channel resources from the sale of WASH services in interconnected areas to non-interconnected areas.
- Develop a line in Findeter for loans to municipalities seeking to invest in neighborhood upgrading.
- Simplify the mechanism by which royalties are approved for upgrading programs.
- Allow the definition of areas designated for neighborhood and home upgrading.

Improve targeting of resources and policies:

- Focus resources on the areas and groups where they are most needed.
- Make rural housing policies and expenditures efficient and effective by ensuring they are well targeted.
- Reconsider allocating additional resources for non-social housing customers to those already approved beyond 2022, given their regressive impact.
- Focus acquisition-approach subsidies on families earning less than two monthly minimum wages.

Reform land-use planning schemes to combat suburbanization and loosen zoning restrictions to enable retrofitting in high-risk areas:

- Improve transparency around the capacity and need for resettlement in order to implement adequate implementation plans.
- When resettlement is not possible due to logistical challenges or high costs, focus efforts on the collection of risk data.
- Reform and coordinate land-use planning schemes to reduce and mitigate the effects of unsustainable suburbanization.



CHAPTER 1:

Colombia: Socioeconomic and Housing Context

Colombia can be characterized as a country with high income inequality and high income informality. It has seen rapid urbanization, but a significant portion of its population is still located in rural areas and small municipalities. These characteristics have had a direct impact on access constraints in the mortgage market and on the housing deficit – the shortfall in the number or quality of houses needed to accommodate the population.

More than 36 percent of Colombians suffer from a housing deficit. This level of deficit is the result of multiple convergent factors, including Colombia's poverty rate, its recent history of rapid urbanization, the distribution of its population among rural areas and municipalities of various sizes, and the government's historical expenditure on housing. This chapter provides a breakdown of the housing deficit and an overview of these contextual factors – including how they are being affected by the current COVID-19 pandemic crisis.

1.1 Poverty and Income Inequality

According to the National Department of Statistics (2020), Colombia saw a sharp reduction in poverty beginning in 2002, but this downward trend has stagnated, or even reversed, in recent years. In 2002, Colombia's poverty rate as measured by income (US\$64 or Col\$257,000 monthly per household member) was 49.7 percent; in 2018, the revised poverty rate was 34.7 percent. The average monthly income for a family in Colombia in 2018 was US\$551, but 70 percent of households had a monthly income lower than the average. Twenty-six percent of Colombian families earned less than US\$208, which was the monthly minimum wage set by the government that year. In 2020, the poverty rate increased to 35.7 percent, as 3,552,000 people dropped below the poverty line compared to 2019.

Low income has a direct impact on the housing deficit, as families don't have the necessary means to afford monthly mortgage loan payments or to rent housing units in adequate condition. Despite Colombia's rapid pace of urbanization during the second half of the 20th century, 3.1 million families (21.6 percent of the population) still live in rural areas, where households' average monthly earnings are 57 percent lower than that of their urban counterparts (DANE 2020e). Housing production in rural areas is also more precarious, with informal and self-construction processes the norm. Families who rely on self-constructed housing tend to use lower-quality materials, and their income constraints result in longer construction times, with some families occupying unfinished housing units.

Additionally, an estimated 56.2 percent of families earn their income through informal means (DANE 2020e). Informal households are excluded from the financial market, so higher informality translates into a higher housing deficit and a lower ownership rate.

Since 2011, Colombia has applied a new poverty measurement that seeks to provide a more comprehensive evaluation of wellbeing. The Ministry of Planning (*Departamento de Planeación Nacional*, or DNP) introduced the Multidimensional Poverty Index (MPI) based on the Alkire-Foster methodology (see Annex A for details). Between 2010 and 2016, Colombia's MPI decreased from 30.4 per-

cent to 17.8 percent of the population.¹ Between 2016 and 2018, however, the MPI surged across all dimensions except for education, and was especially affected by the housing components, particularly those related to the qualitative housing deficit (inadequate conditions of housing units). In 2019 the MPI decreased again reaching a level of 17,5. However housing components did not recover and some of them even worsen. These lackluster results have occasioned a crisis in poverty policy in Colombia – which is further fueled by the COVID-19 pandemic.

The government has prioritized poverty reduction as one of the main targets of the National Development Plan 2018–2022, and it has been classified by the president’s delivery unit as a “transformative target.” However, the COVID-19 shock will have a deep impact on labor income and economic growth, further compromising the performance of poverty indicators that were already losing ground. In confinement and quarantine, deteriorating housing conditions impose additional burdens on low-income families.

1.2 Urbanization in Colombia

Colombia has urbanized at a very high rate. Its urban population increased fourfold between 1964 and 2018, from 9 million to 36 million (CNPV 2018). Between 1960 and 2018, the country’s urban population closed the gap with the OECD (Organisation for Economic Co-operation and Development) countries (OECD 2020). Urbanization has slowed in recent years; in Bogota, the compound annual growth rate decreased from around 5 percent in 1973 to less than 1 percent in 2018.

Population and urbanization growth rates have been impacted by domestic migration flows from rural areas towards the agglomerations of the big cities. As figure 1 shows, only 30 percent of all residents in agglomerated cities were born in the municipality where they resided at the time of the 2018 census; in the other categories, this proportion is higher, at almost 60 percent. Moreover, close to 5 million current inhabitants of the six largest cities are immigrants from another municipality or country, which means that, on average, each city had to find a new housing solution for 800,000 people between 2005 and 2018. Although the smaller municipalities are also home to a high absolute number of immigrants, the newcomers to these localities tend to be more dispersed among them, so the concentration in any given municipality is lower

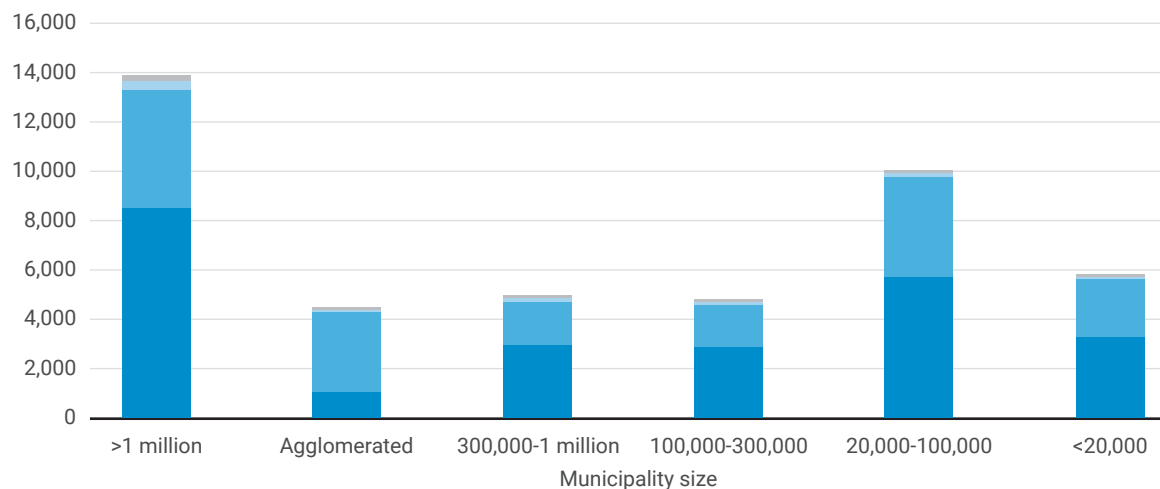
¹ Although Colombia achieved positive results, this reduction was modest compared with that of other Latin American countries. See Annex A for detailed comparisons.

FIGURE 1 | **Place of birth by municipality category, 2018**

■ Same municipality ■ Other municipality ■ Other country ■ No information

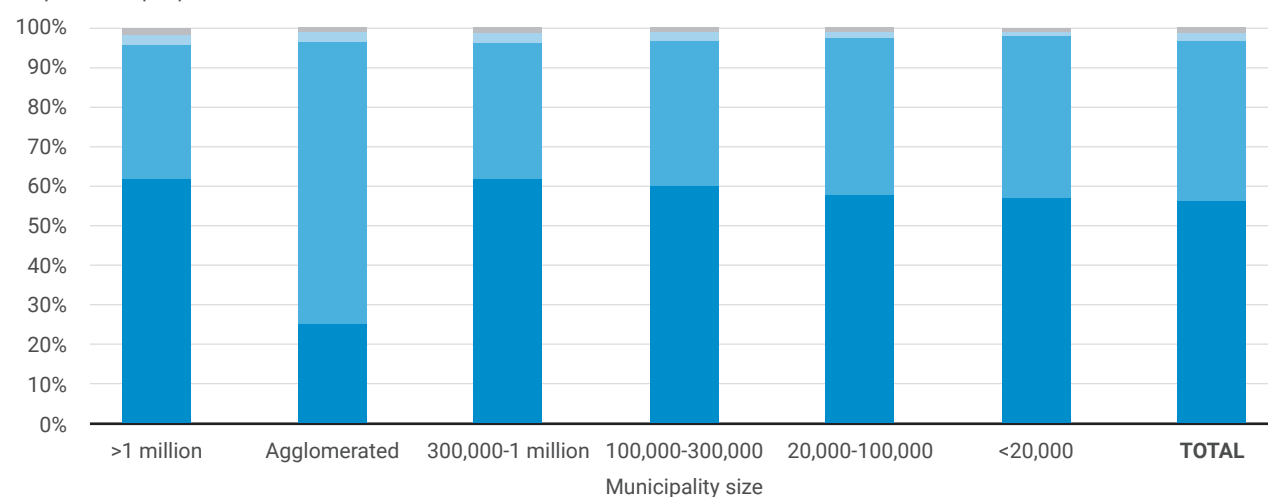
a. Total People

Thousands of people



b. Proportion

Proportion of people



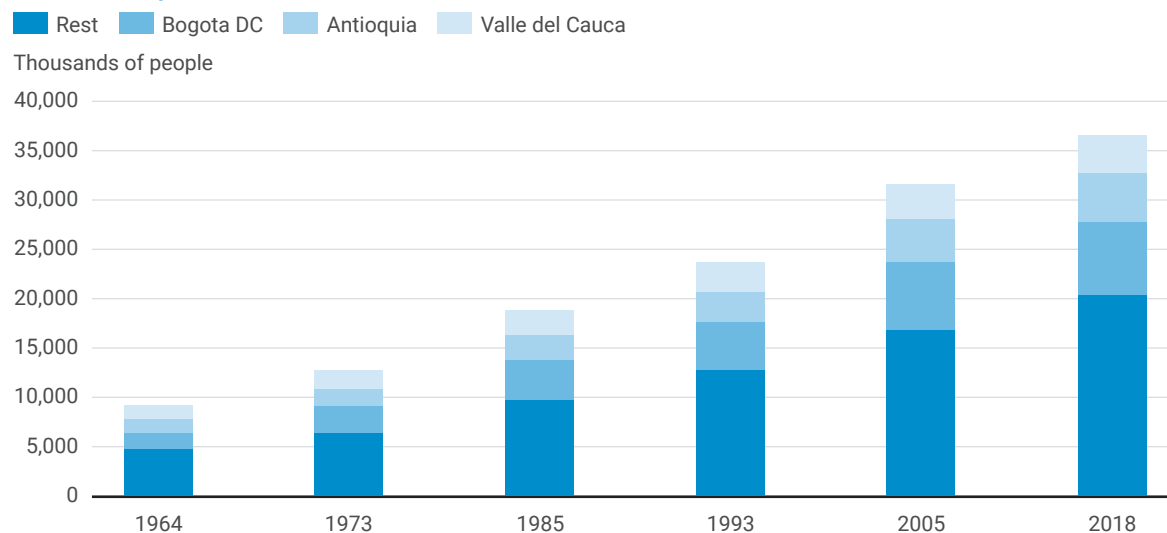
SOURCE: Original calculations for this publication, based on data from DANE 2019a.

From 1990 to 2015, the total area of urban land in Colombia grew by 75 percent, increasing the pressure for the supply of urban housing solutions (*Atlas de Expansión Urbana* 2018). However, due to migration and urbanization trends, not all municipalities have grown at a similar pace.

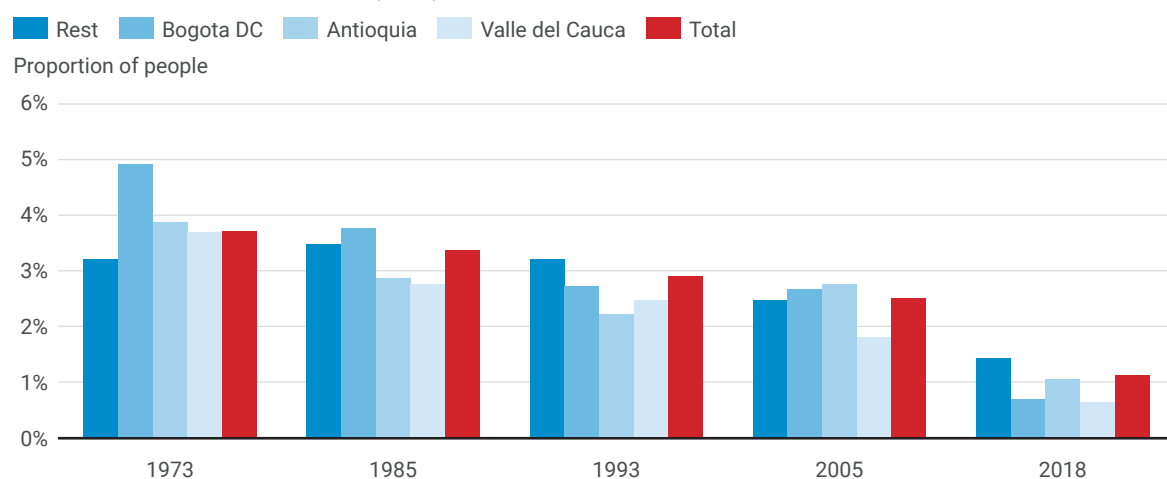
First, important regional differences remain. As shown in figure 2, while the urban proportion of the population in Bogota, Antioquia, and Valle del Cauca is greater than 75 percent, the proportion of urban households in the other departments is still below 70 percent. Given these variations, in-depth analysis to understand the regional differences in urbanization is crucial to enable the design of tailored solutions.

FIGURE 2 | **Urban population growth in Colombia by major municipality**

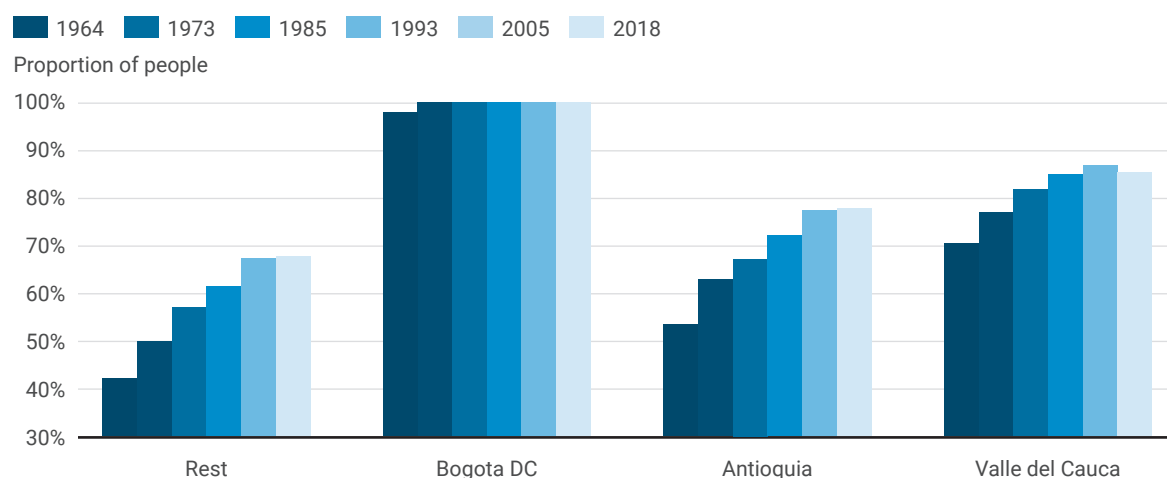
a. Urban Population



b. Cumulative Annual Growth (AGR)



c. Proportion of Urban Population



SOURCE: Original calculations for this publication, based on data from DANE 2020d.

Second, differently sized municipalities have also grown at different rates. As Table 1 shows, the contribution to the overall urban growth rate has been more accelerated in the agglomerated municipalities, big cities, and municipalities of between 20,000 and 100,000 residents; the urban population follows a similar pattern. Therefore, efforts to supply housing solutions should concentrate on these types of urban centers to respond to the increasing demand generated by demographic trends.

TABLE 1 | Population growth by municipality size, 2005–2018

MUNICIPALITY CATEGORY	POPULATION GROWTH, 2005-2018			
	TOTAL GROWTH		URBAN GROWTH	
	%	CONTRIBUTION	%	CONTRIBUTION
>1 million	9%	3%	9%	4%
Agglomerated	39%	3%	41%	4%
300,000 – 1 million	18%	2%	17%	2%
100,000 – 300,000	21%	2%	17%	2%
20,000 – 100,000	17%	4%	18%	3%
<20,000	3%	0%	12%	1%
TOTAL	15%	15%	15%	15%

SOURCE: Original calculations for this publication, based on data from the 2005 and 2018 census (DANE 2016, 2019a).

1.3 Colombia's Housing Deficit

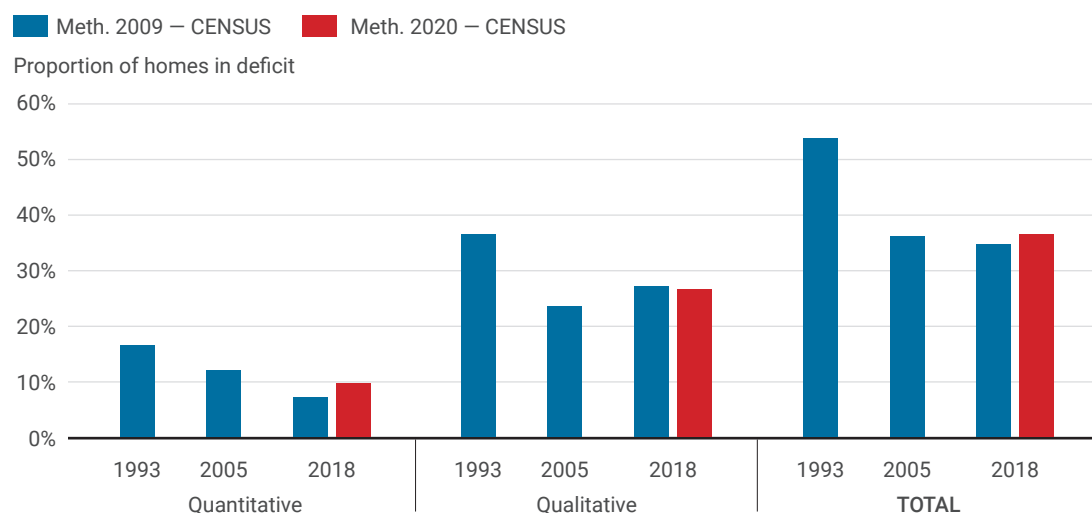
Housing deficits can be broken down into qualitative and quantitative deficits, each of which is assessed by the presence of a range of housing deprivations (deficiencies). The **quantitative deficit** measures the shortfall in the housing space available – either in a community or within a dwelling. In other words, it indicates the gap between the number of households and the number of available housing units. Quantitative deprivations are *structural*: cohabitation and non-mitigable overcrowding, deficiencies in the type of dwelling, and inadequate walls or wall materials. The **qualitative deficit** measures deficiencies in the material *conditions* in which people live, which can be improved; it assesses whether housing units are of adequate quality and condition and whether they have adequate facilities and services. Qualitative deprivations include mitigable overcrowding,² insufficient kitchen space, inadequate bathroom facilities, deficiencies in the flooring materials, and deficiencies in the services available to a household, including water supply, sanitation, electricity supply, and garbage collection.

Colombia's housing deficit is predominantly qualitative, and is more pronounced in rural areas and in small municipalities than in larger urban areas (see Chapter 4). Although the quantitative deficit in urban areas was halved between 2005 and 2018, the qualitative deficit and rural results are inflating national housing-deficit figures. Indeed, housing outcomes between 2005 and 2018 were grimmer than initially supposed. Despite positive projects based on the results of the yearly national General Integrated Households Survey (*Gran Encuesta Integrada de Hogares*, or GEIH), according to census

² According to Colombia's National Department of Statistics (DANE), an urban housing unit with conditions of mitigable overcrowding is home to more than two and less than four individuals per room (excluding the kitchen, bathroom, and garage). A rural unit with mitigable overcrowding houses more than two individuals per room. In contrast to non-mitigable overcrowding, this definition assumes that families who live in conditions of mitigable overcrowding could structurally modify their housing unit to overcome the space limitations. According to the 2018 National Census, 1.41 million urban families and 690,000 rural families live in conditions of mitigable overcrowding. Nationally, 14.5 percent of families live in these conditions.

data from 2018, the evolution of the housing deficit shows mixed results over those thirteen years.³ Although the quantitative deficit decreased, the *total* housing deficit increased between 2005 and 2018 in terms of both percentage of the population and total number of households, largely due to a surge in the qualitative deficit. These results contrast with the sharp reduction between 1993 and 2005, when the housing deficit dropped from 54 percent to 36 percent (see figure 3).

FIGURE 3 | **Housing deficit results by data type and methodology**



SOURCE: Original calculations for this publication, based on data from the 2005 and 2018 census, and 2018 GEIH (DANE 2016, 2019a, 2018).

The impact of various quantitative components has changed in recent years, due in part to the introduction of a new methodology to calculate the housing deficit. In 2005, the component that most affected the quantitative deficit was cohabitation. But the 2018 data suggest that it is more important to focus efforts on wall materials; the use of the new methodology increased the number of households in deficit due to this component.

On the other hand, the main challenges in the qualitative deficit have remained relatively stable since 2005. Although the data are difficult to compare (the 2005 census does not allow disaggregation of the public-services components into populated centers, rural areas, and dispersed rural areas), it is clear that overcrowding and water, sanitation, and hygiene (WASH) services are still the key components that must be addressed. The only exception is the mitigable overcrowding component: the methodology adjustment resulted in a drastic change in its contribution to the total deficit.

³ In 2020, the National Department of Statistics approved a new methodology for calculating the housing deficit that better reflects the country's housing dynamics (see Annex B). The results of the 2018 census, evaluated with this new methodology, show a less favorable situation in terms of the housing deficit than that monitored by the GEIH, which was being calibrated with the 2005 census data using the old methodology from 2009. The GEIH surveys predicted a qualitative deficit that was lower by 4 percentage points than the actual results obtained from 2018 census data: using the 2009 methodology and the sample surveys, total housing deficit was estimated to be 31.2 percent for 2018, which differs from the 35 percent indicator obtained with census data and the same (2009) methodology. The deficit-methodology changes put the 2018 housing deficit marginally above the 2005 level.

TABLE 2 | **Housing deficit components**

2018 and 2005 Census Data, 2009 and 2020 Methodologies.

DEFICIT TYPE	COMPONENT	2005 DATA	2018 DATA	
		OLD METHODOLOGY	OLD METHODOLOGY	NEW METHODOLOGY
Quantitative	House type	2.68%	0.14%	0.14%
	Wall materials	–	1.57%	6.75%
	Cohabitation	8.41%	5.35%	2.27%
	Non-mitigable overcrowding	1.28%	0.94%	1.23%
	Sub-total	12.37%	7.68%	9.81%
Qualitative	Floor materials	7.37%	7.62%	6.78%
	Mitigable overcrowding	4.10%	4.33%	14.32%
	Kitchen	3.00%	4.48%	4.40%
	Water supply	19.40%	14.34%	10.71%
	Sewerage	–	25.38%	12.67%
	Electricity	–	3.66%	2.89%
	Garbage collection	–	2.63%	9.28%
	Sub-total	23.84%	27.12%	26.78%
Total		36.21%	34.80%	36.59%

SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

In order to design appropriate policy responses, we must interpret the data derived from the 2018 census by analyzing the differences between municipalities of varying size and between rural and urban areas. Housing policy should recognize the consequences of these trends and the relative importance of rural and qualitative housing deficits. The following sections show the heterogeneity of housing deprivations across different dimensions. The first compares the deficit in urban and rural areas, the second evaluates the housing deficit figures by region and municipality size, and the third analyzes the housing deficit across gender and minority groups.

1.3.1 Prevalence of Housing Deficit Components in Urban and Rural Areas

Although the new evidence from the 2018 census corroborates the policy benefits that have resulted in improvements on the quantitative dimension, it poses serious questions regarding how efficient the social housing policy pursued by previous Colombian governments has been in reducing the qualitative deficit. Above all, there are problems with the reach and effectiveness of the policy in rural areas. Since 2018, the new government has made efforts to address these challenges, initiating a program that targets the qualitative deficit (*Casa Digna, Vida Digna*) and reimagining the rural housing policy (see Chapter 3).

Although by 2018 most Colombian households (79 percent) were in urban areas, the absolute numbers of households with deficits were similar across rural and urban areas (2.3 million and 2.7 million, respectively). This implies a far greater concentration of households in deficit in rural areas, and this difference has been exacerbated since 2005. Additionally, while only one in four urban households presents a housing deficit, four in five rural households are in deficit. While in urban areas the quantitative deficit improved (qualitative results depend on the methodology used), both components deteriorated in rural areas.



TABLE 3 | **Housing deficit comparison**

2018 and 2005 Census Data, 2009 and 2020 Methodologies

a. Total

DEFICIT TYPE	2009 METH.		2020 METH.
	2005	2018	2018
Quantitative	12.37%	7.68%	9.81%
Qualitative	23.84%	27.12%	26.78%
Total	36.21%	34.80%	36.59%

b. Urban

DEFICIT TYPE	2009 METH.		2020 METH.
	2005	2018	2018
Quantitative	12.56%	6.79%	6.12%
Qualitative	14.44%	13.31%	18.72%
Total	27.00%	20.10%	24.84%

c. Rural

DEFICIT TYPE	2009 METH.		2020 METH.
	2005	2018	2018
Quantitative	11.71%	10.68%	23.74%
Qualitative	56.54%	76.47%	57.25%
Total	68.25%	87.32%	80.99%

SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

The 2018 census data thus shows that a successful and comprehensive social housing policy must address not only the housing deficit in rural areas but also the design and implementation of programs that aim to reduce qualitative indicators. Table 4 highlights the fact that there are almost three times more households in qualitative than in quantitative deficit.

TABLE 4 | **Housing deficit in Colombia, 2018**

DEFICIT TYPE	NATIONAL 14,060,645 households		URBAN 11,118,577 households		RURAL 2,942,068 households	
	HOUSEHOLDS	%	HOUSEHOLDS	%	HOUSEHOLDS	%
Quantitative	1,378,829	9.8	680,381	6.1	698,448	23.7
Qualitative	3,765,616	26.8	2,081,324	18.7	1,684,292	57.2
Total	5,144,445	36.6	2,761,705	24.8	2,382,740	81.0

SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

As noted above, the main driver of the quantitative deficit is wall materials: 70 percent of households with quantitative deficit exhibit this component. Nonetheless, there are differences between urban and rural areas. For urban households, although the wall materials component remains significant, comprising 48 percent of all quantitative deficit causes, cohabitation and non-mitigable overcrowding are relevant as well (38 percent and 20 percent of all quantitative deficit causes, respectively). However, in rural areas, the incidence of the wall materials component is even more significant, representing close to 90 percent of all the causes of rural quantitative deficit.

TABLE 5 | **Housing deficit in Colombia by type and component****a. Quantitative housing deficit**

DEFICIT TYPE	NATIONAL 14,060,645 households		URBAN 11,118,577 households		RURAL 2,942,068 households	
	HOUSEHOLDS	%	HOUSEHOLDS	%	HOUSEHOLDS	%
House type	19,279	0.1	11,519	0.1	7,760	0.3
Wall materials	949,251	6.8	326,746	2.9	622,505	21.2
Cohabitation	319,401	2.3	255,760	2.3	63,641	2.2
Non-mitigable overcrowding	173,193	1.2	140,283	1.3	32,910	1.1
Total	1,378,829	9.8	680,381	6.1	698,448	23.7

b. Qualitative housing deficit

Floor materials	953,448	6.8	262,548	2.4	690,900	23.5
Mitigable overcrowding	2,014,170	14.3	1,341,135	12.1	673,035	22.9
Kitchen	618,355	4.4	470,394	4.2	147,961	5.0
Water supply	1,506,557	10.7	449,293	4.0	1,057,264	35.9
Sanitation/sewerage	1,780,922	12.7	1,006,298	9.1	774,624	26.3
Electricity	406,912	2.9	82,874	0.7	324,038	11.0
Garbage collection	1,305,181	9.3	369,622	3.3	935,559	31.8
Total	3,765,616	26.8	2,081,324	18.7	1,684,292	57.2

SOURCE: Original calculations for this publication, based on data from 2018 CNPV – DANE.

In contrast, the causes of qualitative deficit are less concentrated, and vary more between urban and rural areas. Overall, the main drivers are mitigable overcrowding, sewerage, garbage collection, and water supply – clear evidence that the lack of proper public services is an important obstacle for the housing sector. In urban areas, the two main contributors to qualitative deficit are mitigable overcrowding and sewerage service, deprivations that apply to 64 and 48 percent of households, respectively (a single household can have multiple deficit components). Meanwhile, more than 20 percent of rural households were identified as being in deficit for having low-quality floor materials, presenting mitigable overcrowded conditions, lacking adequate water sources for cooking, lacking proper bathrooms, and not having access to an adequate garbage-collection service. This suggests that the issues in the rural sector are wide-ranging and critical, and tailored solutions focused specifically on these areas are therefore needed as part of a comprehensive housing policy.

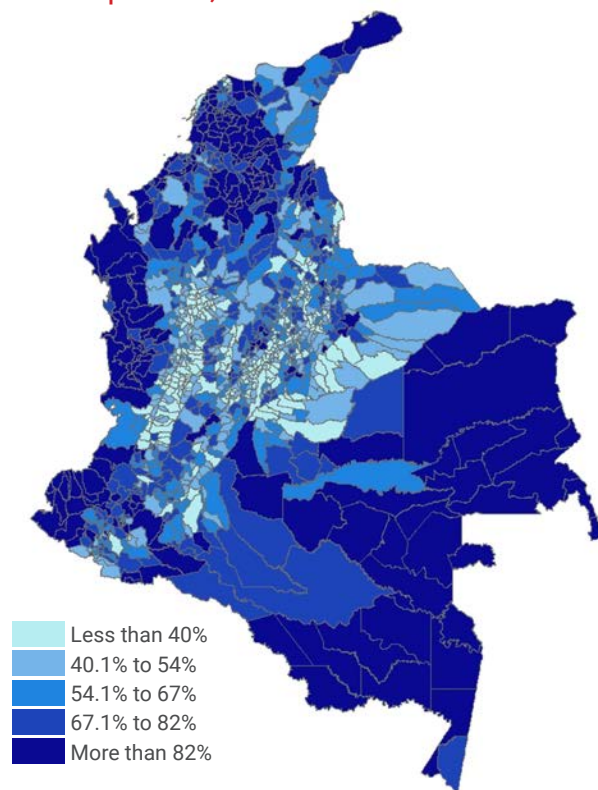
1.3.2 Prevalence of Housing Deficit by Region and Municipality Size

The following maps show the significant differences in the housing deficit between regions in Colombia. While the quantitative deficit is higher in the western Pacific, southern Amazon, and Magdalena Medio regions, the qualitative dimension is more prevalent along the northern Caribbean coast and in some departments in the northeast of the Andean region, like Norte de Santander and Boyacá, and in Cauca in the southwest. A one-size-fits-all solution is not what Colombia needs; instead, the country requires a comprehensive program with solutions tailored to the characteristics of each region.

It is also important to distinguish between municipalities according to their size and functional relationships to bigger cities. In the table below, Colombian municipalities are grouped to enable this analysis. The first group comprises cities with more than 1 million people (in either the municipality or the metropolitan area); this group includes Bogota, Cali, Medellin, Barranquilla, Cartagena, and Bucaramanga. The second group comprises cities agglomerated to the first set – for example, Soacha or Chia (agglomerated to Bogota) or Soledad (agglomerated to Barranquilla). By separating these

municipalities, we can account for the functional relationship they have with the nuclear city, which makes them very different from cities of comparable size that have no such interactions with a bigger city. The third group is composed of cities home to between 300,000 and 1 million residents, including Buenaventura, Santa Marta, Pereira, and Cucuta. The fourth, fifth, and sixth groups are Colombia's smaller municipalities: those with populations between 100,000 and 300,000; between 20,000 and 100,000; and less than 20,000.

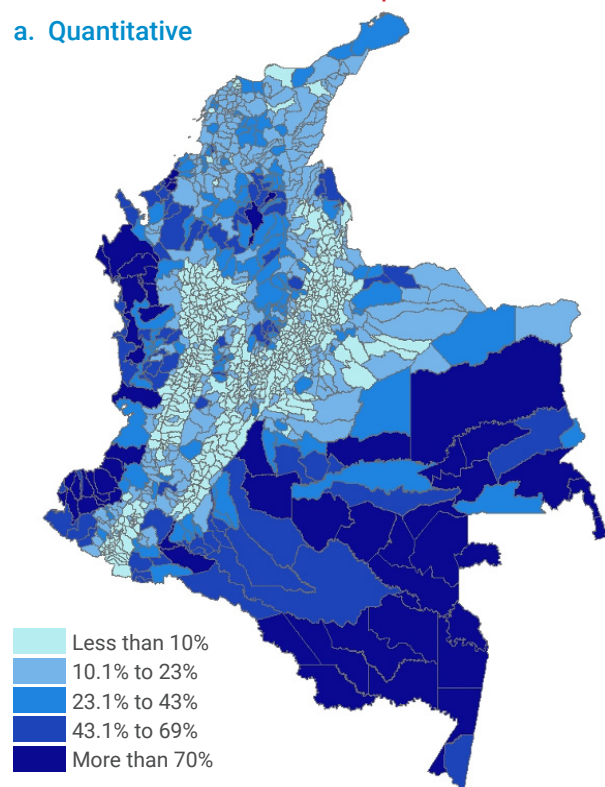
FIGURE 4 | Total housing deficit of Colombian municipalities, 2018



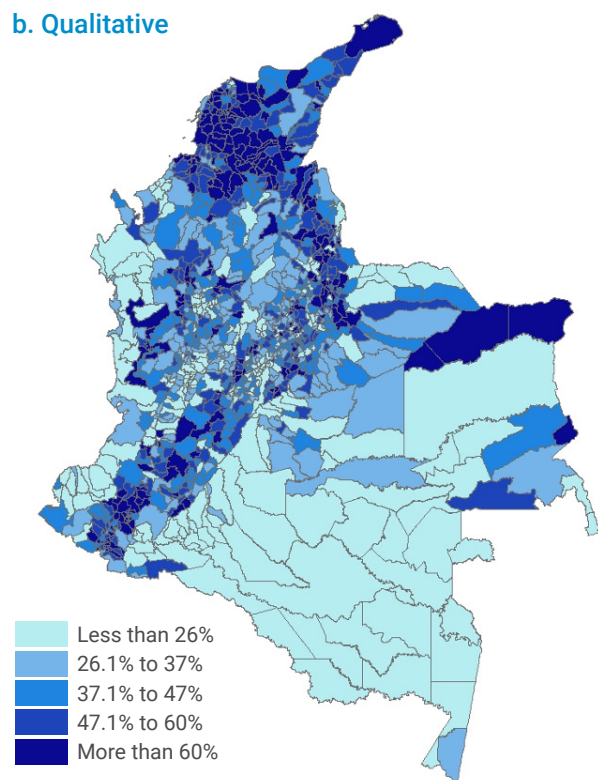
SOURCE: Census 2018 (DANE 2019a).

FIGURE 5 | Quantitative and qualitative housing deficit of Colombian municipalities, 2018

a. Quantitative



b. Qualitative



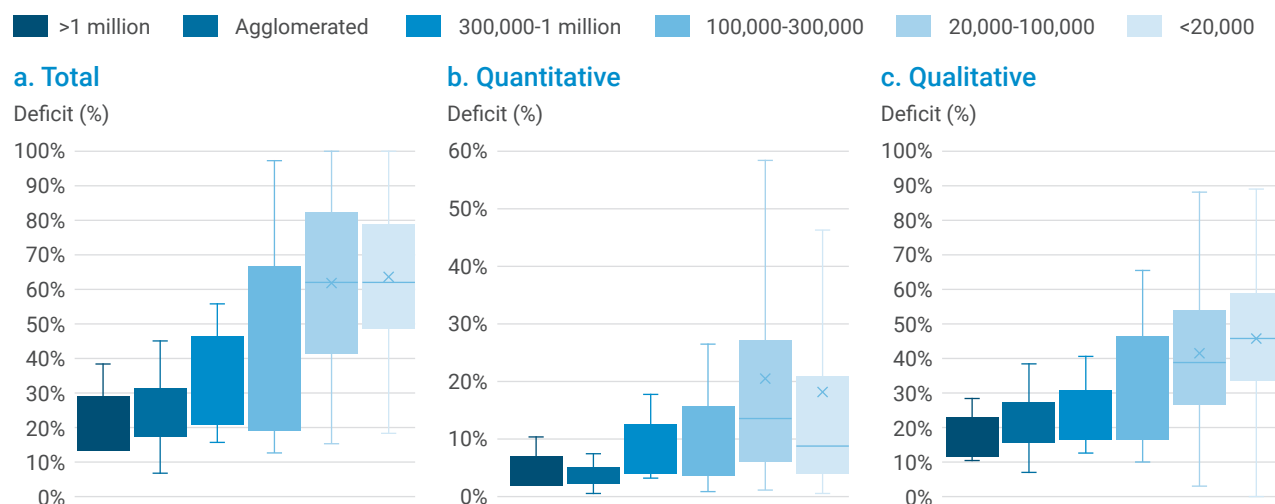
SOURCE: Census 2018 (DANE 2019a).

TABLE 6 | **Groups of municipalities**

MUNICIPALITY CATEGORY	NUMBER OF MUNICIPALITIES	AVERAGE HOUSEHOLDS	TOTAL HOUSEHOLDS	POPULATION DISTRIBUTION
1. >1 million	6	780,149	4,680,896	33%
2. Agglomerated	25	56,619	1,415,478	10%
3. 300,000-1million	12	129,892	1,558,699	11%
4. 100,000-300,000	35	41,859	1,465,075	10%
5. 20,000-100,000	308	9,902	3,049,905	22%
6. <20,000	736	2,569	1,890,592	13%
Total	1,122	12,532	14,060,645	100%

SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

A city's size is closely related to its capacity to tackle both the quantitative and qualitative deficit. Cities with more than 300,000 individuals and the municipalities agglomerated to bigger cities have a quantitative and qualitative deficit of less than 40 percent, while the smaller municipalities have a deficit that is twofold or fourfold larger, especially in the qualitative component. Moreover, both the variance and range of the smaller municipalities is significantly larger than those of bigger municipalities. This could be due to the fact that the cities are smaller, and that there is higher heterogeneity in the quality of public policies. But it also indicates that some of these cities have more nuanced circumstances. In Annex B, a spatial analysis at the municipality level shows that there is a spatial concentration of the housing deficit in metropolitan areas of larger cities, but also in smaller cities and rural areas.

FIGURE 6 | **Housing deficit in Colombia by municipality size, 2018 (%)**

SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

The greatest number of households with a housing deficit are found in municipalities with fewer than 100,000 individuals and in cities with populations over 1 million. The most affected municipalities are those in Group 5 (population of 20,000–100,000) with 1.7 million households in deficit, followed by Group 6 (population below 20,000) with 1.2 million households in deficit. Below that comes bigger cities, with 800,000 households in deficit (plus 357,000 in the agglomerated municipalities). This suggests that housing policy in Colombia should concentrate on the smaller municipalities – not only because of their significant deficit proportion, but also because the largest absolute number of households in deficit reside in these municipalities.

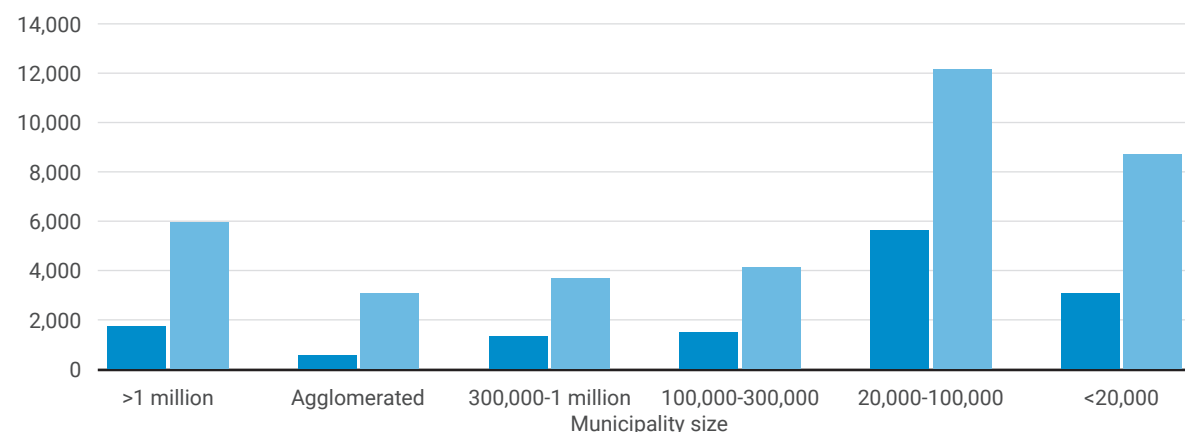
Regardless of the size of the municipality, and for both rural and urban households, the qualitative deficit is larger than the quantitative deficit. The graph below shows the number of households in deficit by group and area. This evidence supports the need to focus on housing improvements, with a special emphasis on rural areas.

FIGURE 7 | **Housing deficit in Colombia by municipality size, 2018 (number of households)**

■ Quantitative ■ Qualitative

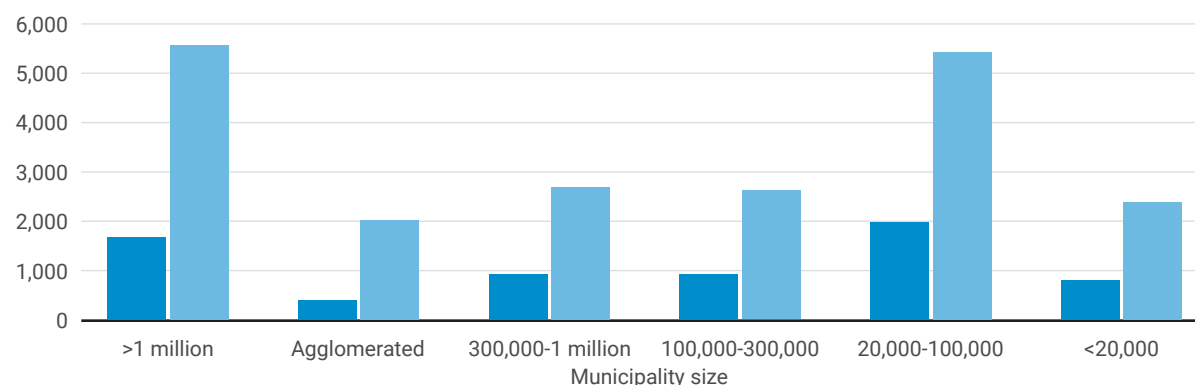
a. Total

Number of households



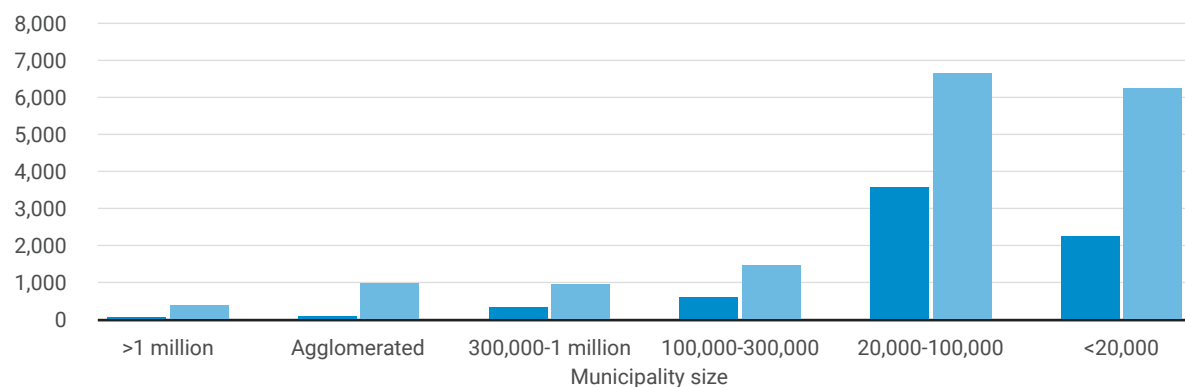
b. Urban

Number of households



c. Rural

Number of households



SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

1.3.3 Prevalence of Housing Deficit by Demographic Characteristics

Minorities in Latin America have historically been underrepresented and underserved by public policy programs. As the housing deficit demonstrates, this is also the case for Colombia, as ethnic groups evince a larger deficit than the rest of the country. Households headed by a woman also have a marginally higher deficit, regardless of city size. Although this higher deficit among minority groups and female-headed households can be explained by several other factors (e.g., income level and cultural traditions), it is a vital factor, and one that housing policies must consider.

Regardless of the city size, between 42 and 44 percent of households in Colombia are headed by a single mother, highlighting the importance of addressing this type of household. However, there is only a small difference between the housing deficits of single-mother and biparental households. The qualitative deficit for biparental households is even slightly larger (by 0.5 percentage points). Single-mother households have a deficit 1 percentage point higher than those headed by their male peers.

TABLE 7 | Housing deficit by gender of head of household, 2018

MUNICIPALITY CATEGORY	WOMEN AS HOUSEHOLD HEAD	TOTAL DEFICIT		QUANTITATIVE		QUALITATIVE	
		MEN	WOMEN	MEN	WOMEN	MEN	WOMEN
>1 million	43.9%	6.4%	6.7%	1.4%	1.6%	5.0%	5.0%
Agglomerated	42.3%	2.3%	2.2%	0.4%	0.4%	1.9%	1.8%
300,000-1 million	43.2%	3.3%	3.3%	0.8%	0.9%	2.5%	2.4%
100,000-300,000	43.9%	3.1%	3.4%	0.7%	1.0%	2.3%	2.4%
20,000-100,000	43.4%	6.6%	6.7%	1.7%	1.9%	4.9%	4.8%
<20,000	42.4%	3.0%	2.8%	0.7%	0.8%	2.3%	2.0%
Total	43.4%	24.6%	25.1%	5.7%	6.7%	18.9%	18.4%

SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

The housing deficit among ethnic groups varies more dramatically from the average. For all ethnic groups, both deficit types are greater than the national average. For instance, the gap is higher by 35 percentage points for households belonging to the indigenous or Raizal communities, and by more than 20 percentage points for Black households.

TABLE 8 | Deficit by ethnic group (of head of household), 2018

CATEGORY	HOUSEHOLDS	QUANTITATIVE DEFICIT (%)	QUALITATIVE DEFICIT (%)	TOTAL HOUSING DEFICIT (%)
Black	875,055	25.4	53.2	56.2
Palenqueros	2,225	11.8	35.9	39.2
Raizales	8,598	15.7	74.0	75.6
Romani	968	12.4	31.5	37.0
Indigenous	356,633	31.1	67.5	71.8
Colombia total	14,060,645	9.8	26.8	36.6

SOURCE: Original calculations for this publication, based on data from Census 2018 (DANE 2019a).

1.4 Government Expenditure on Housing

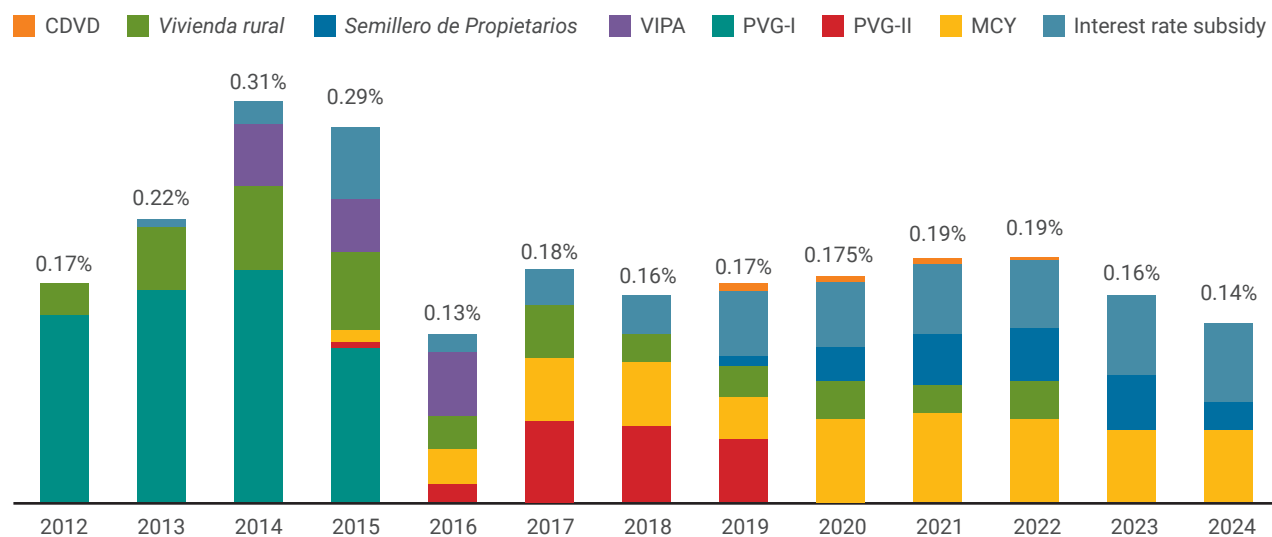
In Colombia, housing represents 4.1 percent of the central government's expenditure on social sectors, a figure similar to that of Peru (4 percent), and only outweighed in the region by Mexico, where

housing has reached 10.9 percent of social expenditure (CEPAL 2019). In fact, housing expenditure in Colombia rates among the highest in a selected sample of comparable countries. However, although this figure seems high as a share of social expenditure, it is relatively low in terms of gross domestic product (GDP). Across Latin America, spending on housing ranges between only 0.4 and 0.8 percent of GDP (with the noted exception of Mexico, which historically has had higher expenditure levels). In 2018, Colombia spent 0.5 percent of GDP on housing – a low level compared with both the average for the OECD (0.68 percent) and for Latin America (0.66 percent).

National expenditure on housing and community services in Colombia was markedly higher than average during two particular periods. The first was between 1992 and 2000, when spending reached historical highs of 1 percent of GDP. The 1999 housing crisis, caused by the uncontrollable growth of UPAC (the deflation housing index), led to a general restructuring of the sector, with a decrease in expenditure back to below 0.2 percent. The second period started in 2006, when housing expenditure started to increase again to an average level of 0.5 percent of GDP, hitting a maximum of 0.6 percent of GDP in 2011 and 2015.

The upsurge in housing expenditure over the last decade is explained by the high investment rates for the government’s free housing program (PVG-I and PVG-II; see Chapter 3) between 2012 and 2016. Housing expenditure by the national government reached a maximum in 2014, at 0.31 percent of GDP. That figure decreased sharply from 0.29 percent of GDP in 2015 to 0.13 percent in 2016. In the last few years, that figure has stabilized around 0.17 percent of GDP.

FIGURE 8 | **Housing expenditure as a percentage of GDP by housing program**



SOURCE: DNP 2018a.



AN EFFECTIVE HOUSING POLICY CAN NOT ONLY DIRECTLY ADDRESS HOUSING DEPRIVATIONS, BUT ALSO HELP COMBAT POVERTY.

COVID-19 and Housing

The COVID-19 pandemic, the economic crisis it has occasioned, and the restrictions that the government has implemented to control its spread are deeply affecting Colombia's socioeconomic context and the housing deficit. The Colombian government's first policy aimed at addressing the pandemic was a strict national quarantine, which started on March 26 and continued until August 31, 2020 (although during that period there were several relaxations in the rules regarding economic and social activities). The purpose of the quarantine was to slow the rates of contagion and death, which would allow effective preparation of health system resources (namely, intensive care units and medical equipment). Particularly during the first 60 days of strict lockdown, Colombia exhibited a slower pace of contagion than the rest of Latin America and many developed countries, and this effectively reduced the death rate. Additional contagion waves have resulted in mobilization restrictions in certain cities.

The impacts of this crisis – and the channels by which they will continue to affect the present and future wellbeing of households – are difficult to foresee. However, it is clear that future public policies must consider how to compensate for the pandemic's long-term negative impacts on health, poverty, unemployment, and housing conditions.

Housing deprivations and COVID-19 are likely to mutually aggravate one another. Amid the global economic slowdown and the resulting increase in unemployment, households are seeing a significant loss of income, with poor families affected most. As economic conditions deteriorate, employment and housing deprivations will follow. Less disposable income and increased evictions may force households to relocate to cheaper housing or put off improvements to their homes, worsening the housing deficit. And

the COVID-19 pandemic has already made it clear that poor housing conditions are related to the transmission of communicable diseases, a link supported by our own national- and city-level analysis (below).

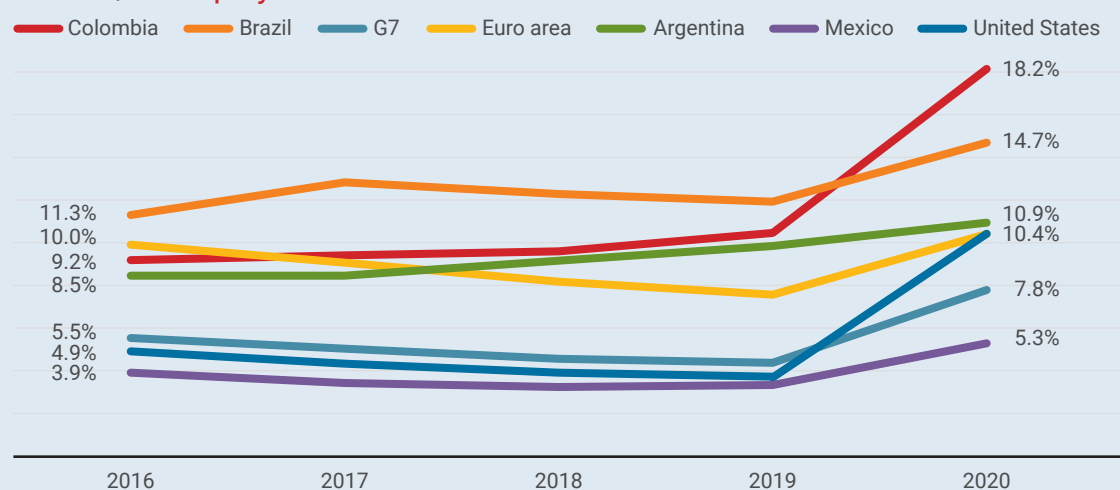
Developing a robust program to counter the pandemic's effects is therefore vital. A comprehensive, effective housing policy will not only directly address housing deprivations, but can help combat poverty as well (see Chapter 6). Understanding the potential impact and persistence of each component is key to determining the public policy roadmap.

The Impact of COVID-19 on Poverty and Housing Deprivations

Mahler et al. (2020a) have forecasted that, due to the COVID-19 pandemic, global poverty will increase for the first time in the 21st century, with between 40 and 60 million people pushed into extreme poverty. The poor are more vulnerable to the economic effects of the pandemic due to where they live, where they work, their high incidence of informality, their high dependence on public services such as health, education, nutrition, and transport, their limited savings, and their lack of access to insurance (Sánchez-Páramo 2020). Alvarez et al. (2020) estimate that, if the government does not intervene, monetary poverty in Colombia could increase between 10.2 and 28.9 percentage points (5–15 million people).

While both developed and emerging countries are suffering the economic consequences of this health emergency, economies with weaker social-protection systems are experiencing the worst effects on their unemployment levels. The general lockdown will have a direct impact on aggregate demand and supply, slowing down economic activity in most sectors (Alvarez et al. 2020). Figure 9 shows that Colombia is one of the countries in which unemployment is expected to rise most sharply, increasing 7.7 percent in 2020 over the 2019 figure to reach 18.2 percent.

FIGURE 9 | Unemployment rate in selected countries



SOURCE: IMF 2020 and Cuellar et al. 2020. Original calculations for this publication.

The pandemic will also impact welfare and the Multidimensional Poverty Index (MPI) through direct consumption effects, such as price changes and increased out-of-pocket expenses (e.g., healthcare), and through service disruption (e.g., saturation of health systems and water and sanitation infrastructure). A large proportion of households in Colombia rely on social services such as health, education, and childcare, and the current crisis and lockdown measures are affecting the state's ability to offer these services. Additionally, the reduction in labor and non-labor income will eat into the disposable income that could otherwise be used to improve life quality, such as through home retrofitting.

These economic effects will undercut families' ability to improve their housing conditions. Deprivations related to inadequate wall and floor materials and overcrowding will increase, mostly as a result of household relocation, worsening the overall housing deficit. The economic slowdown and the lockdown measures will reduce the income of heads of households and deprive many of a stable job, especially among the low-income population. As income decreases, housing improvements will become a lower priority compared to securing food and access to healthcare services. Similarly, utilities deprivations will increase as people become unable to pay for services. Although the national government has prohibited utilities from shutting off service while the crisis is ongoing, this ban is not sustainable. It will likely last only for the length of the crisis, even if the economic effects endure long after the pandemic is over.

COVID-19 has also exacerbated the housing situation of many vulnerable and low-income groups, such as Venezuelan migrants who have sought shelter in Colombia (see Chapter 4), leading local and national entities to prioritize the safeguarding of housing and health conditions. In Bogotá, for example, Decree 093 was published on March 25, 2020, forbidding landlords from evicting their tenants, even if they do not pay rent, until the health emergency is over; the National Government's Decree 579 of 2020 extends Decree 093 to the rest of country. Tenants can commit to pay rent after the quarantine is over, or negotiate monthly fees with their landlord. The problem is that not all leaseholders and landlords are aware of the decree, and many already-vulnerable households may be evicted during the pandemic, worsening their circumstances and likelihood of infection.

To reduce these impacts, the government has centered its attention on providing incentives in the labor market and expanding public transfer programs such as *Familias en Acción* and *Jóvenes en Acción* (conditional cash-transfer programs for families and youth) and *Ingreso Solidario*, the recently created emergency cash-transfer program. Such emergency transfers to the population increase the beneficiary population of conditional cash transfers and other programs.

In the aftermath of the crisis, as the long-term effects of income reduction linger, especially among the most vulnerable households, the government's recovery policy should have two objectives: (i) income generation and job creation; and (ii) providing compensation for private investments in poverty-reduction factors (such as home improvements) that could ultimately boost human capital formation, but that families will not make due to income reductions.

In prioritizing which MPI deprivations to tackle, the government should consider three criteria: whether the deprivation can be addressed through an intervention, its short-term potential impact, and its long-term persistence – the post-pandemic effect on the MPI. In Table 9, we propose a prioritization matrix in which the group of deprivations with high impact and persistence are given precedence and addressed via reinforcements in policy programs that should be sustained over time. Deprivations with high impact but low persistence should be the focus of government efforts only during the year 2021. Those with low impact but high persistence should be thoroughly tracked to assess how the impact evolves, and to inform decisions on how to act. Finally, low-impact and low-persistence deprivations should not be the focus of additional efforts. Housing deprivations and childcare are actionable, and have both high impact and persistence. These are the components that should be subject to the greatest mitigation efforts in response to the COVID-19 crisis.

TABLE 9 | Potential short-term impacts of COVID-19 on MPI deprivations

CATEGORY	DEPRIVATION	POTENTIAL IMPACT	POTENTIAL PERSISTENCE	CHANNEL
Housing & Utilities	Walls	High	High	Income and consumption
Housing & Utilities	Floor	High	High	Income and consumption
Housing & Utilities	Water	High	High	Service disruption, income and consumption
Housing & Utilities	Sanitation	High	Low	Service disruption, income and consumption
Housing & Utilities	Overcrowding	High	High	Income and consumption
Employment	Formal jobs	High	High	Employment shocks
Employment	Long-term unemployment	High	High	Employment shocks
Health	Health access	High	Low	Saturation of health system
Health	Health insurance	Low	Low	Employment shocks
Childhood	Child labor	High	High	Income and consumption
Childhood	Childcare	High	Low	Service disruption
Childhood	School absenteeism	High	High	Service disruption
Childhood	Education lag	High	High	Service disruption
Education	Illiteracy	Low	Low	–
Education	Low educational achievement	Low	High	Service disruption

SOURCE: Original figure for this publication.

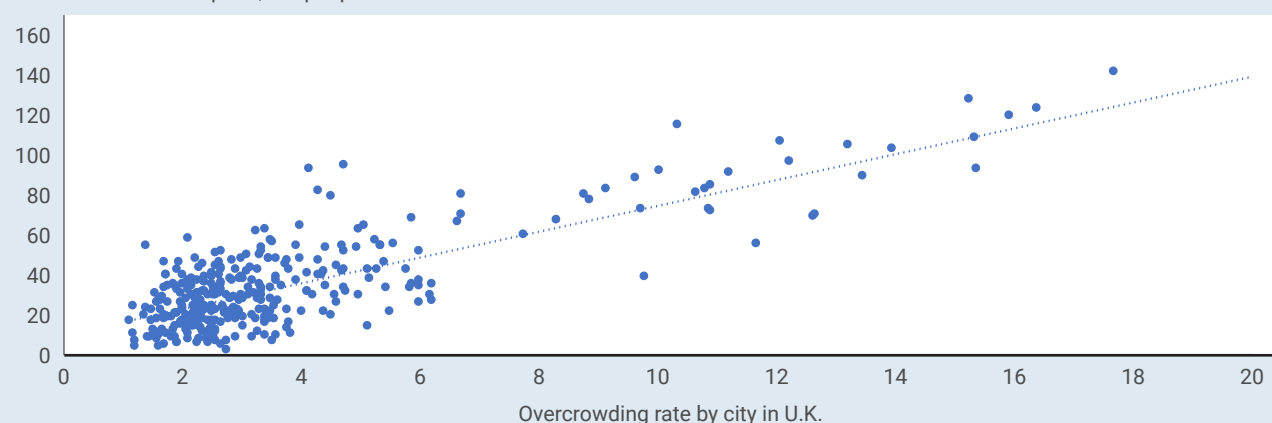
Housing Conditions and COVID-19 Spread

Amid the pandemic, policymakers around the globe have started to focus on the role of housing conditions. Globally, the COVID-19 pandemic has exposed vulnerabilities that result from poor housing conditions. The capacity to cope with this pandemic and future, similar events depends on the robustness of housing factors like access to water and sanitation, cohabitation, and overcrowding. This section narrows the scope of the analysis of health and housing, specifically evaluating the relationship between housing deprivations and the spread of COVID-19.

Recent literature indicates a potential relationship between housing deprivations and COVID-19 infections, mainly related to overcrowding and inadequate construction materials. For example, according to research conducted by the Office for National Statistics in the United Kingdom, overcrowding may contribute to transmission of the virus: for every additional overcrowding point, a city experiences an increase in the death rate of approximately 0.10 percent (ONS 2020). This has been also a major concern for Californian policymakers, who have established that neighborhoods with large numbers of people per household have 3.7 times more confirmed COVID-19 cases per 1,000 residents than neighborhoods with less crowded homes. The UNDP has expressed concern that a successful quarantine may be impossible in places where a lack of proper construction materials and overcrowding undermine the effectiveness of “stay at home” orders and actually generate infection focal points in marginal districts across Latin America (Alvarez et al. 2020). Migrant populations are especially vulnerable, given the persistence of overcrowding and the shortage of affordable house rentals for this group.

FIGURE 10 | **COVID-19 death rate and overcrowding in the U.K.**

COVID-19 death rate per 1,000 people



SOURCE: Office for National Statistics (ONS 2020), United Kingdom.

Given the relationship between health and housing conditions, we evaluated the correlation of COVID-19 disease with housing conditions.⁴ We evaluated three different specifications; in all of them, we found that water-supply deprivations and inadequate temporary housing variables are correlated with the presence of COVID-19. We also performed a more detailed geospatial analysis for Bogota, which was consistent with the national-level results. Cohabitation, overcrowding, and lack of access to adequate sources of water are statistically related to the spread of COVID-19 within the city of Bogota, with cohabitation exhibiting the most significant impact on COVID-19 cases. The analysis showed that COVID-19 critical zones migrated from the wealthier northern boroughs of the city to the poorer southern locations with a more pronounced lack of housing necessities.

This pattern highlights the relationship between COVID-19, poverty, and housing deprivations. In this context, it is particularly critical for Colombia to develop a comprehensive housing policy that takes into account the long-term effects of the pandemic.

⁴ Details of the evaluation and its methodology may be found in Annex C.



CHAPTER 2:

Housing Affordability in Colombia

2.1 The Mortgage Market in Colombia

2.1.1 Prevailing Attitudes toward Mortgage Finance

Colombian households are cautious when it comes to their mortgage loans: down payments are often significantly higher than the minimum required, and families typically pay off their mortgages in a shorter term than that agreed upon. Loan-to-value (LTV) regulation is more restrictive in Colombia than in other countries. The maximum LTV ratio in Colombia is 70 percent for non-social housing and 80 percent for social housing,⁵ compared with 100 percent in Chile, 90 percent in Brazil, and 85 percent in Norway. However, this doesn't seem to be a limitation, as only 10 percent of mortgage loans granted stuck to the maximum LTV (Cuellar et al. 2020). In the case of social housing, this restriction is even less binding, with only 1 percent of loans set at the maximum LTV.⁶ Families also pay off their mortgage dues faster than the term originally agreed on. The average mortgage loan is paid in a seven-year period, which is almost half the average issued term. As there is no penalty for pre-payments, families try to invest their additional income in repaying their mortgage loans faster. A potential consequence of this risk-averse behavior that could be tested in future research is an increase in mortgage interest rates, as financial institutions must compensate the longer-term funding that financed these loans.

2.1.2 Historical Challenges

The consolidation of the financial market for housing is fundamental for middle and lower-middle income families. The recovery of housing credit from the 1998–2003 credit crunch has also had a positive effect on the quantitative deficit of vulnerable households.

The credit crunch led to overwhelming default rates, which reached 20 percent of total housing lending before rulings by the Constitutional Court over the deflation housing index (UPAC) forced the revision of interest-rate indexations (Urrutia and Namen 2012). With the perceived risk of lending so high, many financial institutions abandoned the mortgage market or increased their restrictions, creating a shortage of financing for housing. As a result, the value of the country's outstanding mortgages and leases bottomed out at 2.3 percent of GDP. The crisis had a direct effect on mortgage market regulations: Bill 549 and rulings by the Constitutional Court set the loan-to-value ratio cap at 70 percent and the debt-service-to-income ratio at 30 percent. Together with the interest-rate limits set by the Constitutional Court, this policy restricted some income groups' access to credit, but ultimately created a more conservative housing finance portfolio.

Although the mortgage market in Colombia has diversified its products and sources of funding in the last two decades, it still suffers from a high degree of concentration in supply, with many financial institutions judging the risks too high and returns too low compared with other portfolios. This has

⁵ These LTV restrictions do not apply to leasing. The public development bank (FNA) and some commercial banks offer a higher LTV cap for leasing – up to 90 percent.

⁶ There may be two explanations for this: government subsidies may lower the amount that needs to be borrowed, or social housing is bought by investors who have greater financial capacity.

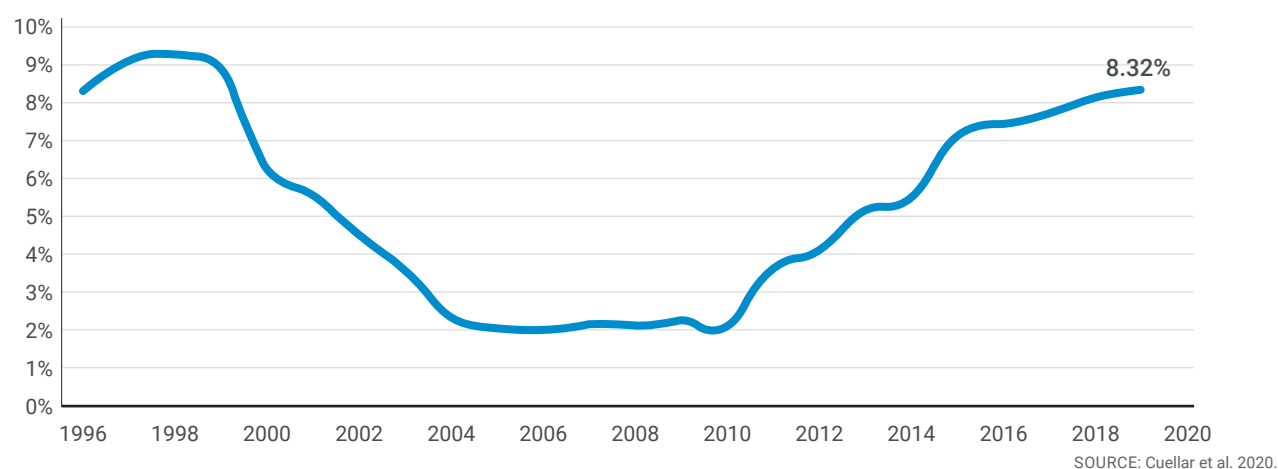
resulted in leasing being seen as a viable alternative to homeownership with mortgages. Over the last five years, the annual real growth rate for the housing leasing portfolio averaged 18 percent, surpassing traditional mortgages by 7.6 percentage points (SIFC 219). However, even for this market, financial institutions are hesitant to grant loans for social housing: in 2019, only 9.5 percent of total housing leasing disbursements were issued for the acquisition of a social housing unit.

As the mortgage market in the country had suffered from a funding problem before 2000, short- and medium-term deposits had been the main source of funding for mortgage loans for nearly 20 years. The creation of the Securitization Company of Colombia (*Titularizadora de Colombia*) was an attempt to address this limitation by grouping mortgage loans issued by financial intuitions and securitizing them. By the end of 2019, 5.7 percent of the mortgage portfolio was securitized, while the remainder was still held by banks (*Titularizadora de Colombia*, n.d.). Securities have played a key role in the growth of the mortgage market, although access is still constrained for small players, limiting the supply of mortgage loans. Currently, five banks own 75 percent of the national housing portfolio (SIFC 2019). Although there is no evidence of collusion to keep interest rates high, as it is shown widely in the literature, more competition could translate in market improvements that can benefit customers.⁷

2.1.3 Recent Growth in the Mortgage Market

In the last decade, mortgage finance in Colombia has experienced steady growth, although the market is still concentrated on high-income families, leaving behind the segment of the population with the greatest housing needs. By the end of 2019, the mortgage portfolio was valued at US\$25.6 billion, or approximately 8.3 percent of GDP (see figure 11). Mortgage loans in Colombia have a low penetration, with only 6.9 percent of adults reporting that they have a mortgage loan – compared with 10.2 percent in Chile, 36.2 percent in Spain, and 41 percent in Denmark (Hofinet 2020). According to Transunion,⁸ prevalence diminishes for lower-income families: of the total mortgage portfolio, only 10 percent is held by families whose income is lower than two monthly minimum wages, despite their representing 54.8 percent of the population. Social housing mortgages account for only 27 percent of the total portfolio, a figure that hasn't changed much over the past decade (see figure 11).

FIGURE 11 | Mortgage portfolio as a proportion of Gross Domestic Product



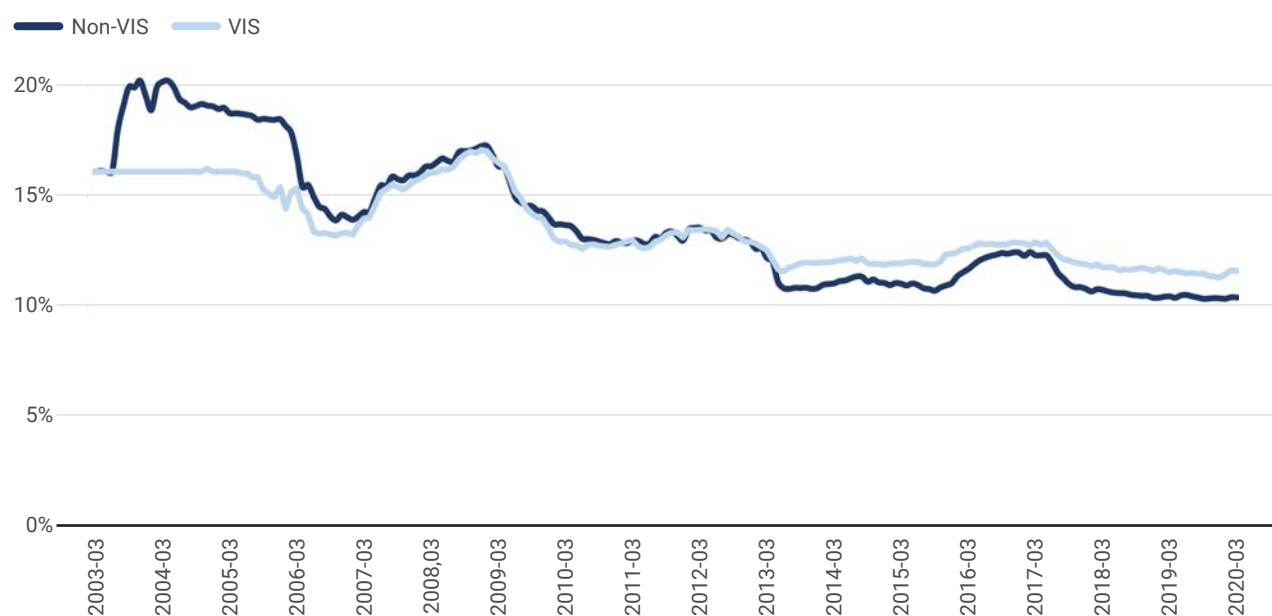
⁷ Estimations by the Central Bank show that the behavior of the housing credit market is similar to that seen in cases of monopoly or collusion (Cuellar et al. 2020).

⁸ Data provided directly to the authors by the Ministry of Housing.

The growth of the mortgage portfolio since 2000 resulted from improved financial conditions, namely longer mortgage terms and lower interest rates, which have allowed many families to own a home. First, the average term for non-social housing increased by 62 months between 2006 and 2019 (SIFC 2019); this growth has been even steeper for social housing, increasing by 83 months in the same period. Second, mortgage interest rates reached a record low during 2019 and have remained low. The average interest rate in 2019 for non-social housing was 10.41 percent (Banco de la República 2020); interest rates for social housing were less favorable, at 11.5 percent, but were also at historically minimal levels. These changes have partially mitigated an increase in housing prices (see below), contributing to the growth of the mortgage portfolio.

However, mortgage interest rates in Colombia are still high from an international perspective, compared with Mexico (8.08 percent), Chile (4.5 percent), or the United States (4.9 percent), and it is clear that their further reduction would benefit more families. And progress has been partially offset by a ruling from the Constitutional Court of Colombia that capped interest rates. Although these caps have never been reached, they limit the access of certain population groups, especially informally employed individuals, who are considered intrinsically riskier and, in some cases, are willing to accept a higher interest rate.

FIGURE 12 | **Nominal interest rates, 2003–2020**



SOURCE: Banco de la República 2020.



COLOMBIAN FAMILIES HAVE LOST HOUSING PURCHASING POWER OVER THE LAST 15 YEARS.

2.2 Housing Affordability in Colombia

2.2.1 Types and Costs of Social Housing

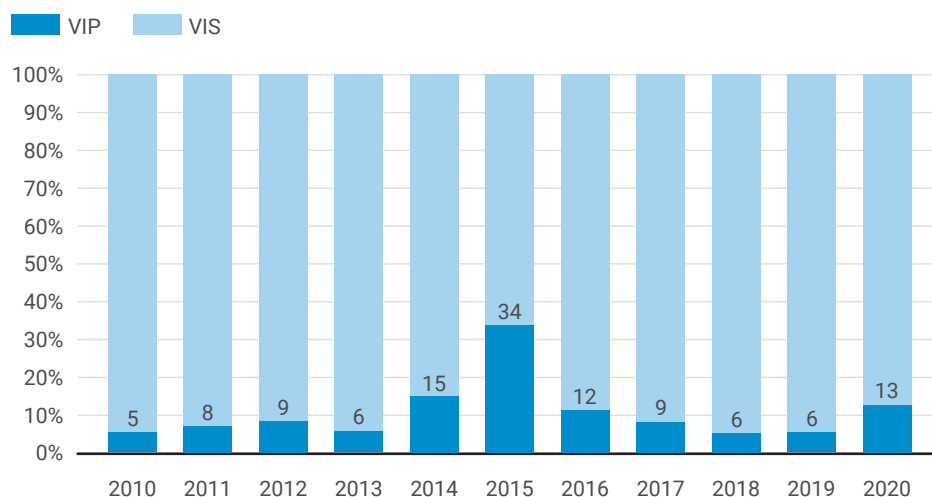
Given the private mechanisms through which social housing is supplied in Colombia, the government has set a cap on the price of social housing units. The price cannot exceed 135 monthly minimum wages⁹ in rural areas, or 150 monthly minimum wages in the six largest urban agglomerations (Bogota, Medellin, Cali, Barranquilla, Bucaramanga, and Cartagena).¹⁰ Thus, the cap price for a social housing unit in Colombia for 2020 is US\$31,466 (US\$34,933 in the six largest cities). Units that meet this criterion are known as VIS (*viviendas de interés social*) housing.

A subcategory of VIS housing is priority-interest housing, or VIP (*vivienda de interés prioritario*), intended to serve the lowest-income families in the country. VIP units have a price cap of 90 monthly minimum wages (US\$21,066). Until 2019, the price cap was 70 monthly minimum wages (US\$16,384), but the effective supply of VIP had been decreasing, and by 2018 accounted for only 2 percent of social housing supply. The reduction in VIP projects was more acute in larger cities, where land prices were steadily increasing. In 2019, supply restrictions drove an upward revision of the price cap, which resulted in an increase in VIP supply. Both VIP and VIS housing are tax exempt, but only VIP housing is subject to the requirements for new housing projects: 20 percent of their area must comprise VIP. Most VIS projects pay a fee to the municipality instead of developing VIP areas.

⁹ A monthly minimum wage in 2020 corresponds to US\$233.38.

¹⁰ Price limits were modified to these caps by Decree 1469 of 2019.

FIGURE 13 | **VIP as a proportion of social housing**



SOURCE: Data provided directly to the authors by Galeria inmobiliaria 2020.

2.2.2 Recent Evolution of Housing Affordability

In general terms, Colombian families have lost housing purchasing power over the last 15 years. However, housing affordability has evolved differently among different income groups and regions. While medium- and high-income groups have maintained their purchasing power, lower-income households have lost it to a significant degree. Affordability of housing has been steadily decreasing in the three major cities compared with its relative stability in other urban areas. The most important factor in the loss of purchasing power is the increase in housing prices, which is only partially offset by a growth in real income and better financial conditions.

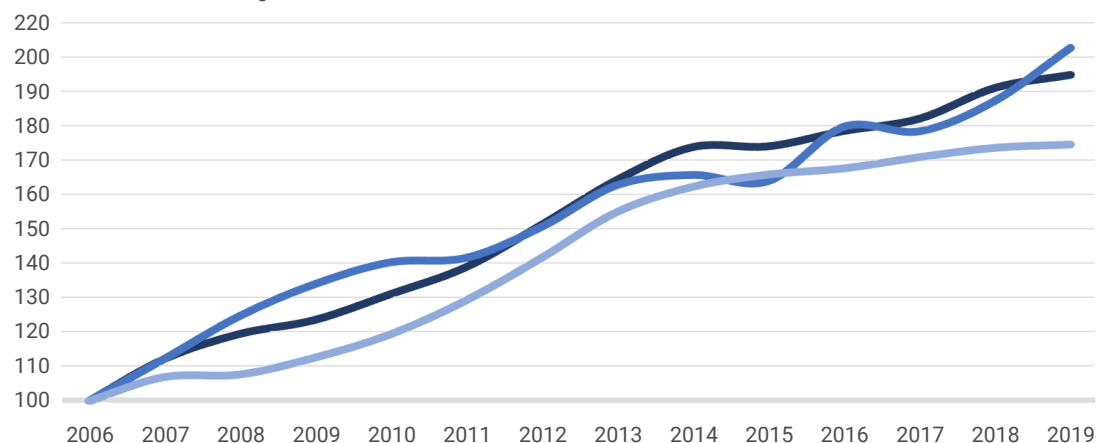
While the real annual growth rate of housing prices in Colombia has been positive since the end of the national financial crisis in 2003, this growth has slowed in recent years. The average real annual growth rate between 2005 and 2019 was 5 percent, meaning that real housing prices almost doubled in a 15-year period. Housing prices in different cities have grown at different paces, with Bogota experiencing an average real annual growth rate of 6.12 percent, Medellin a rate of 4.9 percent, and Cali 3.55 percent. Real prices for social housing units have grown faster than for units in the non-social housing segment. According to information from the central bank (Banco de la República 2020), the real price of social housing units grew 4.21 percent on average from 2014 to 2020, in contrast with the 3.1-percent rate for non-social housing. Social housing saw a spike in its real growth rate in 2016, when the rate surged 9.68 percent. For the past 15 years, the price for social housing has increased steadily, according to data from the Colombian financial system regulator; the average price of a social housing unit bought with a mortgage in 2019 was US\$24,000, or 103 monthly minimum wages.

FIGURE 14 | **Real prices of housing in Colombia**

IPVN refers to the Real Price Index of housing units.

— IPVN DANE — IPVU Banco de la República — IPVN Banco de la República

Real Price Index of housing units.

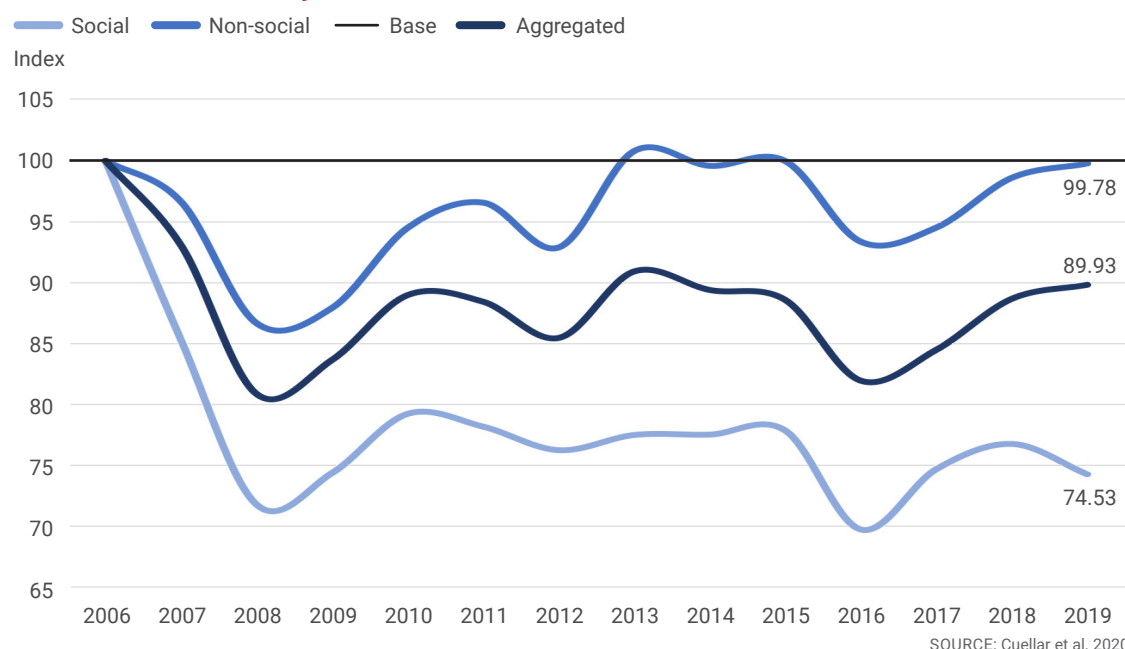


SOURCE: Data from Banco de la República, DANE, Fedesarrollo.

Better financial conditions resulting from lower interest rates, longer mortgage terms, and the growth of real income have not mitigated the faster growth of housing prices. Housing affordability has particularly declined for lower-income families. This has three possible explanations. First, the earnings of low-income families are assumed to grow at the same rate as the monthly minimum wage set annually by the government, and real monthly minimum wages have grown at a slower pace than the economy as a whole – in contrast with the real prices of social housing, which have grown faster compared to those of non-social units. Second, as it has been shown in the literature of housing subsidies, greater availability of subsidies for social housing units may have increased demand; if so, a low elasticity of supply could have translated in higher housing prices. Finally, interest rates for social housing units have decreased more slowly than interest rates for non-social housing. When the housing affordability index is disaggregated by income, the results suggest a regressive effect: while medium- and high-income families have kept their purchasing power, housing affordability has declined by 25 percent for lower-income families.

Fedesarrollo and the Ministry of Housing (Cuellar et al. 2020) conducted an assessment of housing affordability in Colombia within the framework of analyzing the country's housing finance system. To study the evolution of mortgage affordability, they analyzed an index that measures changes in monthly mortgage payment capacity, expressed as the ratio between real family income and the estimated monthly mortgage payments due. This ratio varies according to income growth, mortgage financing determinants, and regulatory restrictions. Increases in wages, the loan-to-income ratio, and mortgage terms would all have a positive effect on the affordability index, while an increase in housing prices or interest rates would have a negative effect. The results indicate that the average citizen has lost 10.9 percentage points of housing buying capacity between 2006 and 2019.

FIGURE 15 | Affordability index, 2006–2019



2.3 Tenure Burden Costs

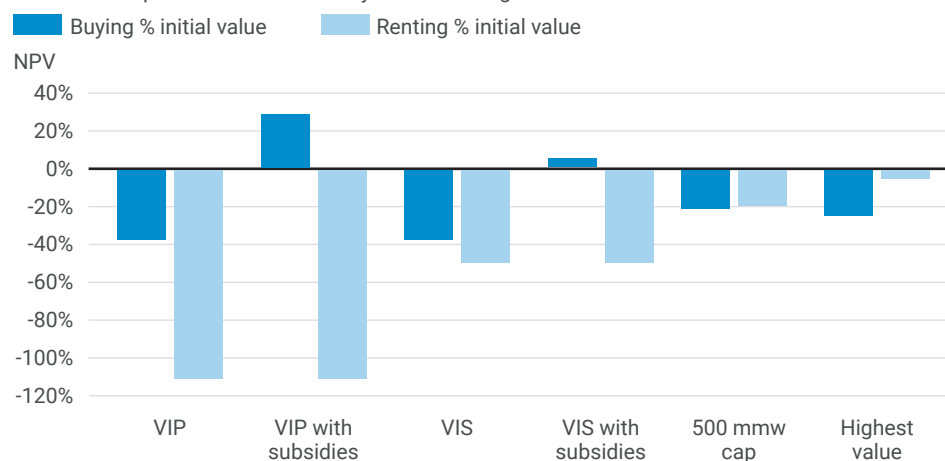
2.3.1 Optimal Tenure Decisions

In line with the affordability exercise presented above, Fedesarrollo (Cuellar et al. 2020) ran a net present value model to compare the optimality of buying housing compared with renting. The results indicate that renting, not ownership, is the ideal strategy for top-income families if they are deciding to buy non-social housing. Despite the fact that medium- and high-income families have maintained their purchasing power, there is a positive gap between the monthly mortgage payment these families would have to make and the rental price for the same unit. Additionally, the rate of property taxes increases with the price of the housing unit, and this is a payment that renting households would not need to make. The deceleration in the appreciation of the value of non-social housing also means that there is a lower financial return on the investment.

By contrast, the optimal decision for lower-income families is to buy a social housing unit. Rental prices in the social housing segment are higher than mortgage payments as a proportion of the housing's value. The mean monthly rental cost of social housing is 0.68 percent of the housing, double the 0.34 percent of a non-social housing unit. Faster growth in the appreciation of the value of social housing also means that low-income families would reap greater financial gains when investing in purchasing these homes.

FIGURE 16 | **Net present value of tenure decision by housing price**

The “mmw cap” indicates the monthly minimum wage limit.



These results do not match the tenancy data, however, which show that renting is most common among lower- and middle-income groups. Since it is not optimal to choose renting over home ownership, this situation may be explained by restrictions on formal mortgage finance. To ameliorate the bias against home acquisition for lower-income families, in March 2021, the government changed the loan-to-income (LTI) cap for social housing to 40 percent (Decree 257 of 2021).

2.3.2 Prevalence of Housing Tenure by Income Group

Taking into account their income, housing tenure, and access to mortgage finance, Colombian families can be classified into four categories, as presented in table 10.

TABLE 10 | **Average monthly income by income decile, 2018**

GROUP	INCOME DECILE	MEAN INCOME	DESCRIPTION
1	1	US\$49.86	The bottom 30% of the income distribution is heavily burdened by home expenditure, has the highest housing deficit, and occupies non-traditional housing supply (self-construction, usufruct, and no legal title).
1	2	US\$129.60	
1	3	US\$194.50	
2	4	US\$247.70	Income deciles 4 and 5 cannot access housing solutions through the financial sector, and the scope of the traditional acquisition approach of housing policy is limited by their informal source of income.
2	5	US\$306.13	
3	6	US\$388.80	For households in income deciles 6 and 7, social housing is barely affordable given their income constraints.
3	7	US\$494.40	
4	8	US\$638.12	For families in the top 30% of the income distribution, affordability, housing burden, and housing deficit are not a critical issue.
4	9	US\$897.60	
4	10	US\$2,086.00	

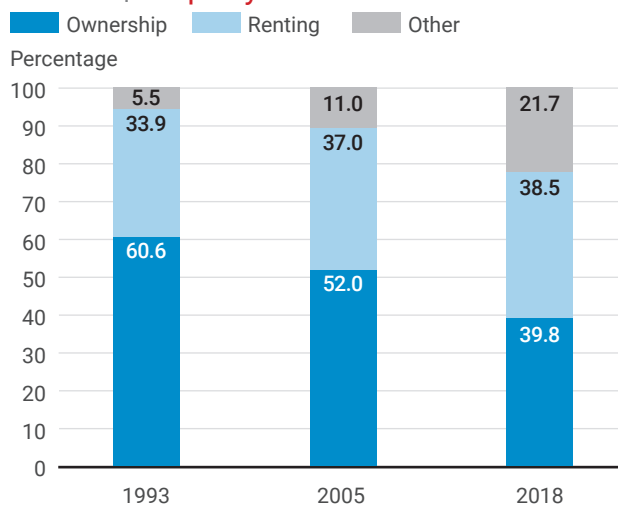
SOURCE: DANE 2018.

Despite government efforts to promote homeownership, the proportion of Colombian families living in rental properties has increased steadily over the last 30 years. The country has a 39.8 percent homeownership rate (DANE 2019b), compared with an average rate of 68.7 percent in the OECD (OECD 2018b). Homeownership is also low compared with regional peers: the rate is 69 percent in Brazil, 83 percent in Chile, and 68 percent in Argentina (Hofinet 2020). Homeownership has decreased sharply, by more than two percentage points, over the past two decades.

The highest ownership rates are seen in the extremes of income distribution, among Groups 1 and 4 (in Table 10). However, while Group 4 uses savings and the mortgage market as the means of acquisition, homeownership in Group 1 is characterized by gradual self-construction processes, mostly in informal settlements that slowly become part of the urban fabric. Groups 2 and 3 present the lowest homeownership rates, with only 32 percent of families in these income groups possessing the legal title of a housing unit.

On average, 38 percent of households in each decile are renters, with a significantly lower percentage for deciles 1 and 2 (Group 1). Rental prevalence increases in Groups 2 and 3, whose income allows them to rent better-quality housing stock but is insufficient for acquisition through the formal financial market. Colombia's current approach to housing policy seeks to increase homeownership rates in these two income groups by creating more affordable housing stock. Finally, rental proportion is lower in Group 4 as homeownership becomes a feasible option through formal means.

FIGURE 17 | **Property rate in Colombia**



SOURCE: 2018 GEIH and 2005 Census (DANE 2018, 2016).

TABLE 11 | **Ownership and rental rates by income decile**

INCOME DECILE	HOMEOWNER	HOMEOWNER WITH MORTGAGE	TENANT	USUFRUCT	NO LEGAL TITLE	OTHER
1	41.75%	0.98%	22.66%	28.26%	5.93%	0.43%
2	38.50%	1.22%	29.76%	24.63%	5.72%	0.17%
3	34.52%	1.64%	35.47%	23.77%	4.39%	0.21%
4	28.72%	1.64%	44.49%	21.52%	3.52%	0.12%
5	29.75%	1.99%	43.00%	21.69%	3.41%	0.16%
6	32.35%	2.47%	44.22%	17.40%	3.19%	0.37%
7	33.02%	3.18%	47.05%	14.11%	2.43%	0.21%
8	35.63%	3.98%	44.79%	13.29%	2.01%	0.30%
9	40.83%	5.86%	40.79%	10.80%	1.47%	0.26%
10	49.98%	10.15%	32.31%	6.96%	0.55%	0.06%
Total	36.51%	3.32%	38.48%	18.21%	3.26%	0.23%

SOURCE: DANE 2018.

The low prevalence of tenants at the bottom of the income distribution is the result of renting's excessive cost burden. Families from Group 1 that decide to rent spend on average 50.2 percent of their income on housing, 23 percentage points higher than the mean. Tenants in both Groups 1 and 2 are overburdened, with more than 30 percent of their income spent on rental payments. Among mortgage payers, this situation also applies for Group 3. In Group 1, the situation is particularly severe, with housing payments reaching 56 percent of income among leasers in the bottom 10 percent of income distribution.

TABLE 12 | Percentage of income spent on mortgage and rental payments

INCOME DECILE	PROPORTION OF MORTGAGE PAYERS	PROPORTION OF INCOME SPENT ON MORTGAGE	AMOUNT (US\$)	INCOME DECILE	PROPORTION OF TENANTS	PROPORTION OF INCOME SPENT ON RENTAL	AMOUNT (US\$)
1	2.88%	59.90%	38.12	1	5.75%	55.60%	37.33
2	3.79%	46.90%	61.60	2	7.97%	45.70%	60.00
3	4.76%	43.20%	84.00	3	8.89%	37.80%	74.30
4	4.96%	38.50%	95.73	4	11.61%	34.10%	84.80
5	6.01%	35.50%	108.00	5	11.21%	29.80%	90.93
6	7.46%	34.00%	132.53	6	11.53%	26.40%	102.12
7	9.62%	29.50%	148.00	7	12.27%	22.90%	112.80
8	12.05%	26.10%	165.33	8	11.69%	20.00%	127.20
9	17.73%	23.10%	209.60	9	10.65%	17.20%	152.26
10	30.72%	18.30%	431.73	10	8.44%	14.60%	261.33
Average		27.00%	238.12	Average		27.80%	114.40

SOURCE: DANE 2018.

While tenants have a mean monthly income of US\$513, mortgage-holding families have an average income of US\$1,189. Home mortgages are also associated with higher incomes within income deciles. For every group, the percentage of income spent on housing is higher among mortgage holders than among renters. On average, both groups spend the same proportion of their income on housing, although a greater concentration of middle-income tenant families is driving up this result.

For every income decile, homeowners have a higher incidence of housing deficit than mortgage payers and tenants. This result may be driven by two forces: a high prevalence of informal self-construction among owners in Group 1, and aging and deteriorating housing stock. This is contrasted with the lowest deficit prevalence, which is seen for homeowners who are currently paying off their mortgage, especially for Groups 3 and 4. However, the higher overall incidence of housing deficit among homeowners compared with renters seems to indicate that landlords maintain generally good conditions for their housing units – suggesting that rental schemes should perhaps be promoted.



CHAPTER 3:

Approaches to Housing Policy in Colombia

3.1 A Thirty-Year Evolution of Social Housing Policy in Colombia, 1991–2020

Colombian housing policy has become increasingly elaborate, with multiple institutions gradually emerging to play a role. In the last 30 years, policy has been dominated by the development of the housing mortgage system, demand-side subsidies, and financial instruments to promote home ownership. However, policy interventions also include direct housing construction, upgrading programs, rural housing policies, and complementary private social-security solutions.

Homeownership has been a primary goal of successive Colombian governments. Gilbert (2014, 254) finds historical evidence of social and political motivations as early as 1948, when President Mariano Ospina argued that homeownership made people feel secure and increased prosocial behavior. In 1970, housing became the main driver of President Misael Pastrana Borrero’s “Four Strategies” plan. The government introduced a new funding system for housing, hoping that it would generate the resources to invest massively in the construction of formal housing, thus creating jobs and raising land values – which in turn could be taxed to finance the provision of infrastructure and services (Gilbert 2014, 254).

Established in 1939, the Colombian Housing Institute (ICT) “built or financed around 700,000 housing units over its fifty-year lifespan” (Torres 1996, quoted in Gilbert 2014, 254). Unfortunately for the less-privileged, purchasing a home through the program initially required a deposit, which in most cases was beyond the means of poorer households. This requirement was canceled in 1982 by the government of Belisario Betancur, which was seeking to establish a more just housing policy in the country. The high demand for the program was never met by the government’s supply capacity, and a high unpayment rate became the norm among beneficiaries. The government therefore decided to “provide” the value of each loan as a subsidy until ICT declared bankruptcy in 1991.

The subsequent evolution of housing policy over the past 30 years can be separated into four periods: (i) an extended 1990s (1991–2002) characterized by the development of demand-side subsidies, the growth of housing credits, and the burst of the housing market bubble, resulting in the worst financial crisis on record; (ii) the Uribe administration and the first years of the Santos administration (2003–2011), which focused on demand-side subsidies for specific populations, the creation of countercyclical interest-rate subsidies, and the development of macro affordable-housing projects; (iii) the policy era led by the new Ministry of Housing (2012–2018), characterized by the development of the free housing program as a 100-percent supply-side subsidy and the consolidation of an ABC (*ahorro, bono, crédito*, or savings, subsidy, credit) subsidy program dependent on the previous financial inclusion of potential beneficiaries; and (iv) the current housing policy regime, which developed small-scale retrofitting and rental programs, proposed a rural housing policy, and doubled down on ABC subsidies.

3.1.1 The Shift to Demand-Driven Policy and the Housing Crisis (1991–2002)

In Article 51 of Colombia’s new constitution of 1991, adequate housing is defined as a universal economic right, to be achieved in a progressive manner with policies concentrated on guaranteeing housing to the most vulnerable populations. Bill 3 of 1991 defined the National System of Social Housing in Colombia and led a shift from a supply-side approach to a demand-led scheme, based on

a Family Housing Subsidy. ICT was replaced by the National Institute of Social-Interest Housing and Urban Reform (*Instituto Nacional de Vivienda de Interés Social y Reforma Urbana*, or INURBE), which granted demand-side subsidies for home retrofitting, land-plot acquisition, and the acquisition of new or previously owned homes.

These transformations began with the new policy approach taken by Gaviria in 1990. The president ordered the creation of the ABC policy: the private provision of new homes and retrofitting of government-subsidized homes. This shift followed the new economic rationale inspired by Chilean policies of the time, which assumed that private entities would provide cheaper and more varied housing to the poor. From 1991 to 1997, subsidies for families with incomes between two and four monthly minimum wages ranged from 10 to 20 percent of the home's value; for households with income below two monthly minimum wages, subsidies covered between 20 and 30 percent of the home's value; for retrofittings, subsidies represented 90 percent of the value (Chiappe de Villa 1999).

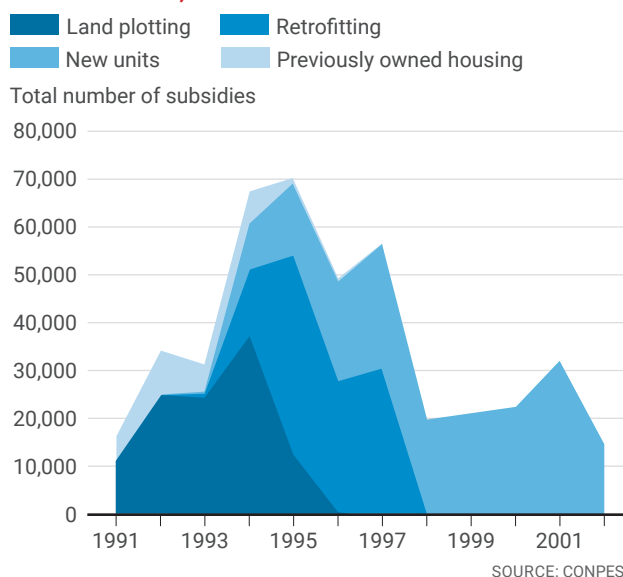
In 1997, Bill 388 (of Territorial Development) created the framework for urban planning based on Territorial Development Plans (POTs). POTs are formulated for a 12-year timeframe and base housing supply on an integrated municipal plan of urban occupation. The bill created an array of instruments for financing urban development. During the Pastrana administration (1998–2002), INURBE continued granting ABC subsidies for home acquisition but eliminated subsidies for the purchase of previously owned housing, which have never been reintroduced. It also eliminated subsidies for both land acquisition and retrofitting. The intention was to concentrate the subsidies on reactivating the housing market – but at the end of its term, that administration was characterized by the lowest level of subsidies in 30 years.

3.1.2 Population-specific Demand-side Subsidies and Countercyclical Interest-rate subsidies (2003–2011)

INURBE was challenged by allegations of inefficiency and corruption and was closed down in 2004. After its disappearance and the collapse of the home mortgage market, housing policy was led by the National Housing Fund (*Fonvivienda*), a branch of the Ministry of Housing and Environment, which was created by Decree 555 of 2003. Until the global financial crisis, this period was characterized by a segmentation of the demand-side population into special groups (e.g., victims of armed conflict) and a bidding process for developers associated with local governments and local public institutions (regulated by Decree 975 of 2004).

Between 2006 and 2009, only 63 percent of allocated subsidies resulted in the purchase of a home (Pinto 2010). The subsidies were granted before credit was approved, leading to situations where families could not access credit despite having the subsidy. The shortcomings in the program's selection process for developers led to a high level of unfinished projects, resulting in multiple noncompliance investigations by supervising agencies. In 2009, the policy shifted to **subsidies for interest rates**

FIGURE 18 | Subsidies for social housing in Colombia, 1991–2002



(through FRECH – see section 3.3.1 below) and the development of macro housing projects in Colombia's largest cities. The interest-rate subsidies were directly associated with housing loans and were administered by the Central Bank, increasing both the rate and transparency of subsidy allocation.

3.1.3 The Ministry of Housing Policy Era (2012–2018)

After the election of Juan Manuel Santos to the presidency in 2010, the **ABC program** continued to play a key role in government housing policy. In 2011, the Ministry of Housing and Environment was separated into the Ministry of Environment and the Ministry of Housing, City, and Territory (Bill 1444/2011).

Beginning in April 2012, there was a significant expansion of the **free housing program**. The government sought to increase housing provision to low-income population segments (those earning below one monthly minimum wage) through supply-side subsidies (Decree 1921/2012). The new program promised to give homes to 100,000 poor and displaced households, with a budget assignment of Col\$4 trillion (equivalent to US\$1.3 billion in 2020). The second generation of the program, which began in 2015, contributed an additional 29,000 subsidies and US\$700 million. The program was focused on displaced families, victims of armed conflict, families in extreme poverty, and families affected by natural disasters. The government tripled its spending on housing for the internally displaced population, who thereafter received the majority of subsidies.

Under the Santos administration, interest-rate subsidies also continued, but two new programs were created, both of which included a down-payment subsidy. These programs, **Mi Casa Ya** and **VIPA**, established the means by which a down-payment subsidy could be combined with the interest-rate subsidy (Decree 428/2015).

During this period, a special agency for reconstruction, the **Adaptation Fund**, was developed in response to the floods caused by the La Niña

FIGURE 19 | Subsidies for social housing in Colombia, 2003–2011

Special populations are victims of terrorist attacks, natural disasters, or displacement; councilmen; and recyclers.

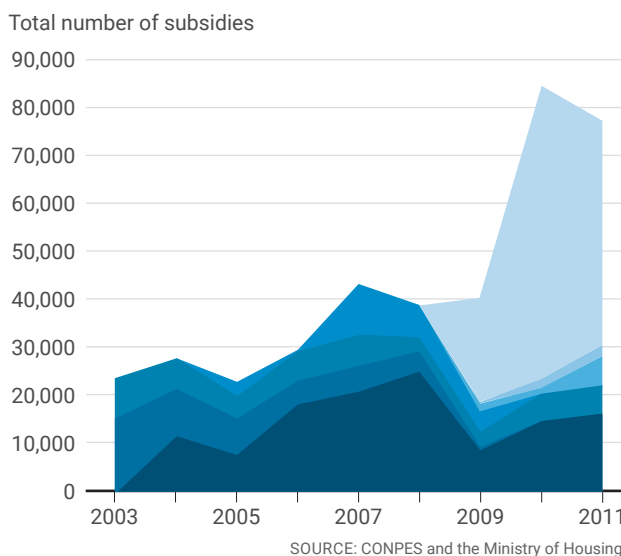
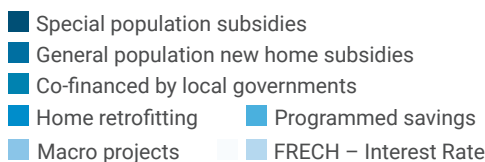
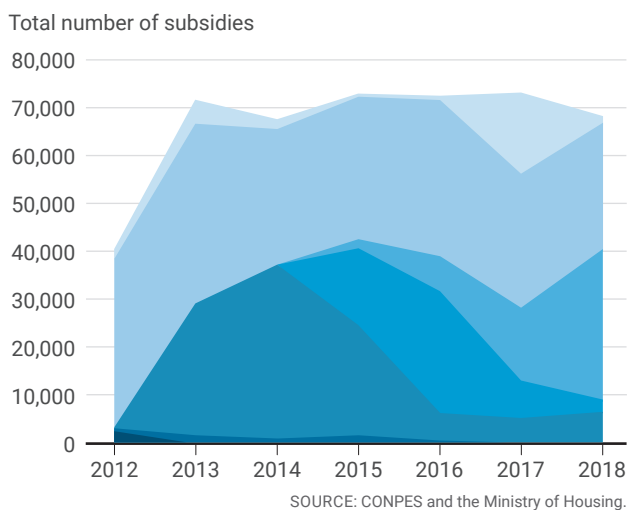
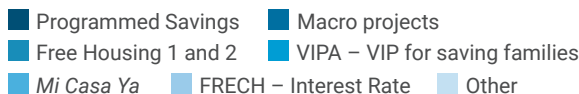


FIGURE 20 | Subsidies for social housing in Colombia, 2012–2018



of 2010–2011. This Adaptation Fund was not involved in the housing sector, and it increased the complexity of the system. It was subject to special regulations and faced multiple difficulties in achieving its goals; to date, it has not completed most of the projects it planned to develop.

3.1.4 Complementary Policies: Rural Housing

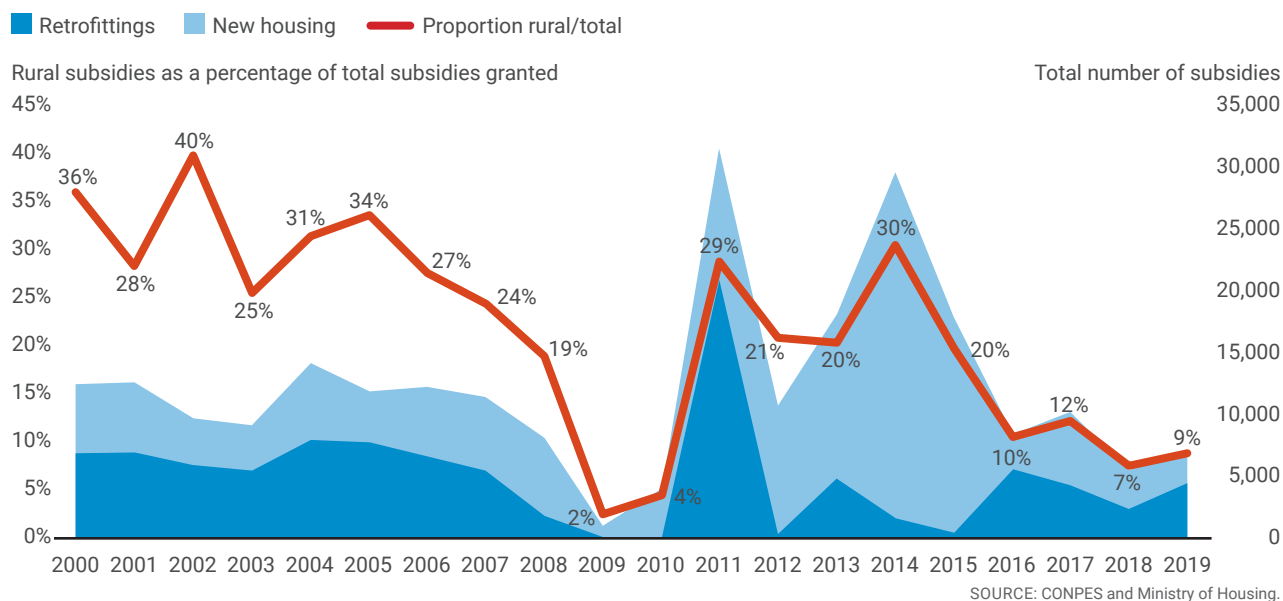
In parallel with the policies detailed above, the Colombian government undertook various measures to address deficits in rural housing. For two decades, rural housing policy was governed by Bill 546 of 1999, which dictates that at least 20 percent of the social housing budget be assigned to rural housing. Until 2019, rural households were granted a subsidy that could be used only on projects developed by municipalities or allied institutions. Subsidies could legally be assigned to new housing or to retrofitting projects on either new plots or property already owned by rural families. The Ministry of Agriculture operated the program along with the state-owned Rural Bank (*Banco Agrario*) and, more recently, the state-owned Agrarian Fiduciary (*Fiduagraria*).

In 2013, the Ministry of Planning (DNP) and the Ministry of Agriculture ordered an external evaluation of the rural housing program. According to the evaluation, 62 percent of the beneficiaries claimed the program had improved their quality of life, and 43 percent made additional investments in progressive housing upgrades after they received the subsidy. However, the evaluation determined that a complex institutional framework limited the scope of the program from 2004 to 2008. The result was that subsidies were concentrated in municipalities, and the program received inadequate supervision from the Ministry. Between 2000 and 2011, 27 percent of the projects either encountered judicial problems with the operators or were not completed.

Throughout its lifetime, the Ministry of Agriculture program also suffered from institutional challenges. Organizational design was complex, the public understanding of the characteristics of the program was limited, and there was an increasing risk of political capture during the contracting or subsidy-allocation process. The degree of accountability between the contractor and the allied institutions (municipalities and agencies), and the monitoring capacity in the Ministry of Agriculture were unclear. The program never took advantage of financial solutions like down-payment or interest-rate subsidies, even though they were legally permitted. A large number of projects were never completed, and those that were had a long average timespan (3.2 years on average between subsidy allocation and project termination). Poor targeting of benefits drove up both operational costs and the rate of execution lapses, with only four municipalities receiving more than 100 subsidies in 2018.

Nevertheless, on average, 12,227 subsidies were granted each year between 2000 and 2019, with a noticeable increase between 2011 and 2015, when the annual average reached 21,490. However, as a percentage of total subsidies granted by the national government, rural subsidies were highest between 2000 and 2008, reaching a maximum of 40 percent in 2002. The percentage of rural subsidies has decreased since 2014, from 30 percent to only 7 percent in 2019. The largest number of subsidies for new housing were granted from 2011 to 2015, with a total of 79,518 over that period.

FIGURE 21 | Rural housing subsidies granted by the national government, 2000–2019



The 2018–2022 National Development Plan (Bill 1955 of 2018) determined that, from 2020 onward, responsibility for rural housing would shift from the Ministry of Agriculture to the Ministry of Housing. Throughout its closure process, the Ministry of Agriculture’s rural housing program suffered from the same problems it had experienced in the past. The Ministry of Housing is still improving the design of the new rural housing program, trying to address these challenges. The distinction between rural and urban is now determined by a locality’s classification in Territorial Development Plans (POTs). The new subsidies for rural retrofitting projects are higher than for urban areas (22 versus 14 monthly minimum wages); subsidies for new houses are lower, and are to be complemented by local authorities.

3.2 The Two Policy Approaches

Over the last several decades, Colombia governments have developed a wide range of tools, methods, and mechanisms to apply to the housing sector. Although these tools can be categorized in several ways, it is useful to consider them as falling into two primary approaches to housing policy:

- The **home-acquisition approach**, which seeks to increase homeownership through financial inclusion and subsidies, is characterized by the provision of tax exemptions, subsidies, financial guarantees, and savings incentives.
- The **upgrading approach** “recognizes self-construction as the predominant method of incremental housing development for many low- and middle-income households in most developing countries, and designs policies to promote it in a responsible way. Incremental self-construction is a pragmatic approach to homeownership for many low-income households, given their limited and often irregular income streams” (Bah, Faye, and Geh 2018, 247). Home retrofitting programs are the main policy tool used in the upgrading approach to improve housing conditions for households living in housing deficit.

After defining these approaches in greater detail, the remainder of this chapter will analyze how they have been applied, with reference to Colombia’s recent history of housing policy as discussed above.

3.2.1 Home Acquisition

The acquisition approach is based on promoting home ownership through the development of the mortgage market. This can be accomplished through various measures:

- i. A general consolidation process (longer credit tenures, lower interest rates, increased development of capital markets)
- ii. Increased information for risk assessment, state-backed risk mitigation (through guarantees and securitizations)
- iii. Tax exemptions (which include value-added tax and rent tax for land developments)
- iv. Loans for housing project developments
- v. Loan promotion schemes
- vi. State-owned development-bank loans
- vii. Subsidies to capital, interest rates, or guarantees

Of these acquisition-approach interventions, one of the most typical is demand-side subsidies that increase households' capacity to acquire housing. These subsidies come in different forms: a direct discount on the house, sometimes targeting different price points to benefit specific populations; financial credits on real estate in the form of payments to the bank that partially or fully cover interest rates; or even tax easing on recently acquired houses (Priemus and Whitehead 2014).

In most cases, housing construction policy has been focused on affordable housing, either by subsidizing production or by controlling costs. Some countries also allow individuals to take out **retirement savings** early and use them to purchase housing (Aziz et al. 2014). Other policies are intended to target the willingness of consumers to buy a house, generally by **decreasing the loan-to-value ratio**. For example, a government might increase the maximum proportion of the home's value that can be paid for with credit loans.

Another group of policies are those that encourage the building of new housing projects. In the case of Colombia, this type of program relies on a ream of **public policy tools**: subsidized interest rates, administrative benefits and housing discounts, and tax reductions, among others. Housing-construction policies can also include **monetary measures**, including reductions in the central bank's basic interest rates. Another option is to **simplify state bureaucracy and reform national norms** to boost the construction and real estate markets, or to encourage private-sector activity by establishing public-private partnerships to promote new housing (Baldini and Poggio 2014).

In contrast, some countries use state-owned banks to **directly finance housing developers** or municipal housing management centers (Wang and Shao 2014). Another method of promoting housing construction is **tax relief**. This policy has been implemented mostly in the form of reduced charges on the building processes, tax relief for property transactions (Best and Kleven 2018), and administrative and tax benefits for housing cooperatives committed to new developments (Baldini and Poggio 2014).

In some places, governments try to **reduce the probability of defaults on home loans** by lengthening their term (Aziz et al. 2014; Imparato and Ruster 2003). In other cases, the preferred policy is to **enhance low-interest homeownership loans** and cover public rental housing (Baldini and Poggio 2014). Finally, some policy measures not directly related to housing have had demonstrable effects on this sector – for example, a reduction in the inheritance tax to generate liquidity, which may be injected into real estate and the construction of new housing (Chen and Bih 2014).

3.2.2 Upgrading

With policies that encourage housing improvements or upgrading, governments can take direct action toward reducing the qualitative housing deficit. The chief mechanisms to promote upgrading are:

- i. Policies aimed at improving houses' physical conditions (walls, roofs, floors, sanitation, water supply)
- ii. Policies aimed at improving or providing public services in the surrounding neighborhoods (including social services infrastructure, public lighting, sewerage, water supply, and public spaces)

Subsidies are the most common tool for operationalizing house-improvement policies. Usually, they are assigned directly to the beneficiary households for the purchase of materials, or are disbursed via discount vouchers on building materials or contractor wages. However, governments must take into account the property rights of tenants and occupiers if these policies are to be implemented effectively (O'Hare, Abbott, and Barke 1998). Additionally, there are some concerns around subsidies for low-income households regarding the lack of concomitant technical assistance and project supervision, the sustainability of the projects over time, and the need for auditing mechanisms (Brickman, Yancey, and Nielsen 2020). A key aspect of successful home-improvement programs is the provision of technical assistance to enable households to get the most out of the programs' offerings. The success of home retrofitting programs also depends on the financial commitment of beneficiaries.

The second mechanism of improvement-focused policies is to **upgrade neighborhoods and local services**. Crucially, both housing improvements and developments must be designed bottom-up rather than top-down in order to achieve sustainable results in deprived neighborhoods.

A key aspect for the success of upgrading programs is strong coordination and collaboration between the national administration and local and regional governments. The intervention of national and local governments is needed not just to provide technical assistance and supervision, but also to directly finance of this type of project. For instance, Mexico's 1994 program in Tijuana, *Manos a la obra*, facilitated community management of small local projects – paving streets, building schools, constructing sidewalks or public areas – with the supervision and advice of government agencies. For projects financed by this program, the community had to contribute 30 percent of the cost, with the government paying the remaining 70 percent (Imparato and Ruster 2003).

BOX. Successful Upgrading Programs

Pakistan provides an example of a successful home-improvement effort, the Building and Construction Improvement Program (BACIP). It was launched in 1997 to improve household living conditions through energy-efficient technologies. Microcredits covered the initial cost of improvements such as home insulation, double-glazed windows, smoke-free stoves, stabilized mud floors, energy-efficient tube lights, storage space, and waterproofing technologies (Brickman, Yancey, and Nielsen 2020). An important component of the program was the provision of technical assistance to households and a management program to teach beneficiaries how to make products at low cost and increase their earnings at the same time.

In Latin America, Mexico's Patrimonio Hoy helped low-income families to undertake home-improvement projects by providing technical assistance, financial education, and building materials and construction services at zero-percent interest (Brickman, Yancey, and Nielsen 2020). In Brazil, the 1994 Guarapiranga program was a large-scale attempt to solve the problem of a water reservoir that was being polluted by nearby settlements of self-constructed housing. This program, which benefited around 200,000 people, required a combination of national, municipal, and local efforts to upgrade sanitation infrastructure to improve wastewater collection, storm drainage of roads, and water supply (Imparato and Ruster 2003). It boosted community ownership of projects by involving local residents in its development, planning, and information-gathering stages.

3.3 The Two Approaches and Recent Housing Policies in Colombia

Historically, the acquisition approach has been the main priority of housing policy in Colombia, while the upgrading approach, despite the recent creation of related programs, has only received minimal attention relative to the magnitude of Colombia's qualitative housing deficit. However, along with the introduction of rental subsidies and the high performance of the extant ABC program, the recent reintroduction of subsidies for home retrofitting projects and for scheduled savings came together to make the last two years of subsidy allocations in Colombia the highest in three decades.

FIGURE 22 | Urban housing subsidies granted by the national government, 1991–2020

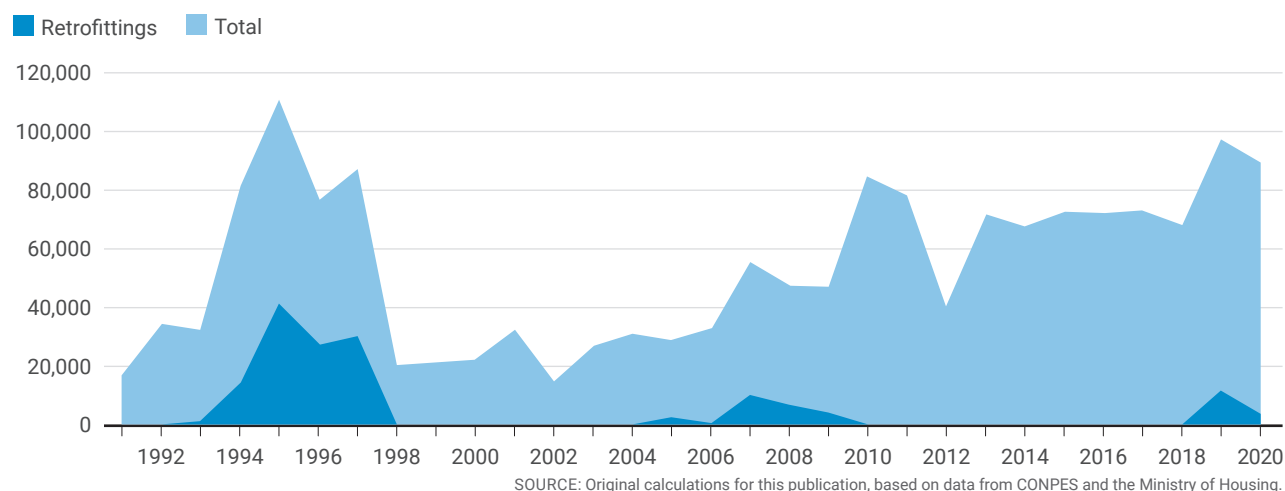
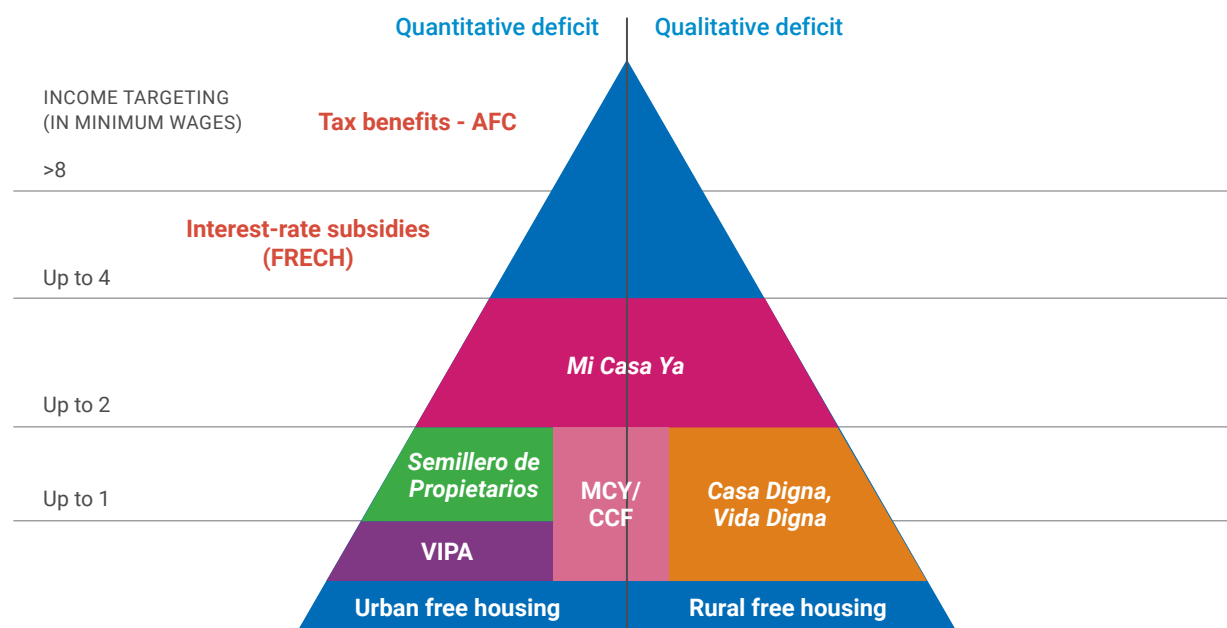


Figure 23 is a visual representation of national housing policy in Colombia since 2018. In both urban and rural areas, the main strategy for addressing qualitative deficits is home retrofitting. For households at the bottom of the pyramid, free housing in urban and rural areas is also a part of the strategy.

FIGURE 23 | Housing policy in Colombia since 2018



SOURCE: Ministry of Housing.

3.3.1 Acquisition-Approach Policies and Programs

In the last decade, the government of Colombia has relied on three main acquisition-approach tools: subsidized interest rates; down-payment subsidies targeted at low-income families; and 100-percent supply-side subsidies (free housing). These tools have been operationalized through a range of programs, described below.

FRECH INTEREST-RATE SUBSIDIES

Mortgage interest rates are one of the main access barriers to homeownership. High interest rates deter households from financing the acquisition of a home: as interest rates rise, monthly mortgage payments reach levels that families cannot afford. Moreover, low income is generally associated with higher risk, which tends to increase interest rates for poorer families. During the last five years, mortgage interest rates for social housing were on average 1.5 percentage points higher than non-social rates. Although the interest rate for social housing units in Colombia has steadily declined over the last 10 years (see Chapter 2), mortgage interest rates are still too high for low-income families to afford. Interest-rate subsidies aim to reduce the high burden of mortgage interest rates.

Subsidies on interest rates were first introduced in 2009 (see section 3.1.2 above) as the government implemented a series of policies aimed at mitigating the negative effects of the global financial crisis. The first modality of these subsidies, which was called FRECH I, provided an interest rate subsidy of 4 or 5 percentage points to individual mortgage loans for housing units with a price lower than 135 monthly minimum wages, with no restrictions on family income to limit access. The subsidies not only galvanized the growth of the housing market and the mortgage portfolio, but also boosted other economic sectors through backward and forward linkages. This subsidy had a direct impact on housing affordability. Lower-income households increased their purchasing power by 42 percent, and middle-class households by 23 percent (Asobancaria 2020).

A second generation of interest rate subsidies, known as FRECH II, started in 2012. The main difference was that these subsidies were directly targeted at more vulnerable families, those with an income lower than four monthly minimum wages. These families are eligible for a subsidy that lowers the interest rate by 4 percentage points for a seven-year period. This means that the current effective mortgage interest rate for low-income families is only 7.5 percent. Unlike its predecessor, this program was financed through future government expenditure commitments. Subsidized interest rates for lower-income families were later merged with down-payment subsidies, creating a more holistic and integrated housing finance policy.

VIPA

Down-payment subsidy programs implemented in Colombia over the last decade have allowed a significant proportion of lower-income families to purchase a home that they otherwise would not have been able to afford given their low savings capacity.

The first version of these subsidies came in the form of VIPA (*Vivienda para Ahorradores*, or “Housing for Savers”), which began in 2013. VIPA was targeted to households with some savings capacity but whose earnings were lower than two monthly minimum wages. The program financed only projects selected by the national government and VIP projects (priority-interest housing – the lowest-priced social housing, the value of which had to remain below 70 monthly minimum wages) (Decree 1432/2013). Initially, the government provided a subsidy with a value of 25 monthly minimum wages to families that proved that they had savings equal to 5 percent of the cost of a prioritized social housing unit. Given the higher risk profile of the targeted families, the national government protected financial in-

stitutions by covering the loans with guarantees. Subsequently, the government increased the subsidy to 30 monthly minimum wages and lowered the savings requirement to 2 percent.

MI CASA YA

- i. Established in 2015, *Mi Casa Ya* was initially targeted at households earning between two and four monthly minimum wages, but after 2017 it was extended to households below that level, replacing VIPA. Like VIPA, *Mi Casa Ya* combines down-payment subsidies with interest-rate subsidies. However, it was designed taking into account the lessons of VIPA, and thus differed from its predecessor in a few key ways:
- ii. It eliminated the explicit requirement for a minimum amount of savings.
- iii. It targeted a broader scope of lower-income families by increasing the maximum income of targeted families to four monthly minimum wages.
- iv. Subsidies became applicable to the purchase of any new social housing unit, not just prioritized social housing, thus increasing the choices available.
- v. The government established a simpler allocation process by relying more on private financial institutions.

Under the program, households with an income lower than four monthly minimum wages receive a down-payment subsidy. If the family's income is less than two minimum wages, the value of their subsidy is equal to 30 monthly minimum wages; those with income between two and four minimum wages receive a subsidy equivalent to 20 monthly minimum wages. Each eligible family can choose any new housing unit with a price lower than 150 monthly minimum wages. Along with the down-payment subsidy, beneficiary families are also eligible for an interest-rate subsidy covering 4 percentage points of the interest rate for a seven-year period. As of December 2020, *Mi Casa Ya* had granted 131,000 mortgage subsidies.¹¹ Since subsidies provided through *Mi Casa Ya* are tied to the approval of a mortgage by a financial institution, the program has a low rate of assigned subsidies that do not result in a purchase.

Mi Casa Ya has made the acquisition of housing possible for many middle-income families. However, there is a limit on the number of subsidies that can be granted every year, meaning that not all members of the targeted population can benefit from the program. Additional problems include a lack of access for families with very low income and the geographical concentration of subsidies; these and other issues with the program are discussed in Chapter 4.

FREE HOUSING PROGRAM (PVG)

Initiated in 2012, Colombia's free housing program (*Programa de Vivienda Gratuita*, or PVG) was intended to mitigate the failures of the subsidy policy approach – namely, its inability to reach the most vulnerable populations, which did not meet the minimum requirements of the subsidy program. The new housing policy was expedited under President Santos by Law 1537, which sought to provide 100,000 free units through the program. PVG prioritized three groups: families linked to any governmental programs for extreme poverty eradication, victims of conflict, and families living in natural disaster risk zones. According to the National Consulting Center (the private consulting company responsible for the impact evaluation), a total of 102,000 homes were built during PVG's initial three-year execution time, benefiting a total of 191 municipalities in 29 departments of the country

¹¹ Data provided directly to the authors by the Ministry of Housing.

(CNC 2021). However, the program started to exhibit problems with social infrastructure supply, high crime rates, and shortage of labor. As a result, the Ministry developed an assistance program for residents of free housing projects, which included social and community assistance and urban infrastructure development.

In 2015, a second generation of the program was launched. This iteration targeted smaller municipalities and smaller projects, aiming to assist 30,000 households. Although the program developed a prioritization strategy, it also accounted for the probable scenario of demand exceeding supply, in which case the allocation of housing would be completely randomized. By the end of the program, 69 percent of the beneficiaries had been selected using the prioritization strategy, while 31 percent were assigned randomly (CNC 2019).

Despite the large investment of almost US\$2 billion, the two generations of PVG benefitted only 2.5 percent of families with a housing deficit. More recently, the Ministry of Housing, City, and Territory has shifted focus to other types of programs, recognizing that free housing is prohibitively expensive (see Chapter 5 for cost breakdowns). If PVG's past rate were maintained, a free-housing solution for the 5.1 million families in quantitative and qualitative deficit would cost US\$76.5 billion – or 181 years' worth of the current national-level annual expenditure on housing.

SEMILLERO DE PROPIETARIOS

A key factor deterring housing acquisition for low-income families is the high renting costs that prevent households from saving to make the necessary down payment. The national government of Colombia has recognized this weak link in the homeownership chain and implemented a rental subsidy scheme for low-income families. *Semillero de Propietarios* is the main instrument for increasing the density of subsidies in households with income between one and two monthly minimum wages (deciles 5 and 6 of income distribution). Its rental subsidies are designed to be temporary, provided while the family saves for a down payment and improves its credit score. The program also includes subsidies for scheduled savings.

The goal of *Semillero de Propietarios* is to free up a proportion of the income of renting families by subsidizing a part of their monthly rental payment. The program is targeted at households whose income is lower than two monthly minimum wages. The beneficiary families receive a rental subsidy equal to 60 percent of a monthly minimum wage, and households must make a monthly deposit of 25 percent of a monthly minimum wage during a 24-month period. Families must allocate the new disposable income into a savings account that could later be used in the acquisition of a social housing unit. Each family needs to save a minimum of US\$53.30 each month. After two years of regular savings, the family should have US\$1,280, or six monthly minimum wages, and has demonstrated good financial behavior, and is thus eligible to buy a social housing unit. Unlike the acquisition-approach housing policies implemented previously by the Colombian government, rental subsidies can be used for previously owned units, although they must meet minimum physical and structural conditions.

Given the high rate of informality among low-income families in Colombia, mortgage institutions face the costly and difficult task of financially profiling these households, often resulting in the denial of mortgage loans. Thus, a positive result of this scheme is that families can prove their savings and income behavior to financial institutions.

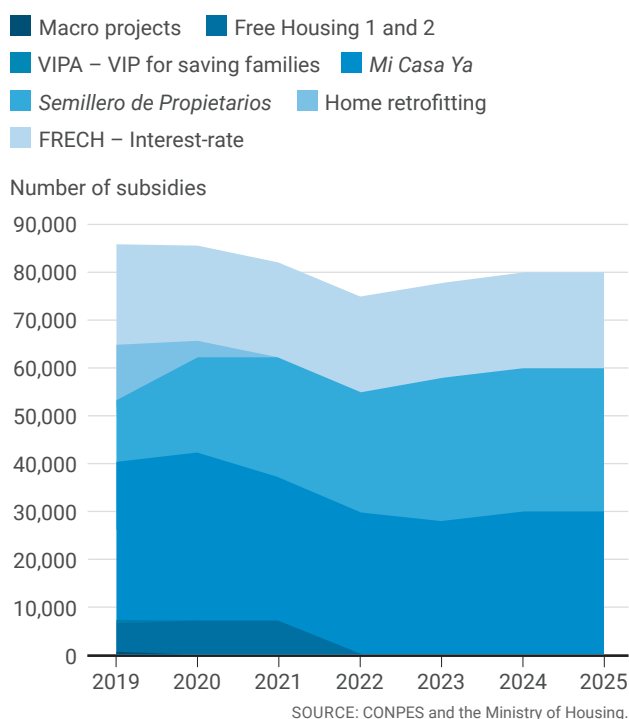
The government's initial goal was to allocate 200,000 rental subsidies during the 2019–2022 presidential period, granting 80,000 subsidies in the first two years. However, implementation has been slow: by September of 2020, only 1,311 rental subsidies had been granted, representing 0.016 percent of the initial goal. The main challenge for implementation has been the inadequate supply of

social housing units available to rent through this mechanism. The government requires that the renting process be conducted through a certified real estate broker in order to guarantee construction standards, but this process is difficult to integrate into the dynamics of Colombia's renting market, in which most rental processes are conducted informally. The government must encourage institutional investments in social housing rentals that may be funded through pension funds and other long-term investors, and guaranteed by the government.

THE ACQUISITION APPROACH IN COLOMBIA GOING FORWARD

In 2019, the social housing sector saw 123,000 units sold – a record number. Seeking stability for the sector, that year the government approved CONPES 3977 to define subsidies for the ABC program and the housing rental program until 2025. The total budget for subsidies approved for the period 2020–2025 was Col\$10.4 trillion (US\$2.7 billion), with planned annual subsidies similar to the levels allocated for 2020.

FIGURE 24 | Subsidies in Colombia, 2019 (allocated) – 2025 (approved)



3.3.2 Upgrading-Approach Policies and Programs

Home retrofitting has been an unstable national policy in Colombia, with a large increase in the Gaviria and Samper administrations in the 1990s, a second implementation in urban areas between 2007 and 2009, and a reintroduction in 2019, although to levels that do not match those of the 1990s. Rural retrofittings have been more consistent, but they only amount to 4,941 subsidies per year – 0.3 percent of the rural quantitative deficit of 1.68 million households.

There has also been limited national-government intervention in slums through neighborhood-upgrading programs. At the municipal level, greater efforts have been made: Medellín and Bogotá, for example, have both conducted ambitious slum-upgrading programs. Some of them, such as PRIMED in Medellín – a sustained policy since the mid-1990s – have been recognized as best practice among developing countries. Other cities have had less structured slum-upgrading efforts, which has led to a higher persistence of insecurity in land tenure, housing deficits, and insufficient infrastructure. An integrated neighborhood-upgrading and home-retrofitting program should take into account physical improvements to infrastructure, tenure regularization, facilities programs, development programs, and housing improvements.

CASA DIGNA, VIDA DIGNA

In 2018, the new government recognized the importance of developing complementary programs, addressing the fact that the acquisition-approach ABC program (*Mi Casa Ya*) was not allocating subsidies to the lowest income groups. This resulted in *Semillero de Propietarios* (the acquisition-approach housing rental program described above) and a home-retrofitting and slum-upgrading program called *Casa Digna, Vida Digna* (CDVD).

CDVD is one of the strategic priorities for the national government. The program was designed with three components: land and title regularization, slum upgrading, and home retrofitting. The Ministry of Housing concentrated on the country's largest municipalities and, from 2020 onward, rural areas (see Table 13 for program targets). The Department of Social Prosperity (DPS) is responsible for home retrofitting in the remaining municipalities.

CDVD's goal is not only to provide adequate housing, but to improve its surroundings. The program was designed as a progressive pathway. The first step is to perform a land securitization process by promoting neighborhood legalization and ensuring that families possess legal title to their units. The second stage is to determine which housing units lack sewerage, water access, and electricity supply, and to make the corresponding intra-domiciliary connections. The third step is to perform a non-structural retrofitting intervention to address the housing deprivations of each unit, including deprivations related to wall and floor materials and those to do with kitchen and bathroom facilities. The final step is the neighborhood improvement process, which, according to the Ministry of Housing,¹² includes improvements to public spaces, libraries, schools, and general facilities. The Ministry of Housing reports that 24,213 families benefited from neighborhood upgrading between 2019 and 2020, mainly through the construction of parks. (An example of a CDVD neighborhood improvement project, implemented in Valledupar in 2019, is discussed in Annex L.)

To qualify for intervention, neighborhoods have to be located in areas not considered high risk, and they have to be on public lands. The Ministry conducts interventions in public spaces, schools, nursery homes, and parks, although it is increasingly concentrating on parks. While the program's national target was initially set at 600,000 households, the Ministry had to include other components of the program as part of the target to maintain consistency with the national fiscal plan. Later, the Ministry also included interventions managed by local authorities and Family Compensation Funds (*Cajas de Compensación Familia*, or CCFs).

TABLE 13 | Policy targets for *Casa Digna, Vida Digna*: 2019–2022

ACTIVITIES	NUMBER OF BENEFICIARY HOUSEHOLDS				
	2019	2020	2021	2022	TOTAL
Ministry of Housing	63,666	58,786	64,561	64,487	251,500
Title regularizations	14,150	14,150	14,150	14,150	56,600
Neighborhood upgrades (beneficiary families)	22,000	11,216	11,297	11,297	55,810
Urban home retrofittings	27,516	26,622	29,247	29,205	112,590
Rural home retrofittings	0	6,798	9,867	9,835	26,500
Department of Social Prosperity	101,687	45,803	86,338	91,172	325,000
Home retrofittings	23,000	30,000	35,000	40,000	128,000
Subsidies for home materials acquisition - FEST	47,080	0	36,160	36,172	119,412
Neighborhood upgrades	31,607	15,803	15,178	15,000	77,588
Ministry of Agriculture	10,798	6,546	3,247	2,909	23,500
Home retrofittings	7,948	3,696	397	59	12,100
Rural title regularizations	2,850	2,850	2,850	2,850	11,400
Total	176,151	111,135	154,146	158,568	600,000

SOURCE: CONPES and Ministry of Housing 2018.

¹² Data in this paragraph was provided directly to the authors by the Ministry of Housing.

However, fiscal constraints and limitations on operational capacity have resulted in a smaller intervention than initially intended. In 2019, the program's budget was Col\$130 billion (US\$35.2 million), or 8 percent of Fonvivienda's total budget of Col\$1.6 trillion (US\$432 million). This included Col\$100 billion for home retrofitting, Col\$25 billion for neighborhood improvements, and Col\$5 billion for land and property title regularization. An additional Col\$65 billion was taken from previous years' surpluses in parks, schools, and nursery homes. As of 2020, the program has a budget of around Col\$35 billion (US\$9.5 million), or 2 percent of the housing budget. The Department for National Prosperity (DPS) has an additional budget of approximately Col\$250 billion (US\$67 million) for home and neighborhood retrofitting (see below).

In 2019, the Ministry of Housing and local authorities financed 11,650 home retrofitting projects in 13 cities with more than 100,000 inhabitants. The largest interventions were in Neiva, Ibagué, and Soledad, with 1,836 households retrofitted on average per city. These interventions are concentrated in a few neighborhoods in each city in order to take advantage of economies of scale. The strategy for 2020 was to perform smaller interventions (around 150 households per city) in 23 cities.

RETROFITTING AS A DPS POVERTY POLICY

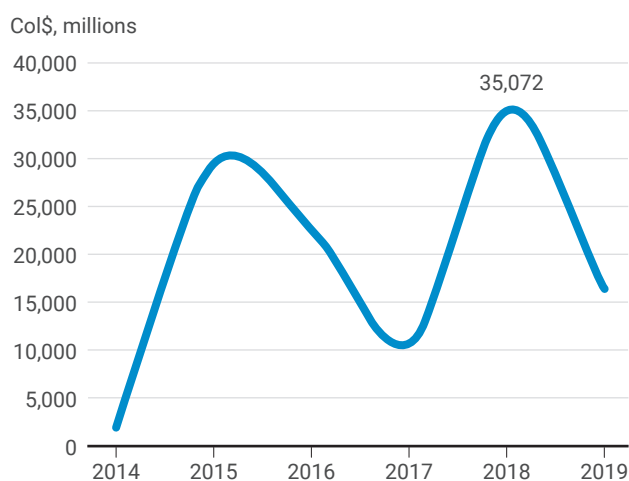
Since 2011, the Department of Social Prosperity (DPS) has been responsible for coordinating social policy for vulnerable populations. DPS is not legally allowed to offer housing subsidies. Instead, it implements poverty-alleviation programs, with FB cash transfers to families. In practice, these transfers do not comply with regulations from the Ministry of Housing. Although there has been direct instruction from the President's office to standardize the interventions in terms of costs and operations, coordination among institutions has proven challenging.

As part of this policy, the agency developed a program of home-retrofitting subsidies, and it has a large budget for neighborhood upgrading and the construction of social infrastructure. Between 2014 and 2019, the agency subsidized 20,192 retrofitting interventions, 82 percent of which were kitchens and bathrooms, with an investment of US\$31 million US\$ (Col\$117 billion).

3.3.3 Complementary Policies: Social Security Networks for Formal Workers

Colombia's social security networks are non-profit organizations that collect, distribute, and pay salary contributions destined for household subsidies. Social security networks have existed since 1957 (Norm 118); following the social and political instability of that time, they were developed to reduce the deficits in health, education, income, and habitability of Colombian households, among other deprivations. Social security networks (SSNs) exclusively benefit formal workers, who account for approximately 42 percent of the total workforce. Given the concentration of formal workers in big cities, housing subsidies are extremely concentrated in Colombia's main urban areas. As of 2019, 77 percent of housing subsidies assigned by SSNs were allocated to residents of Bogotá, benefiting a total of 31,487 families. Antioquia and Valle del Cauca received

FIGURE 25 | Annual DPS investments in home-retrofitting interventions



SOURCE: CONPES and DANE.

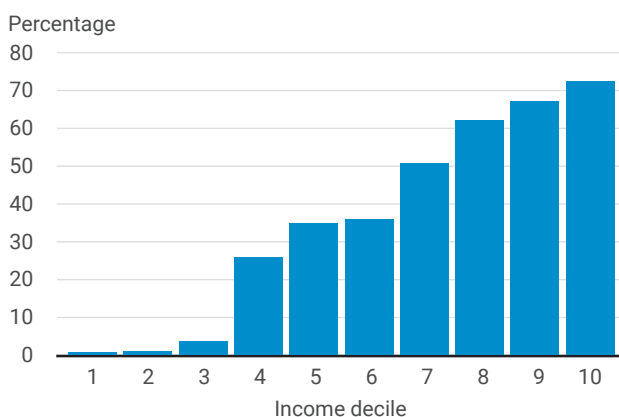
a little less than 15 percent of the total subsidies allocated that year; together, all the other departments of the country received less than 8 percent. Some states received as few as 14 subsidies, or less than 0.01 percent of the total.

Not only do SSN subsidies display a pronounced geographic concentration, but there is also a clear preference for new housing over previously owned homes or home retrofitting projects. New-housing subsidies represent 96.8 percent of the total – a number that has remained stable, with an average of 96.7 percent over the past four years. As of September 2019, 39,772 housing subsidies had been granted for the construction of new homes, whereas retrofitting subsidies totaled 133. Antioquia benefits the most from this policy, as it receives 42 percent of new-housing subsidies. There is, however, a noticeably greater preference for retrofitting subsidies in rural areas. The Col\$13 billion granted in rural housing subsidies benefited 404 households – 1 percent of the urban subsidies, which cost Col\$1.2 trillion. Out of these 404 subsidies, 60 percent were allocated to the construction of new homes, meaning that retrofittings represent the remaining 40 percent of all rural housing subsidies. Here, too, Antioquia is the most-benefited region, accounting for 99 percent of retrofitting subsidies in rural areas.

The Family Compensation Funds (*Cajas de Compensación Familiar*, or CCFs) are social security networks that provide services and subsidies to formal employees. Families that are registered in a CCF and have an income lower than two monthly minimum wages are eligible for a social housing subsidy equal to 30 monthly minimum wages (US\$6,990) provided by the CCF. Before 2019, families were not allowed to receive both a CCF subsidy and the down-payment subsidy provided through *Mi Casa Ya*. However, beginning in August 2019, households are now also eligible for both, although families who receive the CCF housing subsidy are only eligible for an additional 20 monthly minimum wages (rather than 30) through *Mi Casa Ya*. Nevertheless, this adds up to 50 monthly minimum wages (US\$11,650) for social housing.

Theoretically, low-income families' buying capacity should increase as a result of the policy change permitting subsidies to be merged. However, this is only true if the family has access to both subsidies; in reality, a household's registration in a CCF depends heavily on its income level, source of income, and location. According to the GEIH (2018), only 1 percent of Colombia's lowest-income families are registered in a CCF. Figure 26 shows registration in CCF by income decile. Affordability forecasts need to take into account that only a small proportion of low-income households are registered in a CCF.

FIGURE 26 | Proportion of households registered in a CCF by income decile, 2018



SOURCE: DANE 2018.



CHAPTER 4:

The Case for an Integrated Approach

Colombia's housing programs have made significant progress in recent years. Over the past several decades, the country's housing policy, which has largely comprised efforts to help families acquire housing, has led to substantial achievements, especially in the quantitative housing deficit. Nevertheless, there is still room for improvement in the qualitative deficit, in rural areas and smaller municipalities, and for low-income families. In particular, Colombia faces five major challenges that impact the housing sector:

1. Barriers to access for low-income households
2. Dynamics leading to informal neighborhoods and slums
3. A need to improve access for rural areas and smaller municipalities
4. Land-use restrictions and the regulatory framework
5. The current Venezuelan migration crisis, and the housing challenges that migrants face

During the current administration, the government has aimed to address these concerns by creating home improvement and rental programs, and working with the World Bank to expand housing access for Venezuelan migrants. Due to fiscal constraints and regulations, such programs still account for a small proportion of the budget; nevertheless, there are significant opportunities around these investments.

This chapter will analyze each of the five concerns above, and explore how investing further in the upgrading approach could aid Colombia in tackling these challenges.

4.1 Barriers to Access for Low-Income Households

Three main variables hamper families' access to acquisition-approach housing policy and to housing finance in general: low income, rurality, and informality. First, a household with a very low income lacks the financial resources for a mortgage loan, even with the subsidies granted by the government. Second, rural areas do not have an adequate supply of formal housing or sufficient access to financial institutions. Third, since families with an informal source of income are perceived as riskier, and since financial institutions do not have the necessary tools to profile them, those institutions exclude them from the housing-finance system right from the start.

These three factors are correlated both among each other and with the housing deficit (see Annex D). Housing deficit is the highest – at over 50 percent – among the poorest Colombians, Income Group 1.¹³ Although practically all of these low-income households rely on an informal source of labor income, this informality is not their main barrier to homeownership; rather, the issue is that their very low wages are insufficient for a mortgage payment. A major driver for the informality and high hous-

¹³ As discussed previously, Group 1 comprises income deciles 1, 2, and 3 – the bottom 30 percent of Colombia's income distribution. These households suffer from the highest housing deficit and inhabit non-traditional (informal) housing, frequently without legal title. Group 2 is composed of income deciles 4 and 5, which often earn their income through informal employment. Group 3 consists of deciles 6 and 7. Group 4 encompasses the top 30 percent of the income distribution (deciles 8, 9, and 10).

ing deficit of these households is their rurality, which is associated with low wages and an inadequate supply of social housing units. Despite representing only 22.3 percent of the total population, rural families account for more than 50 percent of households in these bottom three income deciles, where housing deficit is highest. Moving up the income deciles, rural families represent less and less of the population. For Groups 2 and 3 (income deciles 4 through 7), who also suffer a significant incidence of housing deficit, the most challenging access barrier to housing finance is income informality.

These three interconnected factors (low income, informality, and rurality) characterize a significant portion of the Colombian population, underscoring the need for the government to improve housing finance and acquisition-approach policies. In particular, a balanced housing policy must effectively include the lowest-income families – who, despite government efforts, currently cannot overcome the barriers that limit their access social housing.

4.1.1 Housing Affordability through the Acquisition Approach

One of the goals of the Colombian government is to increase home acquisition for low-income families through housing finance, and the country has succeeded in enabling families in income deciles 6 and 7 to access social housing. Most households in Income Group 3 can now afford social housing units. However, those in deciles 4 and 5 still face critical housing-deficit issues, and the needs of those in deciles 1 through 3 remain largely unaddressed. Even with all the financing tools the government offers, Income Group 1 currently has no access to housing through current acquisition-approach policy, and Group 2 has very limited access.

These results are demonstrated in the affordability exercise below.¹⁴ We have proposed two scenarios. In the first, families have access to down-payment subsidies from both the government and the CCFs (*Cajas de Compensación Familiar*, or Family Compensation Funds, which are social security networks that benefit formal workers; see Chapter 3). Although this scenario is plausible, CCF registration is very low among low-income families – only 1 percent among income decile 1 (see Annex D). The second scenario, which assumes no CCF subsidy, is therefore more realistic. A low-income household affiliated to a CCF (scenario 1) would owe a monthly mortgage payment of US\$68.80. A family not affiliated to a social security network (scenario 2) would need a monthly income of US\$384 to afford its US\$103.20 mortgage payment.

¹⁴ This exercise was undertaken with the following parameters. For the housing unit's price, we used the value at the 25th percentile of the price distribution for social housing units in Colombia; for 2019, this was US\$20,266, or 96 monthly minimum wages (MMW). Mandatory household savings under the Semillero de Propietarios program – a minimum of US\$53.30 each month, for a total of at least US\$1,280 at the end of the two years required by the program – have been included as part of the down payment.

We have also taken into consideration all available subsidies. CCFs provide affiliated households that have an income of less than 2 MMW with a social-housing subsidy equal to 30 MMW (US\$6,990). As of August 2019, these can be combined with the down-payment subsidies provided by the Ministry of Housing through Mi Casa Ya, which have a value of up to 20 MMW for families with income between 2 and 4 MMW, and up to 30 MMW for families whose income is below 2 MMW wages – unless they are receiving a CCF subsidy as well, in which case the Mi Casa Ya subsidy is capped at 20 MMW. This means that the poorest households (making 0–2 MMW) registered to a CCF receive a total of 50 MMW in subsidies (20 MMW from the government, 30 MMW from the CCF), while those not registered to a CCF receive 30 MMW (from the government). Households making 2–4 MMW receive 20 MMW (from the government). (See Annex D.) Additionally, government-provided interest-rate subsidies lower mortgage interest rates by 4 percentage points for a seven-year period. This means that the current effective mortgage interest rate for low-income families is 7.6 percent, which is the rate we used in this analysis.

When we compare these payments against the income distribution, we can see that acquisition-approach housing policy makes housing affordable for families in Group 3, a notable achievement. However, access barriers remain for lower income groups. Group 1 cannot afford the subsidized mortgage even in scenario 1 (see figure 27). This means that 4.5 million families have an income so small that, despite all available subsidies, they are unable to become homeowners through the formal housing finance market. To reach Group 1 through the acquisition approach alone, the government would need to double its monetary subsidy – a fiscally untenable option.

Additionally, despite having the income to afford the monthly mortgage payment, 1.8 million families in Group 2 have an informal source of income, which prevents them from receiving a CCF subsidy. This implies that under scenario 1, a total of 6.3 million families do not have access to an acquisition-approach solution. In the more realistic scenario 2, *all* of Group 2 is unable to afford a home through the acquisition approach, as Group 2 households are heavily dependent on CCFs and formal sources of income to be able to apply for homeownership.

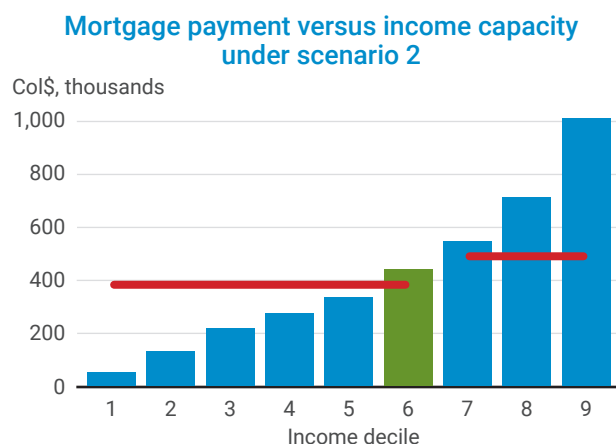
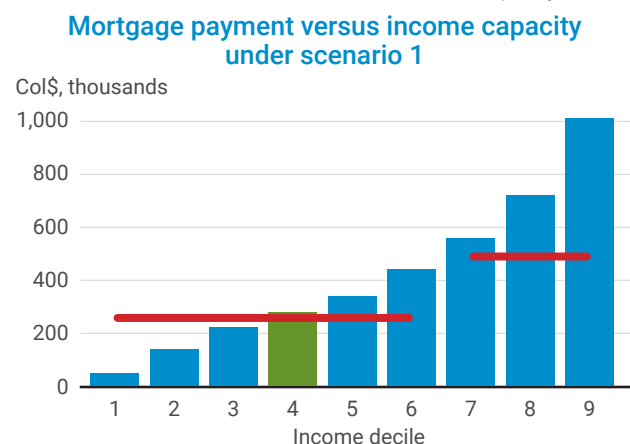
TABLE 14 | **Loan simulation**

VARIABLE	SCENARIO 1	SCENARIO 2
Social housing unit price (MMW)	96	96
Government subsidy (MMW)	20	30
CCF subsidy (MMW)	30	0
Savings (MMW)	6	6
Interest rate	11.6%	11.6%
Interest-rate subsidy	4%	4%
Monthly mortgage payment (US\$) (Households with income below 2 MMW)	68.80	103.20

SOURCE: Original calculations for this publication.

FIGURE 27 | **Access to loans by decile**

- Monthly mortgage payments that households in each decile would have to make
- First decile that meets the minimum income capacity



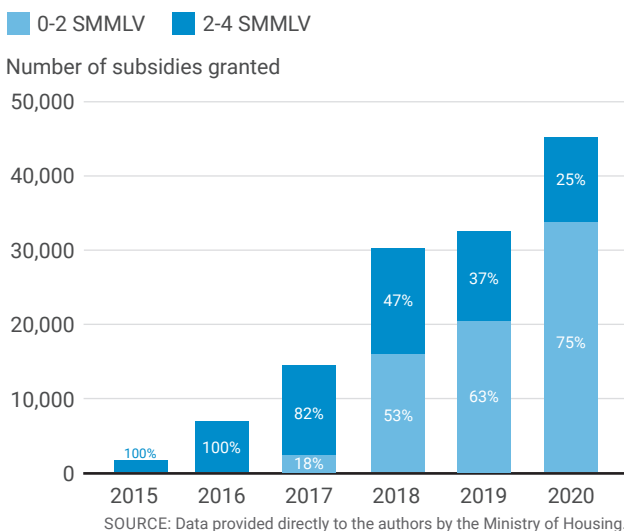
SOURCE: Original calculations for this publication.

4.1.2 Attempts to Target Low-Income Households

The allocation of subsidies indicates some steps toward progressiveness in housing policy. Initially, a higher proportion of middle-income than lower-income households received down-payment subsidy subsidies through the *Mi Casa Ya* program; however, the program has made progress in targeting low-income households. In 2017, households with a monthly income between two and four monthly minimum wages (income deciles 7 through 9) received 82 percent of the total down-payment subsidies granted by the *Mi Casa Ya* program, with the remaining 18 percent allocated to households with a monthly income below two monthly minimum wages. By 2020, however, as much as 75 percent of the program's subsidies were granted to families with income below two monthly minimum wages. This increase of 57 percentage points in a three-year period demonstrates the effort made to increase the participation of the lowest-income families in housing finance and acquisition.

FIGURE 28 | Number of *Mi Casa Ya* subsidies granted by income level, 2015–2020

Subsidies granted before March 2020.



Recent years have also seen the development of mechanisms – such as the *Semillero de Propietarios* program, securitizations, and flat subsidies – that allow CCF and government subsidies to complement each other and that increase land supply for VIP housing, among other benefits. These mechanisms are appropriately directed toward increasing access among formal workers in Group 2, which is composed mainly of families with a single member making minimum wage. This vulnerable population should indeed be a focus of housing policy.

However, the current scheme for interest-rate subsidies on mortgage loans, which increase with the price of the home, is not as progressive. A family with more disposable income, who can acquire a more expensive home, will receive a greater subsidy. For example, a family that buys a home at the price cap for social housing units, US\$40,000, would receive an interest-rate subsidy of US\$7,231. But a family who can only afford a social housing unit of US\$25,000 would receive the proportionally smaller subsidy of US\$3,900.

This regressive mechanism has led some to propose that a flat interest-rate subsidy be implemented from 2021 onward. In this system, any family with an income lower than US\$935 that buys a social housing unit would receive an interest-rate subsidy of US\$4,200. Under the same parameters as scenario 1 above, this mechanism would lower a family's monthly mortgage payment to US\$41.09 – presenting a clear advantage over the current flexible interest-rate subsidy (payment of US\$68.80) and the direct down-payment subsidy (payment of US\$50.16).

With this new mechanism, families in income decile 3 would have sufficient capacity to meet their monthly mortgage payment. However, this assumes that households receive both government and CCF subsidies – an assumption that does not hold, since only 3 percent of decile 3 is affiliated with a CCF. The proposed flat interest-rate subsidy would result in a fairer distribution of the subsidy among income groups, but it still relies on the income formality of possible beneficiaries, meaning

that access barriers would persist for 6 million families. Complementing acquisition programs with an upgrading alternative would more fully benefit these low-income households, building on the progress in housing affordability that Colombia has made among middle-income groups.

4.2 Dynamics Leading to Informal Neighborhoods and Slums

Across Latin America, the lack of a robust social housing policy, the shortage of low-cost housing, and the inability of poor households to access the financial system have resulted in an increase in unplanned neighborhoods and poor-quality housing. Many of these challenges are very much in evidence in Colombia, which has seen a surge in new informal settlements. In 2007, 56 percent of Colombia's housing was supplied through the informal market (Rojas et al. 2010). Informal construction does not adhere to structural quality standards in most cases, and informal neighborhoods are often located in unplanned areas without social infrastructure. This means that a large proportion of families inhabit structurally weak homes, or do not have access to public services.

Colombia's current housing policy stimulates the formal construction sector and subsidizes the market to encourage the provision and acquisition of formal housing. However, despite government subsidies, demographic changes and market dynamics have strained the capacity of the construction sector to supply formal housing. The result has been a shortage in formal housing, and a concomitant increase in informal neighborhoods.

4.2.1 Housing Supply in Colombia

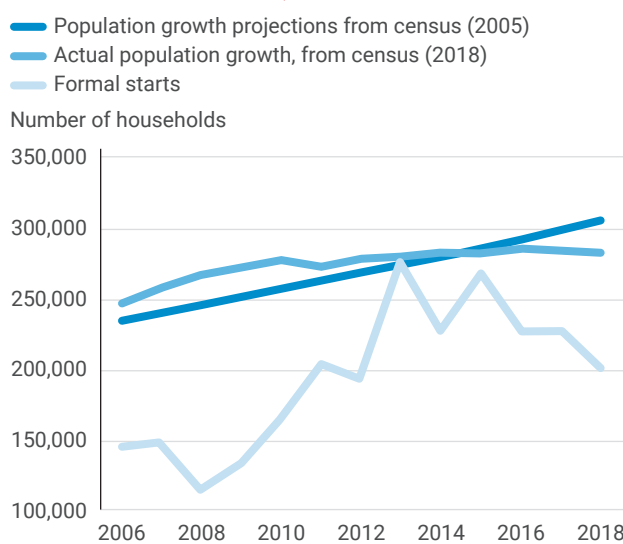
As discussed in Chapter 1, demographic pressures, including population growth, high urbanization rates, and migration flows, have increased the demand for land and for housing solutions in Colombia. The decline in both mortality and fertility rates has resulted in a decreasing population growth rate and a change in the population's composition by age, transforming Colombian society. While this demographic transition has caused household creation to stall in the past few years, there are nevertheless twice as many households in Colombia today than there were in 1985. This national population growth has been driven mainly by Bogotá, Antioquia, and Valle del Cauca.

To cope with excess demand, the informal sector has bridged the gap in housing solutions. Estimating the size of the informal sector is complex, but the gap between the number of formal housing projects begun and number of households created shows that the provision of informal housing is significant. Between 2005 and 2018, 3.5 million new households were established, but only 2.5 million houses were started through formal projects (DANE 2020c). This implies a shortage of nearly 1 million housing units – without taking into account inventory changes or other factors. This gap had to be resolved by families building their own housing, sharing a housing solution, or participating in the informal market.

Formal housing has been concentrated in the big cities. Close to 1.5 million formal housing projects were begun between 2005 and 2018 in major urban areas, compared with less than 500,000 in the other municipalities combined (DANE 2020c). Correspondingly, the housing shortage has been greater in the smaller municipalities. While in the bigger cities, there were 0.9 housing starts per new household, in the smallest municipalities, there were only 0.55 formal starts per new household (see figure 31). This means that almost half of the households in smaller municipalities had to look for a housing solution outside of the formal market.

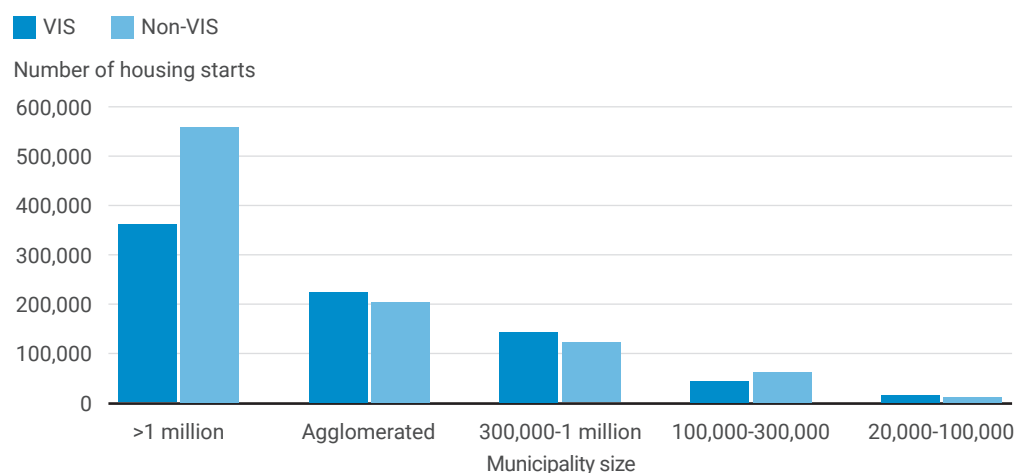
In big cities, there were more non-social housing (non-VIS) than social housing (VIS) projects; in the rest of the municipality categories, the numbers are roughly equal, with social housing slightly dominating in most groups. However, it is worth noting that the Construction and Edifications Census (CEED), which reports the number of formal housing starts, does not have national coverage; it only measures building activity in the larger cities. The lack of information and smaller number of formal starts in smaller cities could therefore be a sign of lack of measurement rather than a dearth of construction projects.

FIGURE 29 | **Formal housing project starts and household creation, 2005–2018**



SOURCE: Original calculations for this publication, based on data from the 2005 and 2018 census (DANE 2016, 2019a) and CEED statistics (DANE 2020c).

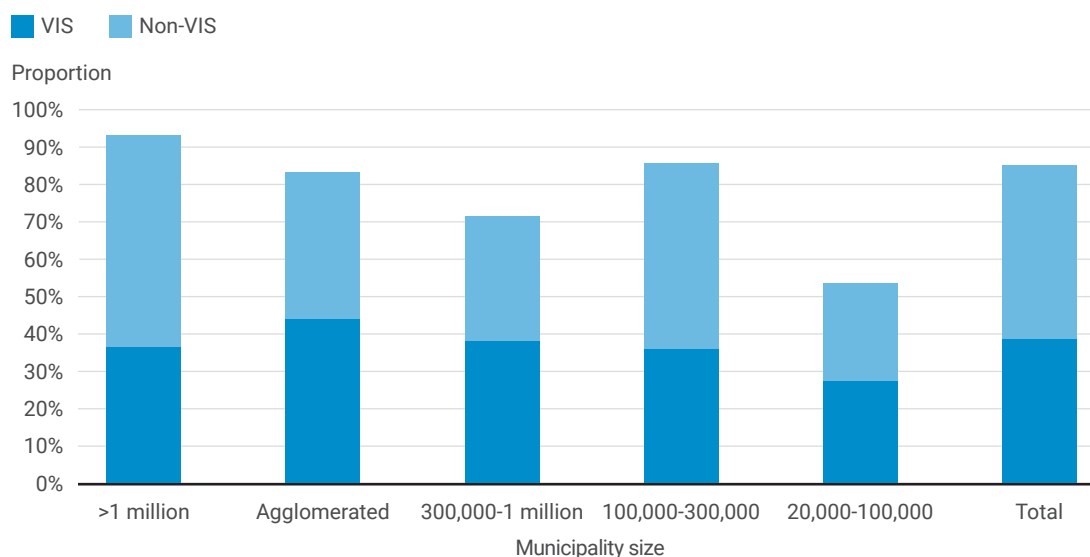
FIGURE 30 | **Formal housing starts by municipality size, 2005–2018**



SOURCE: Original calculations for this publication, based on data from Census 2018 and CEED statistics (DANE 2019a, 2020c).

FIGURE 31 | **Formal housing starts per created household by municipality size, 2005–2018**

This analysis takes into account only those municipalities surveyed in the CEED in order to avoid underestimation due to lack of data.



SOURCE: Original calculations for this publication, based on data from the 2005 and 2018 census (DANE 2016, 2019a) and CEED statistics (DANE 2020c).

This analysis of formal project starts can be complemented by a similar calculation of building permits generated during this same period. Building permits ensure that a house’s construction meets a minimum standard, safeguarding quality of life. Our analysis of these permits covers more municipalities than the analysis of formal starts but shows a similar pattern. Building permits were concentrated in larger municipalities, and among non-social housing units relative to social housing units. Building permits per household created from 2005 to 2018 also reveal a supply shortage in the formal market in smaller municipalities. In the big cities and agglomerations, there were almost 0.9 permits per new household, and in medium-sized municipalities (between 300,000 and 1 million inhabitants), there were even more building permits than new households; however, smaller municipalities saw fewer than 0.4 building permits per household created.

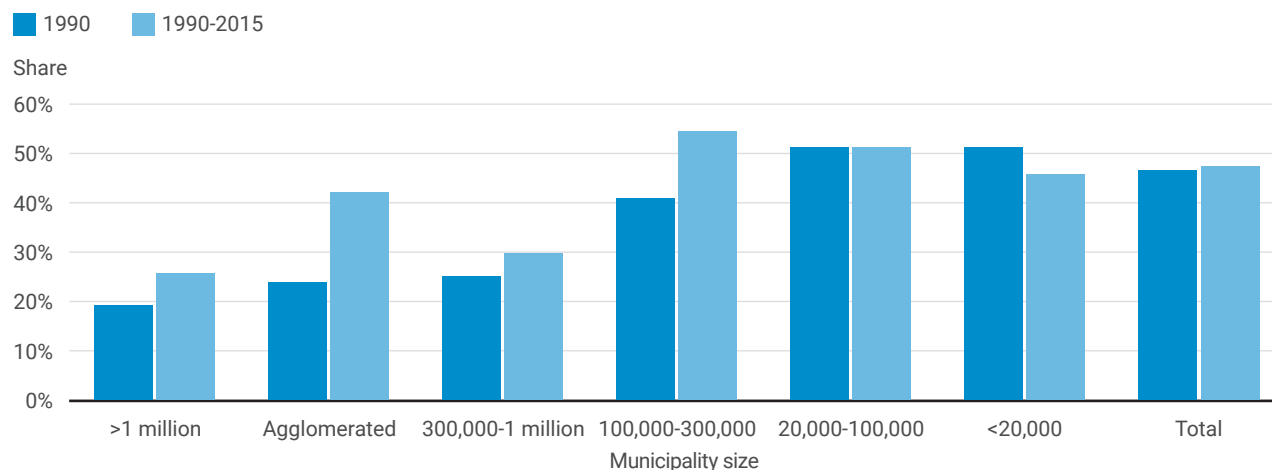
4.2.2 Informal Neighborhoods

The result of this shortage has been an upswing in informal neighborhoods. According to the 2018–2022 National Development Plan (DNP 2019), 1.2 million Colombians live in “Settlements of Incomplete Development” (*Asentamientos Humanos de Desarrollo Incompleto*). This situation is in evidence in all major Colombian cities. By 2006, an estimated 16 percent of the urban area in Bucaramanga was informal, and 69 percent of Cartagena’s neighborhoods were informal in origin (Rocha et al. 2006). In 2015, more than 100 informal settlements could be found in Cali (Alcaldía Mayor de Santiago de Cali 2015), and Bogotá’s nearly 125 informal settlements were home to 230,000 inhabitants (La Información 2015). In 2017, approximately 30 percent of Barranquilla’s residents lived in informal neighborhoods (Vergara Contreras and Villalobos Caballero 2017).

How the level of informality has changed over time, however, differs depending on the municipality size. In the larger municipalities, there has been a significant expansion of informality levels, while the smaller municipalities have sustained a high average level of informality. In the agglomerated municipalities, informal neighborhoods have surged. Although subsidies and government efforts have focused on these areas, there is still room to expand the reach of policy.

FIGURE 32 | **Average informal land coverage by municipality category**

Informal land coverage is the share of residential area in informal land subdivisions as defined through satellite images. Informal land area describes residential areas with irregular land plots, dirt roads, or lack of public lighting. Dates correspond to the closest date to 1990 and 2015, depending on the available information in each municipality.



SOURCE: Original calculations for this publication, based on data from *Atlas de Expansión Urbana* 2017.

The expansion of informality across this 25-year time horizon stems from a range of factors, many of them outside the control of housing policy (for example, forced migration and displacement); nevertheless, a comprehensive housing policy can help address the effects. The top priority for a comprehensive housing policy should be slowing down the expansion of informality in the bigger cities and especially in the agglomerations, while reducing the high average level of informality in the smaller municipalities.

The shortage of formal housing and the resulting informality suggest two challenges for the coming years. First, the formal construction sector is unable to meet demand and provide housing for every Colombian suffering from housing deficit. Second, there is a need to provide adequate solutions for residents living in informal neighborhoods. In many areas, as informal neighborhoods have grown, these households have become not the exception, but the rule: despite the government's recent efforts (e.g., *Casa Digna*, *Vida Digna*), many Colombians are now obtaining housing through the informal, not the formal, housing sector. These changing dynamics suggest that a forward-looking housing policy should include further investment in programs that supplement the acquisition approach.

4.3 Need to Improve Access for Small Municipalities and Rural Areas

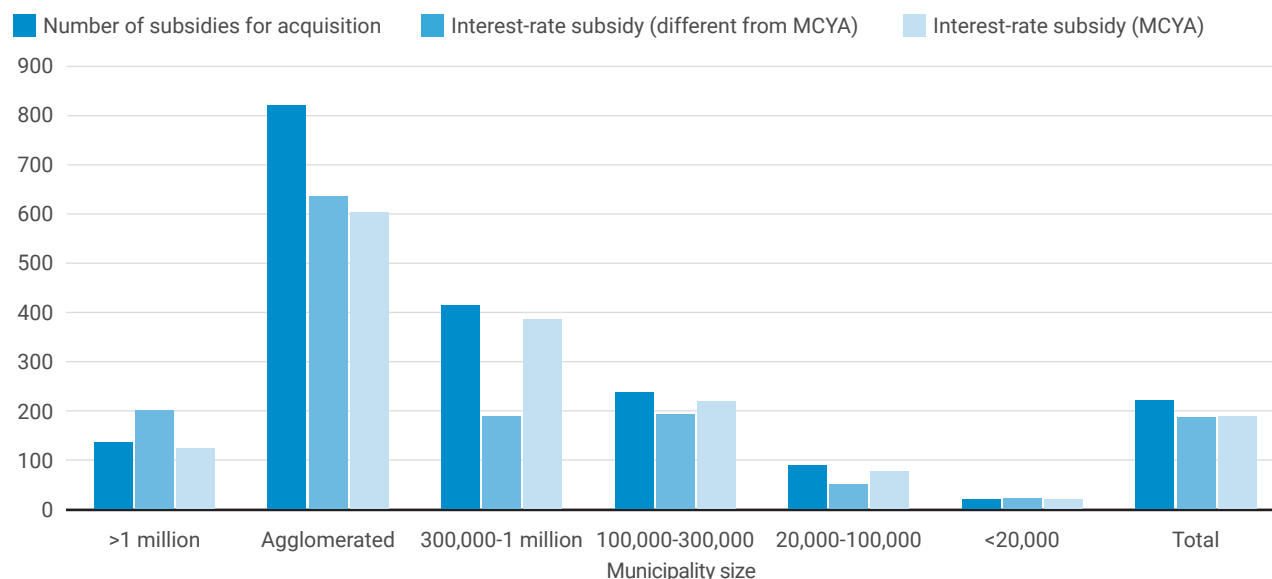
4.3.1 Inequalities in Development and Subsidy Allocation

One major reason for the higher shortage of formal housing in smaller municipalities is that the private housing market optimizes decisions about development projects according to expected profits, which are heavily influenced by economies of scale. Thus, municipalities with low populations are not, on average, as attractive to developers as big cities. Smaller municipalities also face additional complications, such as insufficient access to economic markets and poor availability of construction materials, causing increased transportation costs.

Colombia's current subsidy scheme revolves around the private market: the government grants ABC subsidies to help would-be homeowners obtain financing for homes built by private entities. These entities, which are more effective at larger scales and greater margins, rely on government action to stimulate the market – a process that also generates employment and economic activity. However,

the dynamics of the housing market make it more profitable for private entities to build in dense, populated areas. The result is a high concentration of ABC subsidies in big cities and their agglomerations, and inadequate housing supply in smaller cities and rural areas – the areas where the housing deficit, and particularly the qualitative deficit, is greater (see Chapter 1). As shown in figure 33, small municipalities received fewer subsidies per capita than larger municipalities in 2018.

FIGURE 33 | **Subsidies granted by type of municipality and housing unit as of 2018**



SOURCE: Original calculations for this publication, based on data provided directly to the authors by the Ministerio de Vivienda, Ciudad y Territorio.

In particular, the market attractiveness and accelerated population growth of agglomerated cities has caused ABC subsidies to concentrate there. In 2018, there were 800 ABC subsidies in agglomerated municipalities for every 100,000 inhabitants, and almost 600 non-*Mi Casa Ya* interest-rate subsidies. In comparison, subsidies assigned to the smaller municipalities were insignificant – approximately 105 ABC and 76 interest-rate subsidies per 100,000 inhabitants.

This is not only a problem of quantity. Because the national government cannot infringe upon the autonomy of local governments, it has limited capacity for action in smaller municipalities; but often the institutional capacity of local governments is limited as well. All local entities rely on national programs and on funds provided by central agencies. The only resources they can mobilize for regional and local programs are oil and mining royalties distributed by the General Royalties System, but these need to be authorized by a tripartite committee comprising national, regional, and local entities. Some regional and local entities rely exclusively on transfers from the central government. Only Bogota is implementing a local program, called *Plan Terrazas*, aimed at providing local resources for housing necessities (see Recommendations section). Through programs such as *Mi Casa Ya*, subsidies to (for example) interest rates or leaseholders' funds are provided entirely by national entities.

Subsidies are allocated by demand, not assigned directly by the government; however, it is still of concern that the smaller municipalities – which have grown at a similar pace to the big-city agglomerates and have larger housing deficits – are not receiving a consistent amount of aid. As table 15 shows, the percentage of municipalities in each category benefiting from subsidies plummets as the population size falls below 100,000 inhabitants. Above this threshold, almost all municipalities benefited from some or all of the programs in 2018. However, less than one-third of the smaller municipalities benefited from each subsidy, and this proportion was lower than one-tenth for municipalities with fewer than 20,000 inhabitants.

While ABC programs relying on the private market have proven to be a valuable tool for Colombia's large cities and their agglomerations, they are clearly not as viable a solution for the country's smaller localities. Although ABC subsidies can be supplemented by housing subsidies from social security networks (SSNs), the latter subsidies also suffer from extreme geographic concentration. By 2019, 92 percent of SSN subsidies had been allocated to residents of only three departments, and 77 percent were assigned in Bogotá alone (see Chapter 3). Additionally, SSNs only benefit formally employed workers, and therefore a negligible number of low-income households can benefit from these subsidies at all. A revised housing policy must take into account the economic realities in small cities and towns, where households cannot access new housing through the formal, private market.

Rural areas, too, suffer from an acute shortage of housing subsidies. As discussed in Chapter 3, Colombia's rural housing policy has suffered from ongoing administrative issues, especially in the early 2000s. As a result of its complex institutional framework, the small number of subsidies that were successfully allocated were highly concentrated in municipalities, and a substantial proportion of projects were never completed or encountered legal obstacles. Those that were completed took years and incurred high costs. As of 2019, only 7 percent of subsidies were allocated to rural areas.

4.3.2 Imbalances in the Housing Deficit

The inequalities in subsidy allocation are evidenced by the geographic distribution of Colombia's housing deficit (discussed in detail in Chapter 1). Smaller municipalities have a housing deficit (especially a qualitative deficit) two to four times greater than that of larger cities, and four-fifths of rural households suffer from a housing deficit. As discussed in Chapter 3, the Ministry of Agriculture granted more than 12,200 rural housing subsidies on average every year between 2000 and 2019, and sometimes as many as 21,490 in a single year. These efforts, however, were not able to keep up with need: today, approximately 46 percent of all Colombian households with housing deficits are rural, even though rural areas are home to only about 20 percent of the population. Additionally, these regions have not shared in the improvements that urban areas have seen in the quantitative deficit since 2005: in rural areas, both quantitative and qualitative deficits have worsened.

For both small municipalities and rural areas, the imbalance in the housing deficit is especially acute in terms of the qualitative component. Unlike urban households, which tend to suffer from a few particular qualitative deprivations, rural households present a wide variety of qualitative issues. Housing policies that offer a one-size-fits-all fix for the qualitative deficit are thus unlikely to succeed. A comprehensive housing policy must provide tailored solutions specifically targeting rural areas.

4.4 Urban Planning, Land-Use Restrictions, and Regulatory Burdens

Since the introduction of Bill 388 of 1997, local governments in Colombia have increased their capacity to regulate the use of land within their boundaries, and to promote sustainable urban growth through land-use planning schemes. These are agreements that may be formalized into law, defin-

TABLE 15 | **Municipalities in each category with at least one interest-rate subsidy, 2018**

MUNICIPALITY CATEGORY	PERCENTAGE OF CATEGORY MEMBERS WITH AT LEAST 1 INTEREST RATE SUBSIDY	
	MI CASA YA	NON-MI CASA YA
>1 million	100%	100%
Agglomerated	100%	100%
300,000-1 million	92%	92%
100,000-300,000	80%	83%
20,000-100,000	31%	30%
<20,000	5%	7%
Total	18%	19%

SOURCE: Original calculations for this publication, based on data from Ministerio de Vivienda, Ciudad y Territorio.

ing and restricting certain kinds of activities in specific areas within cities, and actively promoting the development of affordable housing projects and public goods. In Colombia, land-use planning schemes are mandatory for all municipalities and require local officials to promote the development of affordable housing.

In practice, however, the development and implementation of land-use planning schemes have sometimes limited the production of affordable housing and generated suburbanization processes that limit the capacity of municipalities to provide adequate public goods and services. Furthermore, in many cases, these urban planning frameworks restrict and deter retrofitting interventions for existing low-quality housing units. Retrofitting has been challenging due to the neighborhood legalization process required, and zoning and risk restrictions impose a *de facto* clearance approach – seeking to resettle neighborhoods in risk areas – that is blocking more comprehensive urban interventions. A revised, rebalanced housing policy would need to address these issues to effectively improve and upgrade homes.

4.4.1 Land-Use Planning in Colombia

As with many other public policies in Colombia, land regulation duties were devolved to local municipalities in the 1990s. Since the adoption of the 1991 Constitution, local governments have been in charge of developing short- and long-term frameworks that guarantee the sustainable growth of cities and access to adequate housing. By defining land uses and limiting the areas where urban growth is permitted through Territorial Development Plans (*Planes de Ordenamiento Territorial*, or POTs), local governments are shaping new urban configurations.

All municipalities are required by law to develop a POT that ensures sustainable growth. However, the policy framework has indirectly caused a shortage of land available for formal housing development and resulted in disorganized urban growth, both within cities and across metropolitan areas. Consequently, land-use planning schemes have achieved mixed results across Colombian cities. Some municipalities have implemented weak frameworks that do not ensure the sustainable growth of cities. Other local authorities have limited the urban boundaries of their respective municipalities, creating a shortage of land and increasing housing prices.

The POTs of the most populated cities in Colombia, such as Bogota, Medellin, and Cali, have a defined objective of limiting urban sprawl, a policy that promotes land-price increases in the expansion zones. This policy seeks to incentivize urban redevelopment, but the consequence has been the expulsion of social housing to neighboring municipalities, and an increase in the cost of providing complementary public services.

As a result, and in contrast with the urbanization process of the 20th century, Colombia is now experiencing a process of *suburbanization*. Major cities are now growing slowly, while their exurbs and agglomerated municipalities have, on average, doubled their population in less than 15 years. More flexible land-use planning schemes and lower land prices in these areas have attracted new residents, and at a rate which may preclude the adequate provision of public goods and services. Developers are incentivized to build less-dense communities outside the urban core. Given this dispersion, the costs of providing public infrastructure – for example, public transportation – increase. New developments may be built in areas where public services are not yet available, with high sunk initial costs of provision and lower returns on investment compared with the economies of scale in compact cities.

In particular, major cities have not been able to provide enough land for housing projects targeted to low-income and middle-income families. There is an especially low supply of land earmarked for

social housing, in part due to a lack of capacity among local authorities to allocate land for social housing projects within the boundaries of major cities. Some researchers have also linked the shortage in social housing units to high land prices resulting from land restrictions (see García-Ubaque, Henao-Trujillo, and Vaca-Bohórquez 2014), which have increased development prices for low-income housing. Regulation schemes have failed to prevent these undesirable increases in land prices, making it harder for low-income households to access formal housing.

Accordingly, recognizing the inadequate supply of affordable housing, the national government has intervened in local markets by incentivizing alternative tools to enable social housing development. CONPES 3583 of 2009 established “Large-Scale Projects,” “Partial Plans,” and “Urban Units for Action” as alternative mechanisms for promoting the development of affordable housing. These mechanisms have had a noticeable impact on the provision of social housing, but their implementation has been slower than envisioned. According to Contreras Ortiz (2019), only 44.6 percent of the total area assigned for social housing through partial plans was developed between 2002 and 2015. Without sufficient affordable housing within major cities, families have relocated to agglomerated municipalities. This has short-term benefits in housing access, but authorities need to consider the future provision of public services and public infrastructure in areas that are being developed far away from the urban core, and the impact on private welfare resulting from increased commuting times.

Ultimately, a combination of both compact and extensive models is necessary within an effective land regulation framework. Local authorities need to ensure sustainable growth by limiting the available land for urban growth to a certain degree, but should also recognize when these constraints are limiting the production of affordable housing and actively promote alternative solutions, especially for the most vulnerable populations.

BOX. International Focus, Suburbanization, and the Limitations of the Acquisition Approach

Since 1992, the World Bank has shifted its focus to the promotion of housing finance and institutional strengthening, instead of bidding for retrofitting projects and services schemes. UN-Habitat’s World Cities Report 2016 notes that “this change of paradigm implied a shift from poor- to middle-income countries, from smaller to larger loans, and from sites and services or slum upgrading to mortgage refinancing. The result has been a shift in the international agendas, moving towards the objective of increasing home ownership. In the last years, a growing interest in urban resilience and the New Urban Agenda resulted in a redefinition of priorities towards neighborhood upgrading” (UN-Habitat 2016, 52).

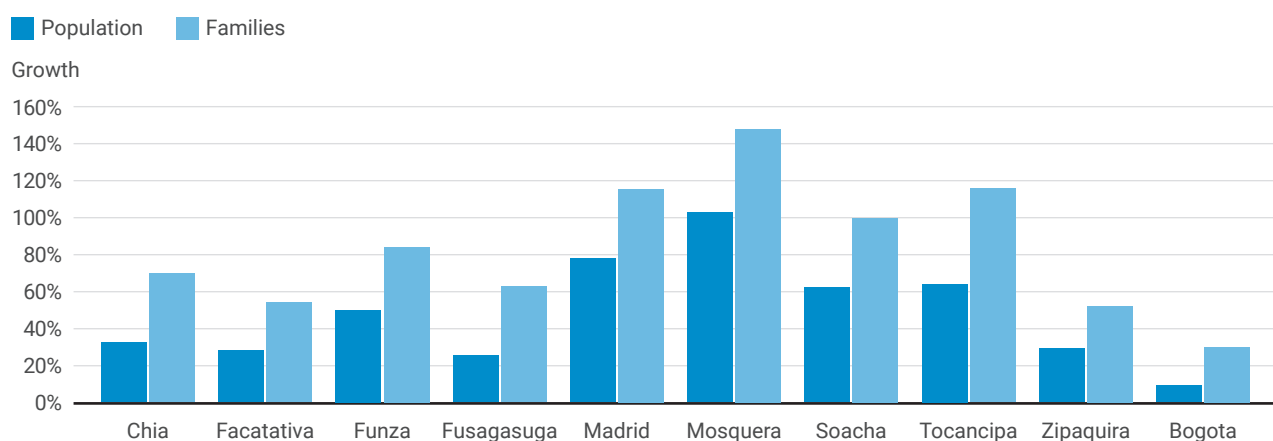
For countries still undergoing urban growth, encouraging or enabling urban sprawl by initiating new social housing projects on urban outskirts is a scale solution for housing supply. However, this strategy comes with a significant downside, as distance to the city center has a strong impact on households’ expenses and access to social networks. Peripheral location essentially doubles commuting costs and triples commuting time over those of centrally located households. Additionally, while governments are investing large sums in developing the network infrastructure and urban services and amenities required by expansive areas in the periphery, they are neglecting the under-utilized or empty urban land within the existing urban footprint, particularly the inner-city areas (Rojas 2015).

4.4.2 Land-Use Planning Schemes and Urban Growth: The Cases of Bogota and Cali

One way to illustrate how land-use planning schemes can shape urban configurations is to assess urban population growth in a metropolitan area, comparing how fast the agglomerated municipalities are growing in relation to the central node of the city system. Below is an overview of case studies for Bogota and Cali.

Bogota's metropolitan area encompasses nine surrounding municipalities. The 2005 census recorded a population of 7.7 million across the metropolitan area. That year, 13 percent of this population was located in the surrounding municipalities; by 2018, this share had increased to 20 percent. Similarly, Cali's population growth rate has been much lower than that of its agglomerated municipalities. The city's neighboring areas grew by 172,000 people from 2005 to 2018, surpassing Cali's population growth of 156,000 during the same period.

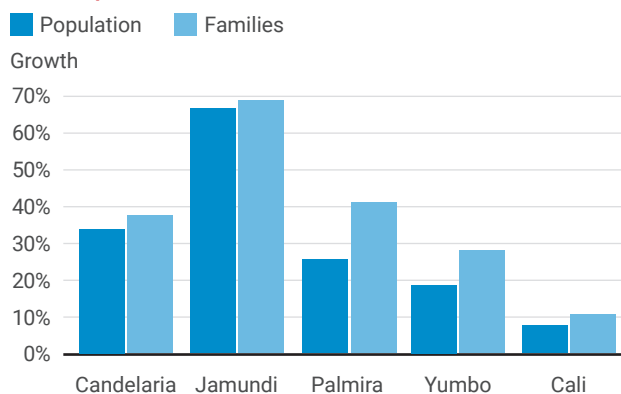
FIGURE 34 | Population growth in Bogota's metropolitan area, 2005–2018



SOURCE: Original calculations for this publication, based on data from DNP and the 2005 and 2018 census (DANE 2016, 2019a).

For both Bogota and Cali, the same decentralized growth pattern can be seen in the availability of social housing. As shown in figure 36, neighboring municipalities have experienced denser social housing sales than Bogota in the period 2016–2020, despite having a much lower population in absolute terms. The largest proportion of social housing construction is not concentrated in the zones established in the POTs as areas of urban expansion. In the case of Cali, a notable portion of this growth has occurred in agglomerated municipalities, despite the fact that the area of social expansion in the south of the city has not yet been fully developed.

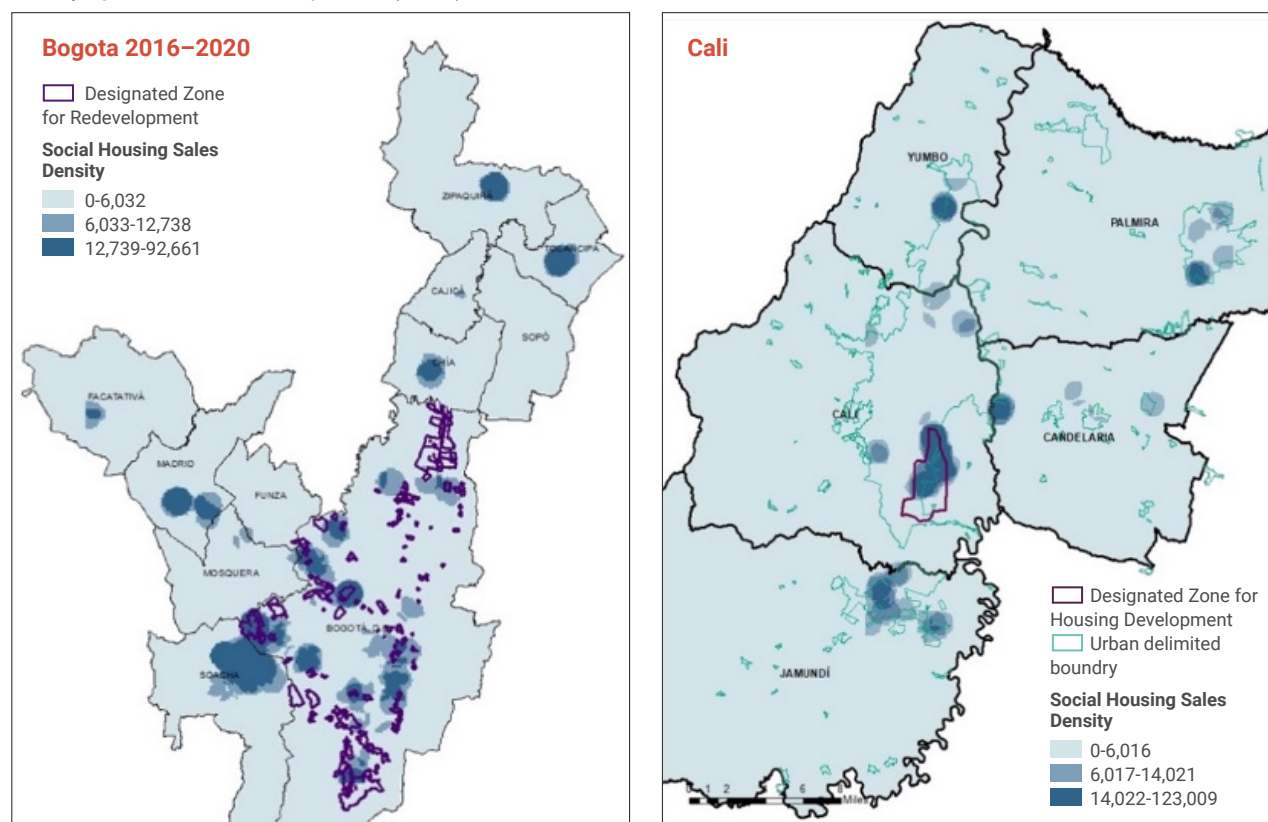
FIGURE 35 | Population growth in Cali's metropolitan area, 2005–2018



SOURCE: Original calculations for this publication, based on data from DNP and the 2005 and 2018 census (DANE 2016, 2019a).

FIGURE 36 | **Density of social housing sales in metropolitan areas of Bogota and Cali**

Density figures are broken into quartiles (Jenks).



SOURCE: Original calculations for this publication, based on data provided directly by Galeria inmobiliaria.

This suburbanization process and asymmetry in social housing availability can be partially attributed to desynchronized land-use planning schemes. Unlike, for example, Medellin or Bucaramanga, Bogotá and Cali do not share a unified land-use planning scheme with the smaller municipalities that surround them. Every municipality develops and implements different land-use planning schemes, which may generate unsustainable urban growth and inefficient land use from a regional perspective. The land available in the central nodes for the development of affordable housing is limited, incentivizing growth in areas where, although prices are lower, a medium-term burden on public services provision may be imposed.

4.4.3 Zoning Restrictions in Areas with High Natural-Hazard Risk

Although Colombia's housing policy is inclined toward the acquisition approach, it does include upgrading programs as well. However, their effectiveness is limited by restrictive regulations regarding neighborhood and home upgrading.

The key factor for a successful home upgrading process is the assessment of risk to determine how mitigable it is. The United Nations Office for Disaster and Risk Reduction (UNDRR) defines disaster risk as, "The potential disaster losses, in lives, health status, livelihoods, assets and services, which could occur to a particular community or a society over specified future time period" (UNISDR 2009). The following section will be based on this broad sense of "risk" as defined by the UN. Additionally, "mitigation" is defined as "the lessening or minimizing of the adverse impacts of a hazardous event. Mitigation measures include engineering techniques and hazard-resistant construction as

well as improved environmental and social policies and public awareness” (UNDRR 2021). The concept of “mitigable” risk is crucial to determining whether areas are fit for retrofitting interventions.

Home retrofitting in Colombia is now regulated by Decree 867 of 2019, the objective of which was to simplify the process and reduce administrative restrictions. Title regularization is not required – a regulatory change that is a step in the right direction – but families have to demonstrate that they have been living in a peaceful manner on the property for at least five years, and that the neighborhood has been legalized or is in the process of being so. Retrofitting has proven to be challenging due to the neighborhood legalization procedure, which requires certainty that water and sanitation can be extended to the area and, critically, that the neighborhood is not situated in a hazardous area – that is, an area highly exposed to potential natural hazards.

This is a major barrier, since, according to estimations for three cities in Colombia (Neiva, Soledad, and Cartagena), 40 percent of households living in deficit are located in mitigable risk zones. By improving specific environmental characteristics, the hazard risk and vulnerability of these families would be considerably diminished – but there is little opportunity to improve the homes. Construction and upgrading processes are restricted, as local governments do not want to be held accountable for human and material losses due to possible natural hazards in areas labeled as risk zones. The main reason for this low political will to engage in retrofitting programs is limited information. The lack of data precludes an appropriate risk assessment. Because they follow action and omission principles, governors and mayors do not have technical instruments that quantitatively assess risk to support urban interventions in informal settlements.

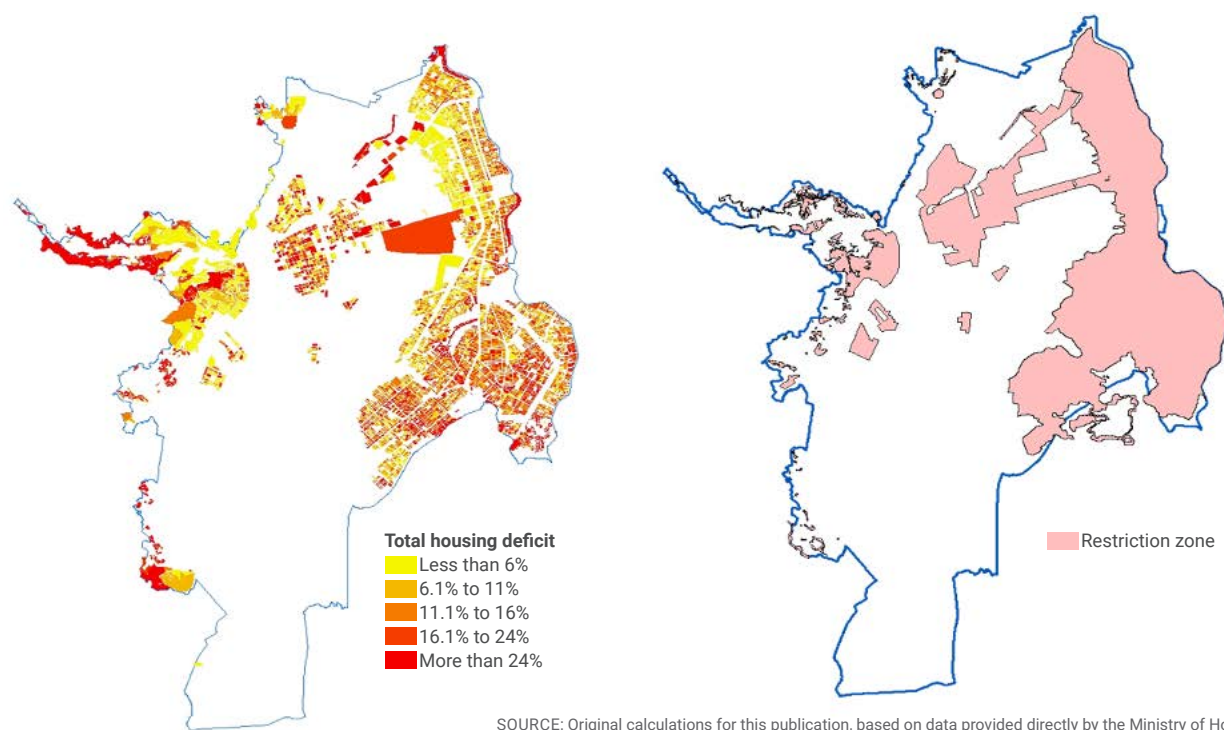
Government restrictions on improving consolidated neighborhoods in vulnerable zones create high barriers for reducing the housing deficit of families living in these locations. These barriers could be overcome by assessing how mitigable the risks are in areas previously classified as vulnerable zones based on their hazard and vulnerability level. With retrofitting initiatives unfeasible, the remaining policy alternative is neighborhood relocations although risk assessment is also necessary to relocate families. However desirable relocation may be, it is virtually impossible most of the time, given its high costs to the Colombian fiscal system. Families therefore remain in deprived units located in natural disaster exposed zones.

The effect of this strategy on the housing deficit can be seen in three cities targeted by the Ministry of Housing for interventions in 2019: Cartagena, Cali, and Neiva. (The methodology and full results of this analysis are available in Annex E.) Each faces a different set of major natural hazards and has instituted zoning restrictions for retrofitting processes.

Our analysis of these three cities quantified¹⁵ the number of housing units with deficits that were located in retrofitting-restricted areas, in both mitigable and non-mitigable risk zones. In Cali, 35,129 households with unmet basic conditions are located in these areas; in Cartagena, 41,928; and in Neiva, 5,172. In other words, approximately 44 percent of deprived families are located in risk zones. This high proportion makes relocation policies fiscally non-viable. It would cost an estimated US\$774 million for Cali's local government to relocate all exposed units.

However, most of these units are located in zones where the risk is mitigable: 90 percent in Cali, 86 percent in Cartagena, and 72 percent in Neiva. The Ministry of Housing rejected areas considered medium-risk or mitigable high-risk, and areas that were not suited for upgrading according to the Territorial Development Plan (POT). However, the risk conditions of units in these areas can be ameliorated – and the current risk zones and zoning restrictions are preventing reduction of the housing deficit. To illustrate, figure 37 juxtaposes housing deficit and restricted zones in Cali. (For further detail, see Annex E.)

FIGURE 37 | Unified restriction zone and housing deficit, Cali



There is no standard mechanism to evaluate risk; every study defines risk depending on the vulnerability being analyzed. However, the final result of broad restrictions indifferent to risk level is an almost perfect match between risk areas and households in deficit. Risk-area restrictions, by limiting upgrading and improvement interventions, are sustaining the very high incidence of housing deficit in low-income neighborhoods

¹⁵ Given the information provided by the Housing Ministry under the CDVD's assessment program, which classifies areas according to their risk level (low, medium, high) but does not evaluate their degree of mitigability based on an objective methodology, we opted to classify mitigable risk areas as those that present low and medium levels of risk. This classification is subject to further evaluation under a more robust analysis that implements quantifiable indicators. See Annex E for further details.

BOX. Risk Management Framework for Neighborhood and Home Upgrading in Colombia

Urban sprawl of informal settlements is a given in most Colombian cities, and it must be addressed if quantitative housing deficit is to be reduced through upgrading programs. Given this reality, the consideration of risk levels in informal settlements must be balanced with the policy objective of improving housing conditions. Therefore, the framework by which upgrading programs are regulated in POTs must be transformed, moving from a restrictive approach toward one that enables the administration of new programs to reduce both risk and housing deficit.

In terms of risk management, the best way forward is to carry out appropriate, detailed studies, analyze the occupation alternatives, apply management instruments, and implement urbanization projects or processes adapted to the region. In cases of illegal urbanization or informal growth, urban regulations should focus on permitting the application of management instruments that mitigate risk, consolidate the infrastructure of public services, and make housing improvement interventions feasible. However, current regulations limit the regulatory, financial, and licensing management instruments that are necessary to enable legalization, neighborhood and home upgrading, and the construction public services infrastructure and public space.

Historically, municipalities in Colombia have defined risk areas based on precautionary and prevention principles, with little detailed information, and with restrictive regulatory instruments and weak urban control mechanisms.

The restrictions resulting from the normative processes in areas of informal origin have only resulted in more informality, higher risk, and therefore further deterioration in the quality of housing. In 2014, the central government established the necessary requirements for a suitable risk assessment process under Decree 1807, which promotes the development of basic and detailed risk analysis at a municipal level, to be incorporated in the POTs

The current high levels of urban informality require a better policy framework for retrofitting policies that directly impact the qualitative housing deficit and address risk. Institutional coordination is required for upgrading instruments, plans, and programs to achieve their expected impact. Institutions must also consider detailed studies that acknowledge current conditions and assess the potentiality of plans and projects. To the extent that the detailed studies consider general guidelines, homogeneous technical conditions, and geographic scales of analysis, it will be possible to achieve economies of scale for financing (beyond the regulation described in Decree 1807 of 2014). Guidelines must clearly differentiate between mitigable and non-mitigable risk areas. If the requirements for safe upgrading exceed the technical and financial capacities of the municipalities, it will be difficult to move forward.

4.4.4 Additional Challenges for Implementation of Upgrading Programs

Colombia's high rate of informality results in a concomitantly high percentage of informally drafted titles. According to the General Integrated Households Survey (GEIH), 15.74 percent of the population in urban areas lack property rights to their home.¹⁶ In 2019, the Ministry of Housing conducted a diagnosis of the 15 cities participating in the home-retrofitting and neighborhood-upgrading program (*Casa Digna, Vida Digna*). These are cities with over 100,000 inhabitants that experience the high level of title informality common in Colombia. Private titles represent 55 percent to 91 percent of total titles in these cities (see table 16). The rest of the areas are classified as land that belongs to the Ministry of Housing, other national or local public entities, and common land that has been occupied.

¹⁶ No legal title or usufruct.

In addition to lacking legal titles, houses in informal areas have often been constructed incrementally, since this kind of housing

“Enables households to enlarge and improve their housing progressively, as needs dictate and as their financial circumstances allow. As a result, however, these houses vary considerably in size and quality. In most cases, only a small proportion of this type of housing conforms fully with formal legal, regulatory, and approval requirements and procedures.”

(Bah, Faye, and Geh 2018, 247)

Attempts to upgrade informal areas and provide adequate housing in such neighborhoods face multiple barriers. Regional challenges prove instructive to understanding these issues. In a literature review, McTarnaghan et al. (2016, 16) report that “García (2001), for example, finds that the development of informal settlements over several decades in Monterrey, Mexico, was linked to the absence of planning and urban management instruments; the municipal authorities had no mechanisms to meet the demand of low-income households for urban land.” The review additionally points out that improper infrastructure is another barrier. Inadequately constructed units will face higher individual costs, especially if they are located on slopes or in other risk areas (Abiko et al. 2007).

Renewed efforts to invest in home and neighborhood upgrading should ensure that self-construction complies with a minimum set of safety standards. At the same time, these policies must be careful not to unnecessarily increase costs or make the process prohibitively demanding. Though the challenges faced by Colombia’s current housing policy are significant, a comprehensive, balanced policy would be able to address them sufficiently to reduce the housing deficit and raise quality of life for Colombians in need.

4.5 The Venezuelan Migration Crisis

4.5.1 The Venezuelan Migration: An Unprecedented Event

The recent Venezuelan migration has become one of the largest migrations in the history of Latin America, encompassing over 5.1 million people in the last five years (UNHCR 2020). As Venezuela’s closest neighbor, Colombia is the most common destination for this population, and had received an estimated 1.9 million Venezuelans by the end of 2019.¹⁷

While the circumstances leading to the recent Venezuelan and Syrian migrations are not compara-

TABLE 16 | Land classification in Colombian cities

Ministry of Housing land is a subset of private land.

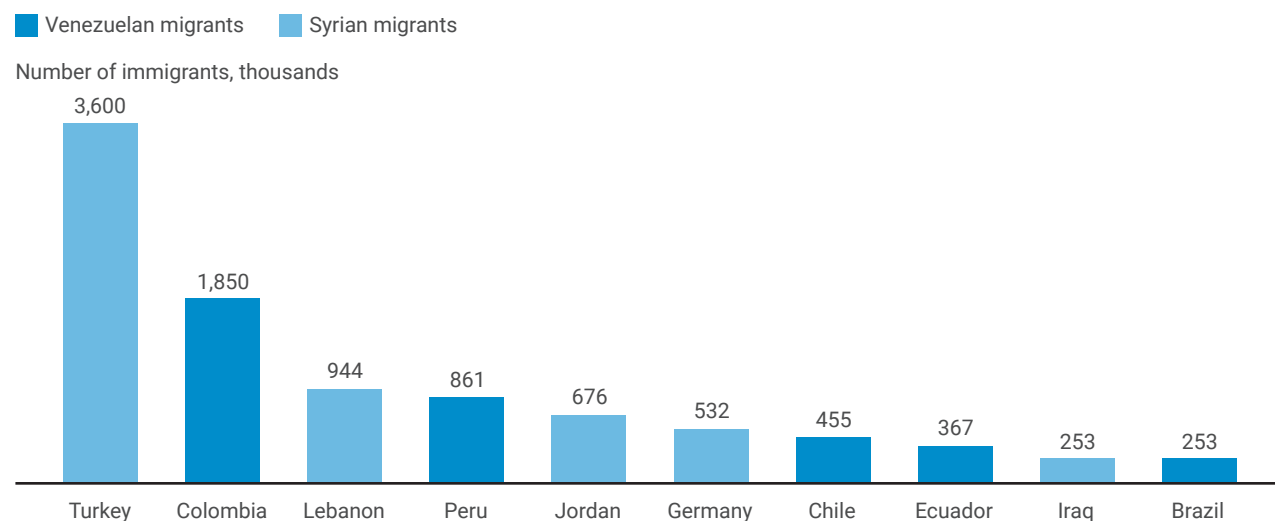
CITY	PUBLIC LAND	PRIVATE LAND	COMMON LAND	MINISTRY OF HOUSING LAND
Arauca	16.4%	79.4%	4.2%	–
Armenia	7.4%	82.3%	10.3%	11%
Buenaventura	43.0%	55.0%	2.0%	6%
Cali	1.6%	96.8%	1.3%	20%
Cartagena	18.2%	78.8%	3.0%	7%
Girón	7.3%	81.7%	11.0%	5%
Ibagué	8.9%	82.6%	7.7%	5%
Neiva	10.8%	79.4%	9.8%	2%
Pasto	2.2%	79.1%	18.7%	11%
Riohacha	17.7%	77.1%	5.1%	6%
Rionegro	–	–	–	2%
San José	3.6%	77.2%	19.2%	1%
Santa Marta	23.4%	97.5%	9.0%	10%
Soledad	6.2%	91.0%	2.8%	4%
Tunja	2.1%	89.6%	8.3%	3%
Valledupar	4.0%	78.2%	17.8%	11%

SOURCE: Ministry of Housing.

¹⁷ This estimation was made from the General Integrated Households Survey (GEIH). Even though different entities – UNHCR, IOM, and Migración Colombia, among others – have different estimations, all range from 1.8–1.9 million Venezuelan migrants in Colombia as of December 2019.

ble, their relative magnitudes demonstrate the severity of the Venezuelan migrant crisis. Figure 38 compares the number of Venezuelan migrants with the number of Syrian refugees hosted by the top five receiving countries in each region. Colombia has received the equivalent of half of the Syrian refugees registered in Turkey since 2011, and other Latin American countries have received a similar number of migrants as their Middle Eastern counterparts.

FIGURE 38 | **Venezuelan migrants compared with Syrian refugees by country, 2019**



SOURCE: Original calculations for this publication, based on data from UNHCR and IOM 2019.

In a mass migration, the housing conditions of the migrant population can become a powerful determinant of their quality of life. As migrants arrive in crowded cities, attracted by greater chances of employment than in small towns and rural areas, they tend to settle on the cities' outskirts, where informal housing and low-quality public services are common. Even after they have begun to establish themselves in informal settlements, or have rented a place to live, migrants continue to suffer from both qualitative and quantitative housing deficit. In Colombia, the vulnerable Venezuelan migrant population faces circumstances characterized by low income, informal jobs, and restricted access to public services such as health, education, and social security.

The current crisis has been unforeseeable in nature and unprecedented in scale. As such, Colombia's current housing policy has no provisions to enable these migrants to access housing. Most Venezuelan migrants in Colombia do not have access to housing subsidies, largely as a result of illegal immigration status and informal employment. But this crisis also represents an opportunity for housing policy in Colombia. By developing policies that improve access to housing for migrants with irregular immigration status and informal employment, Colombia can improve quality of life not just for displaced Venezuelans but also for the vulnerable among its own population.

4.5.2 Housing Deficit among Venezuelan Households in Colombia

Annex F comprehensively compares the housing deficit of Venezuelan migrant households with that of their Colombian counterparts. The analysis is broken down by type of deficit (qualitative or quantitative) along a range of dimensions, including education level, income, tenancy condition, and municipality. The results demonstrate that Venezuelan households experience a higher housing deficit than their Colombian peers across all dimensions. For example, in each income decile and at nearly every education level, the qualitative and quantitative deficits of Venezuelan migrants are higher than

the corresponding figures for comparable Colombians. There are, however, differences in the deficits' compositions. While the average Colombian household lacks access to public services such as sewerage and garbage disposal, Venezuelan migrants are more often located on the outskirts of capital cities, where these services are provided. Their housing deficits instead revolve around cohabitation and overcrowding.

Venezuelan migrants also register lower incomes than Colombians, although a smaller proportion of their income is directed towards housing. This is related to the significant differences in housing tenure between the populations: 88.4 percent of Venezuelans are leaseholders, compared with only 39.5 percent of Colombians. For these reasons, a public policy aimed at improving the living and housing conditions of Venezuelan households should be focused on reducing cohabitation and overcrowding, and should take into account the needs of leaseholders and the characteristics of their households.

4.5.3 Access to Housing Policies for Venezuelan Migrants

The government of Colombia and various international agencies have implemented an array of programs intended to assist Venezuelan immigrants; these programs are focused largely on humanitarian care, food assistance, education, and health services (see Annex F). Although multiple programs have been implemented to improve migrants' sanitation conditions and water-supply access, few efforts have focused on the housing problems that Venezuelan households face. Their inability to access housing often forces migrants to settle in vulnerable geographical zones or live in high-risk housing conditions.

A large proportion of Venezuelan immigrants are excluded from housing policies, with the main restrictions related to legal status and formal employment. Colombia's current housing policies are designed for Colombian households, including the subsidies for priority-interest housing for families with earnings below the minimum wage. Access to other housing policies – including social-interest housing, interest-rate subsidies, and leaseholders' funds – requires a link to formal employment. For instance, social-interest housing is targeted at families with savings validated by a Family Compensation Fund (CCF). Since most Venezuelans are informally employed, they are unable to access any of these subsidies.

Low income also restricts migrants' access to housing. As discussed above, Venezuelan migrants tend to have lower incomes than their Colombian counterparts. In 2019, 61.8 percent of Venezuelan migrants earned less than two minimum wages. Just as for Colombians, their low income significantly restricts this population's access to the benefits provided by current housing policies.

Legal status is the other key requirement for accessing national housing policies. *Migración Colombia* assigns legal work permissions through three main mechanisms: (i) nationalization; (ii) asylum; or (iii) special permissions for permanence. Though Venezuelans who formalize their legal situation can access formal work opportunities and benefit from housing policies, almost 56.7 percent of Venezuelan immigrants do not have legal status in Colombia. Additionally, immigrants' lack of documentation is a bureaucratic barrier when the time comes to buy or rent a residence – particularly since they cannot use their land or houses in Venezuela as collateral for credit or rent contracts.¹⁸

No current laws provide a direct solution for Venezuelan migrants' housing needs. The only way that Venezuelan households have been able to access a housing solution is through the Family Housing

¹⁸ The Colombian government has attempted to address this issue through the creations of the Registry of Foreign Workers in Colombia (RUTEC), a database of legal-status migrant workers. See Annex F for details.

Subsidy (*Subsidio Familiar de Vivienda*). Provided by the national government, the subsidy consists of a one-time transfer for the sole purpose of enabling recipients to buy a new house, build one on their own property, or undertake home improvements.¹⁹ On the other hand, the CCFs can only allocate their subsidies to households with formal earnings of between one and four minimum wages, with the restriction that none of the family members has previously received a housing subsidy or is already a homeowner. Moreover, families earning between two and four minimum wages need to prove savings in order to access the subsidy. Venezuelan immigrants who could apply for the Family Housing Subsidy are thus a very small proportion of the total. Those Venezuelan immigrants with legal status who may access the subsidy use it mainly for leasing.²⁰ The rest have no access to housing solutions through current policies.

To fill this gap, the Ministry of Housing and the World Bank are implementing a range of solutions for migrants as part of the Resilient and Inclusive Housing Project (World Bank 2021b). The project has three components. Migrants with monthly rental payments less than 40 percent of a monthly minimum wage are eligible for a 100-percent subsidy on their rent for up to a year. In addition, the project aims to increase the number of units available on the rental market by providing retrofitting subsidies for Colombian families to fund improvements or expansions, creating additional adequate units to be rented to Venezuelan migrants. Finally, the project enables the Colombian government to invest more than US\$35 million in upgrading neighborhoods by building recreational and social infrastructure. These facilities will help not only migrants, but the communities of which they have become a part.

¹⁹ There are some exceptions to these restrictions: displaced and victim populations may apply for the subsidy and use it for leasing, or to buy previously owned homes.

²⁰ Recently, the Constitutional Court protected the housing rights of a Venezuelan man and his family, who were living in a provisional shelter in Cucuta (Statement T-459/16 of the Constitutional Court; see <https://www.corteconstitucional.gov.co/relatoria/2016/t-459-16.htm>). The Court ordered the Family Compensation Funds based in Norte de Santander to provide a subsidy for the family's rent. But this case does not represent a common scenario for Venezuelans, either because of their income or because of their legal status.



CHAPTER 5:

Cost-Effective Policy Solutions

5.1 Complementing Current Policy: The Need for a Balance of Approaches

Acquisition-approach policies are a fundamental strategy for housing in Colombia. ABC subsidies, for instance, are an effective and transparent mechanism for incentivizing homeownership and deepening the mortgage market, both of which are useful for the consolidation of the middle class. However, as we have seen, they exclude informal and low-income groups and focus primarily on the quantitative housing deficit and on large cities. They are often unable to address the housing deficit for those populations and in those areas that need it most. On its own, then, the acquisition approach is insufficient to solve the housing deficit.

Indeed, no single policy approach can hope to fully eliminate the housing deficit. The problems discussed in the previous chapter – the lack of solutions for low-income groups and migrants, a shortage of formal housing and a concomitant surge in informal neighborhoods, underserved rural areas and smaller municipalities, and burdensome regulatory processes and land-use restrictions – are complex. Solving them will also be complex. However, significant improvements to Colombia's current housing policy – which since 2018 have already begun to be implemented – can be made to better address or even overcome these problems.

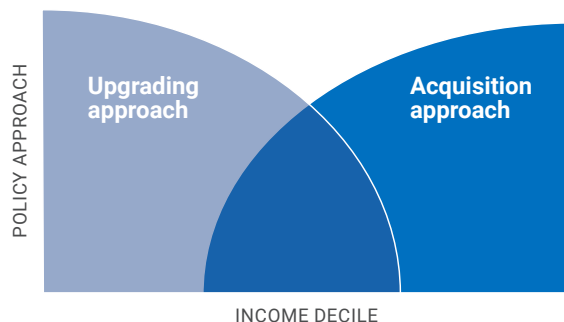
The key is a more balanced housing policy, one with more investment in the upgrading approach. Colombia's historical targeting of the quantitative housing deficit through the acquisition approach has led to an imbalance in the housing deficit. Across the country, the qualitative deficit is now more severe than the quantitative deficit. It is thus important to shift the balance, and to design holistic, comprehensive upgrading approach policies, which address the qualitative deficit and can potentially reach all geographical areas and demographic groups.

The upgrading approach – focused as it is on home retrofitting and neighborhood upgrading – is an effective and viable alternative to acquisition for households at the bottom end of the income distribution. These policies specifically target population segments without the characteristics required to access a housing loan (see figure 39). A balanced development of both policy approaches is therefore needed to accomplish both poverty reduction and middle-class consolidation.

FIGURE 39 | Reach of the two policy approaches by income group

Upgrading approach

- Supplies housing solutions that address qualitative deficit and housing deficit in rural areas
- Requires that the household has a house that needs improvements



Acquisition approach

- Supplies housing solutions that address the quantitative deficit and housing deficit in urban areas
- Relies on beneficiaries having access to financial markets and on the supply of affordable housing projects in the private market
- Excludes rural areas, low-income groups, and urban areas with insufficient housing supply

SOURCE: Original figure for this publication.

As discussed in the previous chapter, the acquisition approach has also historically excluded immigrants, mainly due to legal restrictions. For informal immigrants, even once their legal obstacles are resolved (which has been a priority for the Colombian government), their income level and informal jobs still disqualify them as beneficiaries. To address these challenges, as discussed in Chapter 4, a new initiative led by the Colombian government and the World Bank is helping improve access to housing for migrants through a three-pronged approach: rental subsidies, retrofitting subsidies to increase the number of rental properties on the market, and neighborhood upgrading. Though the upgrading approach alone will not help informal immigrants procure new homes, it can help them improve their current housing conditions. Upgrading and retrofitting programs may therefore help Colombia address the ongoing housing crisis for Venezuelan migrants.

Even for other minority groups, upgrading programs would be a welcome addition to Colombian housing policies. It is true that both policy approaches can be accessed by minority groups – and there are even some resources targeting certain minorities, such as the rural housing programs for PDET (Municipalities Specially Affected by the Armed Conflict) municipalities. However, Colombian minorities – like the country overall – suffer predominantly from qualitative housing issues, and these are the issues that the upgrading approach is better equipped to address.

This approach can also fill some of the gaps left by the shortage of formal housing. A more balanced housing policy would offer a complement to acquisition-approach programs that provide new housing through the overwhelmed formal housing sector. By investing in the upgrading approach as well, the government can reduce the number of families that need completely new housing by remediating their current residences and making them safe to inhabit. At the same time, it can improve conditions in the informal neighborhoods that have expanded to satisfy the unaddressed demand, especially in large cities and their agglomerations.

For the most part, ABC programs that rely on the private market are a valuable tool in highly populated urban areas. But they are not an effective solution for rural areas and small cities and towns. As discussed in the previous chapter, the formal market is limited in smaller municipalities because they are less attractive for private contractors. To this end, focusing on existing infrastructure in these areas through retrofitting programs is a key alternative. To tackle demographic changes and the geographic limitations of the private market, Colombia's housing policy needs to give the upgrading approach due priority.

Bridging this gap and designing effective ways to reach neglected populations should become a priority for both local and national authorities. In view of this goal, Annex G proposes a prioritization index to guide policymakers in focusing on areas with a more acute shortage of formal housing, recognizing that a revised housing policy has to be balanced between the two policy approaches. For big cities and agglomerations, the index indicates where government efforts to incentivize the formal market should be focused. In smaller municipalities, however, the government should reallocate both its efforts and its budget toward the upgrading approach: retrofitting the existing housing stock.

5.2 Cost-Effectiveness of the Two Approaches

Putting more emphasis on upgrading programs may therefore help target some of the primary issues keeping Colombia's housing deficit levels high. Moreover, this hybrid approach is likely to better address the housing deficit at a lower cost than the acquisition approach alone. Below, we compare the relative cost-effectiveness of upgrading-approach and acquisition-approach programs for resolving Colombia's housing deficit. Ensuring that housing policy is cost-effective is especially critical today considering the convergence of two major factors influencing housing expenditure: Colombia's fiscal constraints, and the economic impact of the COVID-19 pandemic.

5.2.1 Fiscal Restrictions and Housing Expenditure

Colombia is currently undergoing the biggest fiscal shock in its recorded history, and this will limit the possibility of implementing additional programs. The global economic downturn resulting from the COVID-19 pandemic will reduce the public and private resources available, leading to a higher fiscal deficit, especially in developing countries like Colombia. In this scenario, governments can decide to cut expenditure and investments or to become indebted.

Colombia has a target annual deficit established by the fiscal rule (Bill-1473 of 2011), which was suspended through a crisis clause for the years 2020 and 2021 as a result of the impacts of COVID-19. In 2020, according to the Medium-Term Fiscal Planning Framework, national government debt increased from 50.3 percent of GDP in 2019 to 65.6 percent (Ministerio de Hacienda 2020). The adjustment in years to come will be severe. Government income will have to increase from 15.6 percent in 2020 to 17.4 percent in 2022. In order to achieve this, the government is planning to privatize 1.7 percentage points of GDP in 2021 and 2022. Expenditure will have to be reduced from 23.8 percent of GDP in 2020 to 19.9 percent in 2022. Public investment outside emergency expenditures will be reduced from 1.9 percent of GDP in 2020 to 1.3 percent of GDP in 2022. These non-emergency expenditures are what will finance investments in housing by the national government.

How Colombia will return to the path toward a sustainable deficit is still a crucial challenge to be solved; nonetheless, the current housing situation demands drastic action. The national government and the housing sector, however, are subject to strict spending restrictions. Future commitments (*vigencias futuras*), an instrument that secures future procurements and investments and cannot be reduced without complex contract restructuring, represents 1.1 percent of GDP in 2021, 0.9 percent in 2022, and 0.7 percent between 2023 and 2025. The largest share of future commitments between 2021 and 2048 is planned for infrastructure and transportation, at US\$23 billion, or 82.3 percent of the total. The second-biggest sector is housing and water and sanitation at US\$2.8 billion, 10.1 percent of the total. The Ministry of Housing has future commitments for US\$530 million in 2021, US\$501 million in 2022, and US\$456 million in 2023. Expected expenditures in housing and water and sanitation are mostly concentrated on housing subsidies, specifically interest-rate subsidies, down-payment subsidies, and rental subsidies with saving incentives (i.e., FRECH, *Mi Casa Ya*, and *Semillero de Propietarios*). The rural housing program has its own specific targets and additional resources that will need to be discussed by CONFIS (the *Consejo Superior de Política Fiscal*, the highest fiscal authority in the country). Additionally, the government launched a program intended to provide 100,000 subsidies for non-social housing, at a cost of US\$1 billion in nominal terms between 2020 and 2022 (to be paid until 2029).

Public expenditure in Colombia is also very inflexible for a variety of other reasons. It is constrained, especially for the central government, by the constitutional regional transference scheme, the obligation to contribute to the pension system's financial gap, national debt repayments, and other legislatively and judicially mandated fiscal requirements (Bernal et al. 2017). For this reason, the only component that can be adjusted tends to be investment expenditure. Thus, social investment – including housing expenditure – is one of the budgetary sectors most vulnerable to crises such as the current pandemic, and the government has very limited options when adjusting the budget to its priorities.

5.3.2 The Cost of Eradicating the Housing Deficit

Given that public resources in Colombia are so limited (Bernal et al. 2017), it is very important to understand the total cost needed to eradicate the housing deficit, and to ensure that spending on hous-

ing is as cost-effective as possible. As noted previously, most housing programs from 2011 to 2018 (the free housing programs PVG-I and PVG-II; FRECH; VIPA; *Mi Casa Ya*; and *Semillero de Propietarios*) were focused on the quantitative deficit, and these have historically accounted for almost all of the national housing budget. Only in 2019 did the upgrading-approach program *Casa Digna, Vida Digna* begin operations. In the context of Colombia's fiscal restrictions and the COVID-19 economic crisis, it is helpful to compare the cost-effectiveness of these different programs in addressing the housing deficit.

Table 17 shows how much it would potentially cost to reduce housing deficit indicators via a selection of existing and proposed housing programs, with reference to the distribution of Colombian households by number of housing deprivations.²¹ The advantage of focusing exclusively on the ABC or free housing programs is that one action solves all the deficit components; however, such programs are very costly. While the upgrading-approach programs focus on a specific component and can therefore be more complicated to operate, they are more cost-efficient. The most cost-efficient method of solving the qualitative issue are microcredits – an instrument that has not yet been implemented in Colombia to its full potential.

The net present value (NPV) cost of eliminating the quantitative deficit in both urban and rural areas ranges from about US\$16 billion (by means of the most cost-efficient government subsidy scheme) to nearly US\$30 billion (through free housing alone). As table 16 shows, the free housing program is almost twice as costly as the ABC program with the current subsidies; but in rural areas the possibility of using the ABC programs is very limited, as it relies on the availability of social housing projects. Free housing should therefore be used only when the conditions for operating the ABC programs cannot be met.

On the other hand, the cost of eliminating the qualitative deficit in Colombia (for urban areas plus rural areas) ranges from US\$3.5 billion to US\$80 billion depending on the program. Clearly, using the acquisition-approach programs to solve the qualitative deficit is not cost-efficient, although a case may be made for using them when a household has a large number of deprivations. As table 17 shows, when a household has more than four components, the costs of subsidizing a new house are similar to those of a structural retrofitting. This implies that a more detailed analysis has to be performed to assess the best solution.

²¹ It is important to note that this is a top-down analysis that does not take into account particular circumstances present in rural or urban areas, or the particular characteristics of households.

TABLE 17 | Cost per program to completely eliminate the housing deficit (NPV, billions of US\$)

a. Urban

DEFICIT	NUMBER OF COMPONENTS IN DEFICIT	URBAN HOUSEHOLDS	ACQUISITION APPROACH			UPGRADING APPROACH		
			FREE HOUSING	HOUSING SUBSIDIES (MINISTRY + CCF)	HOUSING SUBSIDIES (MINISTRY)	STRUCTURAL RETROFITTING	NON-STRUCTURAL RETROFITTING	MICROCREDIT SUBSIDIES
Quantitative	Total	871,184	16.5	13.2	9.1	–	–	–
	1	775,866	14.7	11.8	8.1	–	–	–
	2	91,244	1.7	1.4	1	–	–	–
	3	4,014	0.1	0.1	0	–	–	–
	4	60	0	0	0	–	–	–
Qualitative	Total	2,360,525	44.8	35.8	24.6	11.7	4.4	1.8
	1	1,579,151	30	24	16.5	6.7	1.9	0.7
	2	418,407	7.9	6.4	4.4	2.3	1	0.4
	3	202,012	3.8	3.1	2.1	1.3	0.7	0.3
	4	99,453	1.9	1.5	1	0.8	0.5	0.2
	5	44,779	0.8	0.7	0.5	0.4	0.3	0.1
	6	14,684	0.3	0.2	0.2	0.1	0.1	0
	7	2,039	0	0	0	0	0	0

b. Rural

DEFICIT	NUMBER OF COMPONENTS IN DEFICIT	RURAL HOUSEHOLDS	ACQUISITION APPROACH			UPGRADING APPROACH		
			FREE HOUSING	HOUSING SUBSIDIES (MINISTRY + CCF)	HOUSING SUBSIDIES (MINISTRY)	STRUCTURAL RETROFITTING	NON-STRUCTURAL RETROFITTING	MICROCREDIT SUBSIDIES
Quantitative	Total	693,439	13.2	10.5	7.2	–	–	–
	1	671,874	12.8	10.2	7.0	–	–	–
	2	21,456	0.4	0.3	0.2	–	–	–
	3	109	0.0	0.0	0.0	–	–	–
Qualitative	Total	1,828,600	34.7	27.8	19.1	9.8	4.1	1.6
	1	833,038	15.8	12.6	8.7	3.6	1.0	0.4
	2	532,637	10.1	8.1	5.6	2.9	1.3	0.5
	3	303,848	5.8	4.6	3.2	2.0	1.1	0.4
	4	132,048	2.5	2.0	1.4	1.0	0.6	0.3
	5	25,678	0.5	0.4	0.3	0.2	0.2	0.1
	6	1,351	0.0	0.0	0.0	0.0	0.0	0.0

SOURCE: Original estimations for this publication, based on data from Census 2018 (DANE 2019a).

Note: The table shows the number of households in deficit (column 3) by the number of components in deficit (column 2) in order to assess costs of each program to eliminate the deficit. This top-down analysis assumes that each program can solve any component deficit type, with the exception of using the upgrading approach programs to solve the quantitative deficit.

Methodological note: The costs of each program used are described in table 17 where the NPV values are designated. For structural retrofitting, it is assumed that the initial intervention costs 18 monthly minimum wages, and each additional intervention costs 5 monthly minimum wages. Non-structural retrofitting costs 5 monthly minimum wages per intervention, and the microcredit cost is equivalent to subsidizing, for 5 years, a portion of the payment installments (5 monthly minimum wages) necessary to cover the intervention defined earlier. We used an exchange rate of Col\$3,700 to US\$1 and the 2020 monthly minimum wage level.

Table 18 details the deprivations that each program can potentially resolve and the cost of eliminating each. As before, the ABC programs are more cost-efficient than the free housing program for the quantitative deficit, while microcredits for retrofitting are the most cost-efficient option for eliminating qualitative deprivations.

The upgrading approach is also more flexible in the deprivations it can address. Wall material deprivations can potentially be solved by upgrading-approach programs, even if a structural improvement is required. In such a case, the upgrading approach can be used instead of the acquisition approach even though the component being addressed is quantitative. However, neither the acquisition-approach policies nor the upgrading-approach programs can address deprivations in garbage collection or energy supply, so Colombia's housing policy should be complemented by a comprehensive utilities policy that tackles these issues directly.

TABLE 18 | Cost per housing program to completely eliminate the housing deficit (NPV, billions of US\$)

a. Urban

COMPONENT	ACQUISITION APPROACH			UPGRADING APPROACH		
	FREE HOUSING	HOUSING SUBSIDIES (MINISTRY + CCF)	HOUSING SUBSIDIES (MINISTRY)	STRUCTURAL RETROFITTING	NON-STRUCTURAL RETROFITTING	MICROCREDIT SUBSIDIES
House type	0.2	0.2	0.1	–	–	–
Wall materials	6.2	5.0	3.4	1.4	0.3	0.1
Cohabitation	4.9	3.9	2.7	–	–	–
Non-mitigable overcrowding	2.7	2.1	1.5	–	–	–
Mitigable overcrowding	–	–	–	5.7	1.4	0.6
Floor materials	–	–	–	1.1	0.2	0.1
Kitchen	–	–	–	2.0	0.5	0.2
Water supply	–	–	–	1.9	0.2	0.1
Sanitation	–	–	–	4.3	0.5	0.2
Electricity	–	–	–	–	–	–
Garbage collection	–	–	–	–	–	–

b. Rural

COMPONENT	ACQUISITION APPROACH			UPGRADING APPROACH		
	FREE HOUSING	HOUSING SUBSIDIES (MINISTRY + CCF)	HOUSING SUBSIDIES (MINISTRY)	STRUCTURAL RETROFITTING	NON-STRUCTURAL RETROFITTING	MICROCREDIT SUBSIDIES
House type	0.1	–	–	–	–	–
Wall materials	11.8	–	–	2.7	0.5	0.2
Cohabitation	1.2	–	–	–	–	–
Non-mitigable overcrowding	0.6	–	–	–	–	–
Mitigable overcrowding	–	–	–	2.9	0.7	0.3
Floor materials	–	–	–	3.0	0.6	0.2
Kitchen	–	–	–	0.6	0.1	0.1
Water supply	–	–	–	4.5	0.4	0.2
Sanitation	–	–	–	3.3	0.4	0.2
Electricity	–	–	–	–	–	–
Garbage collection	–	–	–	–	–	–

SOURCES: Original estimations for this publication, based on data from Census 2018 (DANE 2019a).

Note: Complementing the last analysis, this table shows the cost of eliminating each deficit component, without taking into account whether a household has multiple components in deficit. The analysis is thus useful in comparing the cost of reducing each component between programs, but not in estimating the total cost of eliminating the deficit by program.

Methodological note: For structural retrofitting, it is assumed that 18 monthly minimum wages can be used to pay for one intervention, whichever it is. An exchange rate of Col\$3,700 to US\$1 and the minimum wage of 2020 are used.

Both analyses show that in order for a housing policy to be successful, it is important to have a portfolio of programs that specifically target a component and work in both urban and rural areas. In urban areas, the ABC programs are the most efficient for solving quantitative issues, and microcredits for retrofitting are most efficient for solving qualitative issues. In rural areas, the impracticability of ABC programs suggests the need to implement free housing or other schemes that do not depend directly on the private housing sector to address the quantitative housing deficit. Similarly, access to microcredits can be limited in rural areas, so the non-structural retrofitting program, financed 100 percent by the government, could be more useful for addressing the rural qualitative deficit. The costs of structural retrofitting programs depend on the structural necessities of each housing unit. Although ameliorating a housing unit's structure would not decrease housing deficit figures, it may be a necessary precondition for the implementation of non-structural retrofitting plans that *would* address deficit components.

A housing policy that includes upgrading programs as well as measures that enable housing acquisition will therefore be not only effective at reducing the housing deficit, but cost-effective as well. A comprehensive housing policy of this type will be accessible to all income levels and minority groups, including migrants. It will reduce over-reliance on the formal housing sector and address the shortage of new housing that has led to an upswing in informal neighborhoods, while simultaneously improving slums. If it addresses overly burdensome regulations and land-use restrictions, such a policy will reach the areas that are currently overlooked and the places that need housing solutions most, including rural areas and smaller municipalities. And if it is appropriately financed, as through subsidized microcredits, a housing policy with greater emphasis on the upgrading approach can be an efficient and effective expenditure of Colombia's very limited financial resources.

Moreover, a balanced, hybrid housing policy approach offers a range of co-benefits in poverty reduction, human capital accumulation, and economic expansion. The next chapter explores these co-benefits in detail.

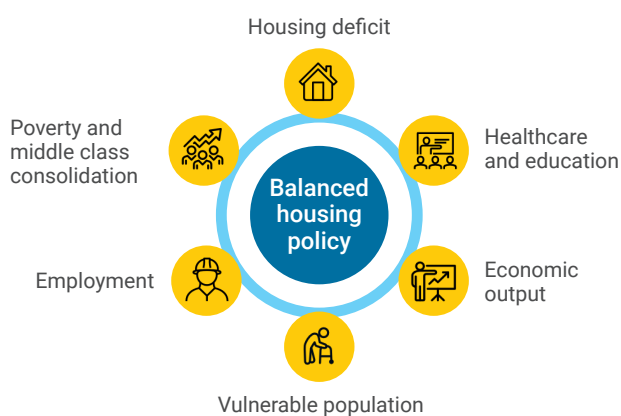


CHAPTER 6:

Beyond Housing: The Co-Benefits of a Balanced Housing Policy

Housing programs do more than ensure adequate shelter for a country's residents: a well-designed housing policy is also a social and economic policy, an instrument to catalyze improvement across sectors. Better housing is only one of the policy objectives a comprehensive housing policy in Colombia should entail. These policy objectives are summarized in figure 40: i) reducing the housing deficit, both qualitative and quantitative; ii) reducing poverty and consolidating the middle class; iii) boosting human capital accumulation by improving outcomes in healthcare and education; iv) increasing economic output; v) increasing employment demand; and vi) benefiting vulnerable populations like minorities and immigrants.

FIGURE 40 | Objectives of social housing policy in Colombia



SOURCE: Original figure for this publication.

This report has already discussed how a balanced housing policy can help Colombia achieve objectives (i) and (vi). But in addition to their direct impacts on the housing deficit and housing access, housing policies also have spillover effects on poverty reduction, employment and economic output, and human capital accumulation. The upgrading and acquisition policy approaches complement each other in each of these areas of concern. In terms of employment, for example, the acquisition approach incentivizes job formalization, generates high-quality, capital-intensive jobs, and fosters financial inclusion of the beneficiaries; the upgrading approach, on the other hand, is more labor-intensive per dollar spent.







Therefore, a comprehensive housing policy requires a balanced combination of both housing policy approaches – not only to successfully address the housing deficit but also to achieve broad improvements in other areas of Colombian society. This is made clear by figure 41, which shows the extent to which each policy approach fulfills the objectives discussed above, and demonstrates how the two approaches complement one another.



A WELL-DESIGNED HOUSING POLICY IS ALSO A POWERFUL SOCIAL AND ECONOMIC POLICY.

FIGURE 41 | **Evaluation of housing policy approaches by impact on social housing objectives**

Impact: ○ None ● Low ● Medium ● High

	SUB-CATEGORY	ACQUISITION APPROACH	UPGRADING APPROACH
 Housing deficit	Quantitative	●	●
	Qualitative	●	●
	Rural	○	●
	Urban – large municipalities	●	●
	Urban – small municipalities	○	●
 Poverty and middle class consolidation	Extreme poverty	○	●
	Poverty	●	●
	Vulnerable	●	●
	Middle class	●	●
 Employment generation	Formalization of beneficiaries	●	●
	New jobs	●	●
	Skilled-labor jobs	●	●
 Economic output	Counter-cyclical	●	●
	Impact	●	●
 Healthcare and education	Healthcare	●	●
	Education	●	●
 Vulnerable population	Women	●	●
	Minorities	●	●
	Informal immigrants	○	●
	Formal immigrants	●	●

SOURCE: Original figure for this publication.

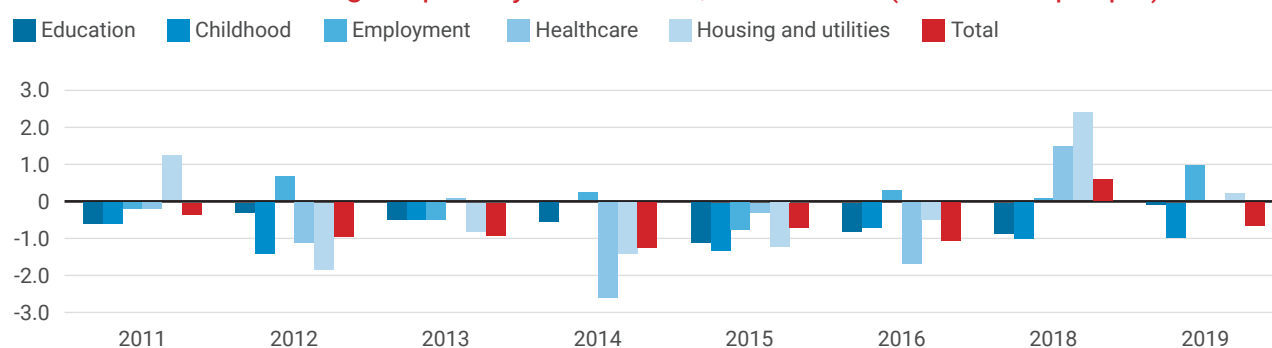
The remainder of this chapter will explore how a balanced housing policy can offer co-benefits for Colombia in poverty alleviation, human capital accumulation, and economic output and employment generation.

6.1 Poverty Reduction

6.1.1 Impact of Housing on Recent MPI Deterioration

Poverty in Colombia, as measured by the Multidimensional Poverty Index (MPI), skyrocketed in 2018. It was the first year since 2011 that Colombia registered an increase in more than one poverty dimension – most dramatically, in housing and utilities deprivations.

FIGURE 42 | **Absolute change in poverty dimensions, 2011–2019 (millions of people)**



SOURCE: Original estimates for this publication, based on data from DANE 2019c.

The increase in housing deprivations was greater than that in childhood, employment, and health-care deprivations combined. The only housing condition that improved was overcrowding (-0.4 points), which is more associated with the quantitative deficit than the other housing components are. Between 2016 and 2019, floor conditions alone caused a one-point increase in the MPI, the largest contribution of any sub-component of the index. Water access deprivations caused an MPI increase of 0.9 points; sanitation, 0.7 points; and wall materials, 0.4 points.

TABLE 19 | **Number of people and change in MPI deprivations by component**

DEPRIVATION	PEOPLE (MILLIONS) 2019	GROWTH 2016-2019	
		%	ABSOLUTE
Illiteracy	4.5	-2.8%	-10.0%
Low Educational Achievement	21.5	-3.8%	-90%
School Absenteeism	1.3	-5.6%	-10%
Educational Lag	12.6	-8.5%	-120%
Health Access	2.7	26.8%	60%
Health Insurance	5.5	19.4%	90%
Overcrowding	4.2	-8.2%	-40%
Sanitation	5.4	16.2%	70%
Walls	1.3	38.8%	40%
Floor	3.1	44.2%	100%
Water	5.6	19.0%	90%
Child labor	0.8	-33.7%	-40%
Child Care	3.9	-7.9%	-30%
Formal job	35.7	0.4%	20%
Long-term unemployment	6.1	16.4%	90%
Total	8.56	-0.3%	0%

SOURCE: Original estimates for this publication, based on data from DANE 2019c.

These stark facts suggest that one of the most effective poverty policies for Colombia may be to increase efforts in the housing sector. Addressing the housing components of the MPI through a comprehensive housing policy will not only have the direct effect of improving the shelter conditions of residents; it will also enable Colombia to resume steady reductions in poverty and to comply with the first sustainable development goal (SDG) of zero poverty.

6.1.2 Potential of Housing Policy to Reduce Poverty

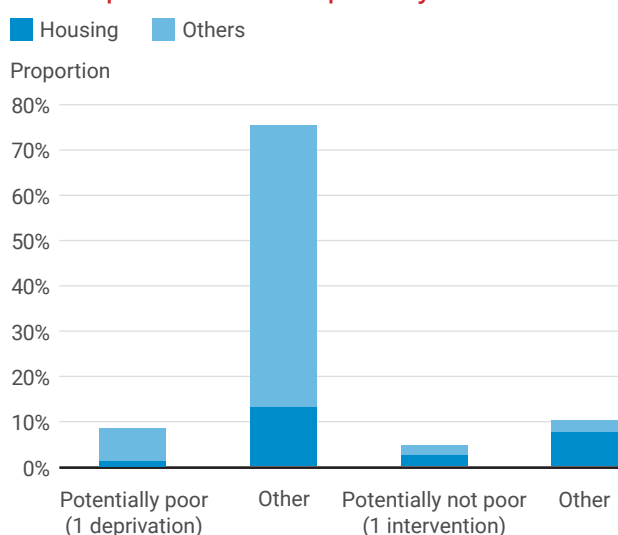
Unlike many other MPI components, housing dimensions are completely and directly actionable via policy interventions,²² since the government can supply, either directly or through subsidies, solutions for each housing deprivation. Additionally, these policies can easily address an array of housing deprivations at the same time. This is a crucial point, since most households have more than one type of poverty deprivation, which means that ameliorating many of the other MPI components requires action across different dimensions by different sectors.

In addition to helping poorer households, therefore, focusing on housing could also have a direct impact on MPI results for the country overall. A large proportion of households that are one deprivation below the poverty threshold are deprived as a result of a housing condition (see figure 43). Housing interventions for this population will therefore have a direct impact on the MPI. (Additionally, families defined as poor because they are *more* than one deprivation over the definition also, in most cases, have a housing deficit.)

The costs of certain housing interventions are also relatively limited – for instance, utilities investments rank among the most cost-effective poverty solutions. There are two main reasons for this. First, housing interventions affect the whole household; in contrast, the government must perform individual interventions for each person suffering from illiteracy, childcare, health insurance, or school absenteeism deprivations. Second, housing interventions have a higher probability of persisting over time, because they focus on the home’s infrastructure. This infrastructure is more permanent and less dependent on individuals’ behavior or external factors – as opposed to, for example, childcare or school absenteeism interventions, the success of which depends on external factors (such as the child being taken to the childcare location), and which require continuous efforts to maintain.

Taken together, these features imply that by formulating a comprehensive housing policy, Colombia would also be instituting a relatively inexpensive and effective poverty-alleviation policy. Housing and education together represent a large percentage of poverty deprivations, and addressing them would be the most cost-effective

FIGURE 43 | Proportion of households within one deprivation of the poverty threshold



SOURCE: Original estimates for this publication, based on data from DANE 2019c.

²² This is not the case for – to take one example – the employment dimension of the MPI, which depends on general macroeconomic conditions. The government cannot sustainably supply the jobs the economy requires; the state needs the private sector to demand (most of) the jobs.

way of reducing the MPI. However, to do so most effectively, Colombia's housing policy must represent a balance of the two approaches. Acquisition-approach programs are cost-efficient to solve the problem of quantitative deficit in urban areas, but because they rely on beneficiaries having access to the financial markets, they are not the most effective poverty solution; and since they do focus largely on the quantitative housing deficit, they would less efficiently address the housing deprivations responsible for driving up Colombia's poverty index. Given their potential impact on poverty reduction, the priority housing interventions should be WASH (water, sanitation, and hygiene) solutions and improvements in walls and floors – improvements that can be best accomplished by complementing housing-acquisition policies with home retrofitting programs that address qualitative deprivations.

6.2 Human Capital Accumulation

Human capital is widely regarded as a fundamental input for economic growth (Jones 2016). In statistical decompositions, it explains a significant portion of productivity growth and per-capita income differences between countries (Hall and Jones 1999; Baier, Dwyer, and Tamura 2006). Among the structural policy priorities identified by the OECD (2018), recommendations to boost human capital feature prominently.

Upgrades to homes and neighborhoods can boost human capital through better health conditions, enhanced cognitive development, and the improved availability of social services. Well-designed housing policies therefore not only address the immediate needs of families but may also have positive long-term effects for household members and for society at large.

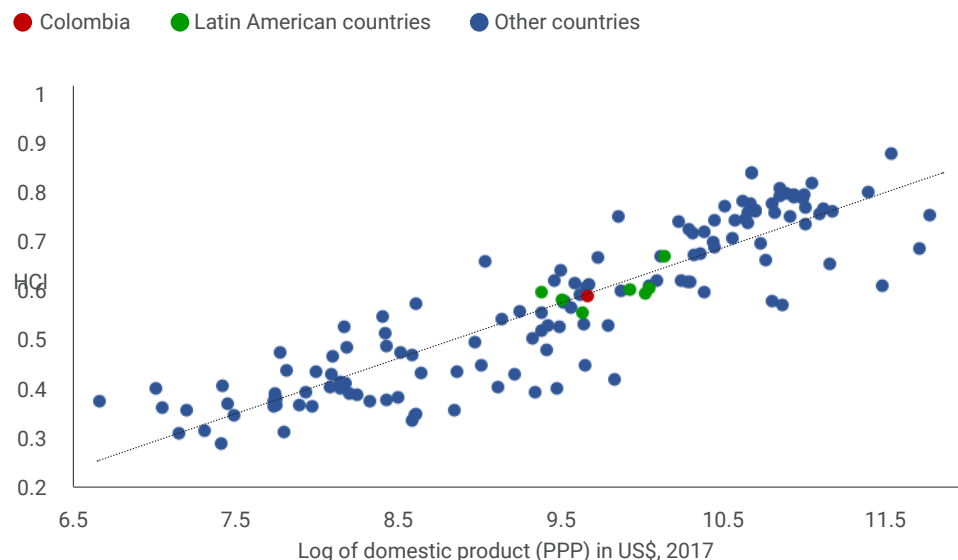
6.2.1 Human Capital Accumulation in Colombia

The Human Capital Project, and specifically its Human Capital Index (HCI), aims to standardize human capital accumulation metrics. Its goal is to generate the political attention needed to shift resource allocation from short-term, easy-to-materialize investments (such as infrastructure and monetary transfers) toward long-term investments in human capital. To determine the amount of human capital a child born today can expect to accumulate, the HCI considers three main components: survival (the under-five mortality rate); expected years of schooling, adjusted for education quality; and health.²³

Colombia is located in the third quartile of human capital worldwide, with an HCI of 59. It is just above the mean for both regional and global indices, and has a performance consistent with its GDP per capita. The country over-performs in under-five mortality rates and shows better-than-average outcomes in childhood health. These achievements, however, are shadowed by very low standardized test scores compared with the global average. Even though Colombian school enrollment and attainment rates are high, when expected schooling is adjusted by quality of education, the country falls just at the global average. In other words, the quality of education received does not reflect the amount of time children spend educating themselves.

²³ A full description of these components and the breakdown of Colombia's scores on each can be found in Annex H.

FIGURE 44 | Human capital index, 2018



SOURCE: World Bank 2018a.

6.2.2 The Correlation between Human Capital and Housing: Global and Regional Literature Review

A balanced housing policy is likely to have the corollary benefit of improving Colombia's (currently average) HCI score. By adding and strengthening upgrading programs (such as *Casa Digna*, *Vida Digna*) that ameliorate qualitative housing deprivations as a complement to acquisition-approach policies, Colombia can strengthen the health and child-development outcomes that are critical for human capital accumulation.

Research has found that neighborhood upgrading and home retrofitting can have particular benefits for health, since underinvestment in these areas is linked to a variety of illnesses. Corburn and Sverdlik (2017, 2) note that "slum-dwellers increasingly face a 'triple threat' of infectious diseases, non-communicable conditions (e.g., diabetes, cardiovascular disease, and mental illness), and injuries due to violence or road traffic accidents." The authors summarized the healthcare effects of housing deprivations, correlating characteristics of slums with their associated environmental health issues as presented in table 20.

TABLE 20 | Healthcare effects of housing deprivations

HOUSING CONDITION	DEFINITION AND INDICATORS	COMMUNITY HEALTH RISKS
1. Overcrowding	More than 2 persons per room or less than 5 m ² per person	Spread of tuberculosis, influenza, meningitis, skin infections, and rheumatic heart disease
2. Low-quality housing structure	Inferior building materials, dirt floors, and substandard construction	Vulnerability to floods, extreme heat/cold, burns, and falling injuries
3. Hazardous housing sites	Geological and site hazards (e.g., industrial waste sites, garbage dumps, railways, wetlands, steep slopes, etc.)	Acute poisoning, unintentional injuries, landslides, flooding, toxic contamination, environmental pollutants, drowning, leptospirosis, cholera, malaria, dengue, hepatitis
4. Inadequate water access	Less than 50% of households have affordable, 24/7 access to piped water or public standpipe	Malaria, dengue and diarrheal diseases, cholera, typhoid, hepatitis; increased HIV/AIDS vulnerability
5. Inadequate sanitation access	Less than 50% of households have sewerage, septic tank, pour-flush, or ventilated improved latrine	Fecal-oral diseases, hookworms, roundworm; missed school days during girls' menstruation; malnutrition and children's stunting; safety/sexual violence for women from unsafe toilets
6. Limited services and infrastructure	Inadequate healthcare, drainage, roads, energy, transport, schools, and/or refuse collection	Traffic injuries, lack of emergency services provision, fires, flooding/drowning, waste burning and air pollution, respiratory diseases and cancer
7. Tenure insecurity	Lack of formal title deeds to land and/or structure	Fear, increased hypertension, diabetes; low birth weight newborns
8. Poverty and informal livelihoods	Low incomes, few assets, and low access to credit; lack of social protection	Increased occupational hazards, maternal health complications, vaccine-preventable diseases, perinatal diseases, drug-resistant infections
9. Violence and insecurity	Elevated crime, including domestic and gender-based violence	Homicides; hypertension, obesity; sexual violence; vulnerability to STIs, especially for young people forced into sex work
10. Political disempowerment	Low or no governmental responsiveness to needs and services	Lack of health services; poor education; preventable hospitalizations; typhus, leptospirosis, cholera, chronic respiratory diseases, growth retardation

SOURCE: Corburn and Sverdluk 2017; text has been lightly edited for clarity.

Several experimental studies in Latin America, collected for the Global Housing Report Index (McTarnaghan et al. 2016), have also shown connections between health outcomes and housing factors. These factors include both structural (qualitative and quantitative) and non-structural (e.g., title security) reforms, highlighting the need for a country's housing policy to give equal consideration to multiple approaches.

McTarnaghan et al. (2016) present a study by Galiani and Schargrotsky (2004) in Buenos Aires which showed that having a formal title leads to health gains – specifically, increases in weight-for-height among children and a reduction in teen pregnancy. In a study of three countries, Galiani et al. (2014, 2015) found that a prefabricated housing solution not only improved the quality of housing but also had notable outcomes for children's health, such as a significant reduction in the incidence of diarrhea. Other studies in the region have shown the health risks associated with environmental housing-related factors, such as a lack of potable water or sewerage, which cause increased incidences of diarrhea or acute respiratory infections among the urban poor (Fay and Wellenstein 2005; Rojas 2015, both cited in McTarnaghan et al. 2016).

Given these correlations, it is not surprising that home and neighborhood upgrading projects around the world have successfully improved health outcomes (see Annex H). In Manila, for example, the Zonal Improvement Program reduced the incidence of diarrhea by improving neighborhoods' water supply, roads, housing, land rights, and electricity.

BOX. The Case of *Piso Firme* in Mexico

The *Piso Firme* program aimed to improve household living conditions in the Mexican state of Coahuila by replacing dirt floors with concrete. The main objective of the program was to improve the health of Coahuilans by reducing the probability of contracting infectious diseases through the dirt floors. According to estimations made by Cattaneo et al. (2009), the program successfully reduced parasites in the targeted households by 19.6 percent, leading to a decrease in diarrheal diseases and anemias (by 12.8 and 20.1 percent respectively) as well as general qualitative improvements. The targeted households also reported significantly lower levels of depression and perceived stress – approximately 12.5 and 10.6 percent lower on average, respectively (Cattaneo et al. 2009, 96).

Critically, replacing dirt with cement flooring also appears to be a cost-effective policy for improving child cognitive development. Impact Evaluation results reported by Cattaneo et al. (2009) showed that children in targeted households had a 30.2 percent higher score on the MacArthur test and showed a 9-percent improvement over the control group on the Picture Peabody Language Development Test, a cognitive assessment. Furthermore, *Piso Firme* was cost-effective when compared with similar programs, such as the “*Oportunidades*” cash-transfer program. The latter led to a 12 percent improvement on the MacArthur test, but with a much higher price per child – between Col\$ 210 and Col\$ 750, requiring a budget 30 percent higher in the best-case scenario (Cattaneo et al. 2009, 29).

Housing conditions are connected not only to physical health and wellbeing but also to educational attainment and to social and emotional stability, making adequate housing crucial for childhood outcomes (McTarnaghan et al. 2016, 12). McTarnaghan et al. (2016) find evidence in three major studies: Kaztman (2011), who concludes that structural changes in housing quality are correlated with the educational enrollment and attainment of Latin American children, and Moreno (2011) and Rojas (2015), who show a positive relationship between housing quality and school enrollment, attendance, and performance (McTarnaghan et al. 2016, 12).

The affordability of housing also has significant effects on childhood development. Unaffordable housing can compromise the wellbeing expenditures that parents make on behalf of their children, with corresponding consequences for development. This would occur, for instance, if high housing costs forced cutbacks in basic necessities, required the family to live in crowded or physically inadequate housing, forced frequent moves, or had other deleterious effects on the child’s home environment.²⁴ To fully reap the potential co-benefits of a well-designed housing policy, therefore, Colombia must ensure not only the quality but also the affordability of housing solutions.

6.2.3 The Correlation between Human Capital and Housing: Evidence from Colombia

As discussed in Chapter 3, the second generation of Colombia’s Free Housing Program (PVG) included a mechanism for the randomized allocation of free housing. By exploiting this process, the National Consulting Center (CNC) was able to develop a randomized control trial to measure the impact of the program on human capital variables – specifically, health and education. The analysis included 76,231 families, of which 47,934 (63 percent) constituted the control group (potential beneficiaries that applied to the program but were not selected by the lottery process) (CNC 2021).

²⁴ There are four main scholarly conceptions about the mechanic of this effect. One is that lack of disposable income results in material hardship and an inability to obtain goods and experiences beneficial for child development; the second revolves around family stress and its consequences; the third focuses on the limited time and availability of working parents; and the fourth suggests that the communities surrounding affordable housing lack the desirable characteristics that result in positive outcomes for children who live in expensive neighborhoods. For a full description of these theories, see Annex H.

Amongst the most important findings was that free-housing beneficiaries were 11.77 percentage points less likely to qualify as poor. Program beneficiaries attended between six and 11 more years of education than the control group, and scored on average 2.6 percentage points higher on standardized tests. The study also found two broad positive effects on health indicators. First, when compared with the control group, free-housing beneficiaries over the age of 18 were 6 percent more likely to visit a health institution, an action that is associated with a higher self-care consciousness and proximity to health centers. On the other hand, beneficiary children under 7 years old were 16 percent less likely to visit a health facility, implying better general health conditions; those children were less likely to develop diseases like diarrhea, pneumonia, and tuberculosis.

This study, and those in the literature discussed above, are borne out by our own analysis of data from Colombia (see Annex H for full details on our statistical model and for full results).²⁵ We found several housing deprivations in Colombia to be correlated with human capital accumulation variables, including school attendance, standardized testing scores, and illness. The results directly link human capital accumulation and housing conditions, corroborating the idea that upgrading homes will not only improve the lives of their residents but also boost their human capital accumulation – and that of Colombia at large – by improving children’s health and educational attainment.

Using census data, we found a significant correlation between housing deprivations and childhood illness. Overcrowding has the biggest effect: living in a unit with more than two people per room increases the probability that an underage household member was sick during the last month by 2.27 percentage points.

Every housing deprivation we studied also has a negative effect on school attendance. Co-habitation and overcrowding have the biggest effect: a child suffering from one these two deprivations is 3 percentage points less likely to attend school than a non-deprived child. Inadequate meal preparation facilities have the second-largest effect, decreasing the probability of school attendance by 2.72 percentage points. We also found 11th-grade standardized test scores (at the municipal level) to be negatively and statistically significantly affected by wall deprivations, overcrowding, inadequate meal preparation facilities, lack of access to water supply, poor sanitation, and poor garbage collection. Overcrowding and kitchen deprivations have the greatest negative effects on test scores (-8.12 and -4.54, respectively).

These results indicate that although housing deprivations have negative effects on school attendance, their effect on school performance is even worse. As discussed above, the main weakness of Colombia’s educational system is test results, not attendance. By focusing on housing conditions, public policy can have a positive impact on Colombia’s HCI, as education quality would be expected to improve. If a balanced housing policy with an upgrading-approach component successfully reduced the proportion of overcrowded households by a single percentage point, the mean standardized test score would rise by 8.12 points – a 19 percent increase over the current average.

It is not only conditions *inside* a house that can affect human capital. Health and education variables are also correlated with the availability and quality of physical infrastructure in the surrounding neighborhood. If Colombia combines social housing provision with the implementation of good transportation networks, amenities, and public spaces through a comprehensive, balanced housing policy, it may see considerable spillover effects on human capital indicators and the wellbeing of families.

²⁵ We also performed an instrumental variable exercise in which housing deficits were explained by the national government’s free housing program; this exercise can also be found in Annex H.

6.3 Employment Generation and Economic Stimulus

In a severe crisis like the one caused by COVID-19, governments must intervene to reactivate the economy and the productive apparatus. In these efforts, some sectors are crucial for the quantity of resources they use in their production process, the cross-sector demand they generate, their impact on investment, and their potential to create employment opportunities. Construction is one such sector.

Construction can be defined as the branch of manufacture and trade comprising the preparation of land and the building, maintenance, and repair of buildings, structures, and other real property. Because of its ability to generate employment and its role as an intermediary in the accumulation of physical capital, construction has enormous potential to stimulate the economy, or to reactivate it after an acute crisis. In fact, construction has been used in the latter scenario repeatedly over the past two decades. This is true for developed countries,²⁶ but is also the case in emerging economies both in Asia²⁷ and in America, as for Mexico and Costa Rica (Imparato and Ruster 2003). These cases substantiate the idea that promoting construction – including through housing policies – can help counteract the negative effects of economic crisis and reactivate the economy. Although this mechanism is particularly useful in times of crisis, incentivizing construction activity at any point in the economic cycle can stimulate production and output, as well as generate significant employment opportunities.

This is precisely what a well-designed housing policy will do. Housing policies foster construction activity both in the traditional acquisition approach (facilitating families' acquisition of housing), or in the more audacious upgrading approach – i.e., promoting small and incremental home improvements and retrofittings for low and lower-middle income households. By incentivizing construction activity (through increased demand for new housing or through home improvements, respectively), these policies both have substantial effects on employment. Our analysis finds that, if the upgrading approach is properly promoted – i.e., if retrofitting investments are leveraged from the financial sector through microcredits – it has the potential to create a total of 807,000 jobs (direct, indirect, and induced). That number is approximately on par with the employment generated by subsidies for non-VIS housing allocated in the acquisition approach.

Moreover, the employment effects of the two approaches are complementary. In the acquisition approach, which relies on beneficiaries' access to financial markets, household members' jobs must be formalized for families to have a higher chance of being awarded a loan. The constructors and developers must also be formally employed, and the jobs require a minimum level of specialization and knowledge, ensuring that (most of) the direct jobs generated are of good quality. While the jobs generated by home retrofitting programs do not require as much skilled work, these programs are more labor intensive, so their impact on employment is higher.

Given Colombia's high unemployment levels, these various instruments can and should be used in tandem to maximize employment in the housing construction sector. By designing a housing policy with a balance of the two approaches, Colombia will reap the full benefits of the housing sector's ability to create jobs and invigorate the economy.

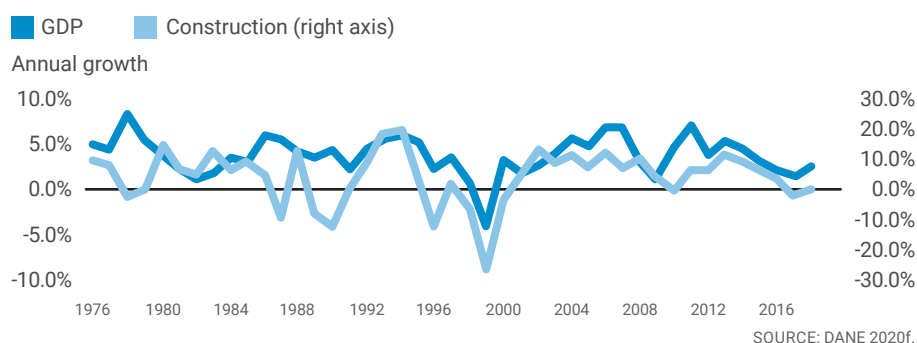
²⁶ This is the case for Europe broadly (Primeus and Whitehead 2014) as well as for eastern Europe (Poggio and Whitehead 2017) on a regional level. On the country level, construction has been used to reactivate the advanced economies of Austria (Norris and Byrne 2018); France (Tutin and Vorms 2014); Italy (Baldini and Poggio 2014); the Netherlands (Ronald and Dol 2011); Spain (Primeus and Whitehead 2014); and the United States (Caldararo 2019).

²⁷ For instance, in China (Wang and Shao 2014) and Taiwan, China (Chen and Bih 2014); India (O'Hare, Abbott, and Barke 1998); Malaysia (Aziz et al. 2014); and South Korea (Lee 2014).

6.3.1 Context: Construction Output and Employment in Colombia

The construction sector, including residential construction, absorbs a significant portion of Colombia's workforce and serves as a critical intermediary for productive sectors in the accumulation of physical capital. Because of its role in capital accumulation, however, construction closely tracks the ups and downs of aggregate investment, the most volatile of all sources of demand. In other words, construction is an especially procyclical economic activity. Evidence of the relationship between the construction sector and fluctuations in the economy at large can be seen by plotting GDP against construction output (figure 45). Construction itself contributes 6.6 percent of Colombia's GDP, making it a significant sector for the Colombian economy (see Annex I for details.)

FIGURE 45 | GDP and construction output in Colombia, 1976–2018



Because of its procyclical behavior and its reliance on the volatile performance of investment, the sector risks expelling construction workers when the economy falls into a recession phase and aggregate investment (and thus demand for construction) drops. The corollary, however, is that the construction sector can account for a considerable amount of employment during the expansion phase of the economic cycle. A comprehensive housing policy that stimulates the sector therefore has the potential to generate significant employment, particularly for low-income and non-qualified workers.

Construction workers comprised 7.2 percent of the total Colombian labor force as of February 2020, slightly surpassing the five-year average of 6.9 percent (DANE 2019b). This represents approximately 1.5 million construction workers, of which more than half participate in private residential construction. Most construction workers belong to vulnerable demographic groups. A full 40 percent earn less than the minimum wage, and only 9 percent earn twice that or above. Construction workers also tend to have less education than the average Colombian: more than half do not have a high-school degree, and only 17 percent have completed tertiary education. (Annex I presents a full breakdown of construction workers by subsectors, tasks, and demographic dimensions.)

A housing policy that properly utilizes the construction sector will stabilize the employment of its workers and encourage their economic absorption. Not only will such a policy aid the recipients of housing interventions, but it may also help keep the vulnerable populations who implement them out of poverty – and kickstart the economy at large.

6.3.2 Housing Construction, Economic Stimulus, and Job Creation

In general, there are three types of policies that countries apply to generate employment and promote economic activity through construction: public infrastructure projects, building of new housing, and home improvement and slum upgrading.

Public infrastructure projects have two main advantages that make them a powerful tool for stimulating the economy. One is their associated direct fiscal multiplier, which in the long run tends to be greater than one (Ilzetzki, Mendoza, and Végh 2013). The other is their capacity to generate indirect benefits and boost the productivity of other sectors that rely on the availability of public capital (Ferderke and Bogetić 2009; Subacchi et al. 2015). However, public infrastructure policies face myriad obstacles: delays in public contracts, political cycles of local government expenditure, and a long process of bidding and assignation of infrastructure projects.

One alternative is to focus on residential construction policies, which improve housing conditions while also revitalizing sluggish economies. With its high potential to create jobs (Ball 1981) and strong linkages with other economic sectors (Lean 2001), the construction of new housing can be a powerful stimulant to the economy. Policies that incentivize a healthy supply of new housing by enabling more people to purchase homes²⁸ directly remediate the quantitative housing deficit, but they also sustain a dynamic construction sector that generates employment and economic activity. Similarly, upgrading policies simultaneously improve both the physical and economic conditions of vulnerable households: in providing the neediest families with home retrofitting or neighborhood improvements, these policies also generate employment opportunities for unskilled labor.

6.3.3 Calculating the Macroeconomic Effect of Residential Construction and Housing Policies

Various housing policies can thus expand both formal employment (in the case of acquisition-approach policies) and unskilled labor opportunities (in the case of upgrading programs). The ideal housing policy would not only reduce the housing deficit to the greatest extent possible, but also fully take advantage of this co-benefit. To enable Colombia to design a policy with the ideal balance of programs, we must determine the potential of each policy approach to create jobs and increase output on a macroeconomic scale.

Annex I contains the full context, inputs, methodology, and calculations required for this analysis. It begins by disaggregating Colombia's construction activity into three subsectors, including construction driven by private-sector demand, most of which is residential. One critical input for the subsequent analysis is the labor intensity of different types of residential construction, which is necessary for calculating the employment impact of various housing policies. Social-interest (or VIS) housing comprises more basic residential buildings, while non-social (non-VIS) housing is more sophisticated. Unsurprisingly, non-VIS housing requires more construction workers per unit, as these units are larger and take longer to build. Additionally, in apartment buildings (common in VIS housing), some of the most labor-intensive stages of construction, such as structure and covering, can be scaled, reducing the labor required.

The key analysis necessary to determine the macroeconomic employment effect of housing policies is calculating the construction sector's macroeconomic multipliers: its output multiplier, employ-

²⁸ For instance, through subsidized down payments and interest rates, housing discounts and mechanisms to decrease the loan-to-value ratio of homes, tax reductions and benefits, monetary measures, and administrative policies.

ment multiplier, salary multiplier, and tax multiplier.²⁹ These figures describe the construction sector's impact on the total level of each component across the Colombian economy.

However, each of these multipliers must be disaggregated one step further, into the two components, or branches, of private (mostly residential) construction: formal construction and self-construction. Annex I breaks down the differential contribution to the Colombian macroeconomy of these two branches. Formal construction represents almost four-fifths of the private sector's total added value. The informal construction branch tends to focus on incremental home retrofittings and private improvements to buildings. It accounts for a large portion of the construction labor force, but it has much lower productivity than the formal branch. Unlike formal construction, which has to be properly declared at the initiation of a building project, self-construction activities are not officially registered, and they are characterized by low investment on capital inputs. Since these activities are mostly undertaken by families to improve their own residences, there is also no opportunity for economies of scale – in contrast to formal construction, which is mostly carried out by big firms. Nevertheless, self-construction activities have greater flexibility in terms of financial prerequisites and higher potential for non-qualified (unskilled) employment generation.

Annex I provides a full account of each economic multiplier for the formal and informal branches. The results for each branch (formal and informal) are then multiplied by the branch's contribution to Colombia's GDP to determine the absolute macroeconomic effect. For instance, the output multipliers for formal and informal construction activity are 2.25 and 2.88, respectively. But when those figures are multiplied by each branch's contribution to Colombia's 2019 GDP, we find that the absolute contribution to economic output of the formal sector is more than twice that of the informal one, at US\$18.49 billion and US\$7.43 billion, respectively.

Combining all of this information, we can estimate the differential impacts on economy-wide employment of several types of housing policies. If we take a given quantity of resources and simulate assigning them to various housing policy alternatives, we can evaluate which one provides better economic results. For the purpose of this exercise, five policies were considered. Two are acquisition-approach alternatives: social housing construction and non-social housing construction (both belonging to the formal sector). Three are upgrading-approach policies focused on promoting home retrofitting (considered a self-construction activity): structural retrofitting, non-structural retrofitting,³⁰ and subsidies for microcredits to be used for housing improvements. Below, we calculate how much employment would be created across the economy if each policy alternative were assigned Col\$3.7 trillion (nearly US\$1 billion).³¹

²⁹ A sector's output multiplier can be interpreted as the total value of all the economic activities that are required for the sector to increase its production by one unit. The employment multiplier indicates the total expansion of employment throughout the economy that results from an increase in final demand sufficient to create one additional construction job. The salary multiplier indicates how labor remuneration throughout the whole production chain would be impacted if salaries in the construction sector changed by one monetary unit. And the tax multiplier shows how much an increase of one monetary unit in tax payments by the construction sector would cause tax payments across the total economy to rise.

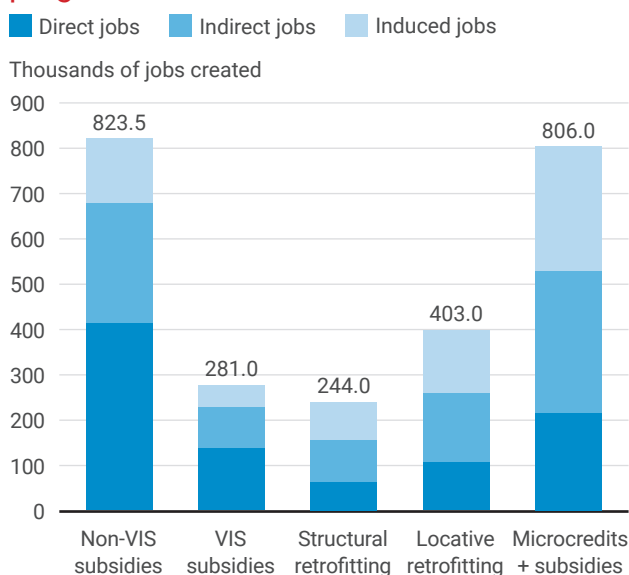
³⁰ Structural retrofitting requires a construction license and affects the structure of the building by modifying columns and supporting structures. Additionally, structural retrofitting improves resistance to seismic movements. In contrast, a non-structural retrofitting can be performed without a license. Though this type of intervention improves housing conditions like ceiling or floor materials, bathrooms, kitchen facilities, or connections to public services, it does not affect the home's structure.

³¹ We arrived at this figure by using the budget for the Colombian government's recently announced measure to promote housing construction (May 2020), which is carried out through interest-rate and down-payment subsidies. In particular, we have taken as a reference the total cost of the subsidies for non-social housing, which consists of 100,000 subsidies for home acquisition – totaling nearly US\$1 billion (Col\$3.7 trillion). This is the reference value we assigned to each housing policy, estimating how much employment would be created across the economy in each case.

The inputs for this macroeconomic estimation are shown in table A28 in Annex I. The final results are displayed below in figure 46, which shows the total jobs generated by each policy alternative. The first conclusion of note is that structural retrofitting policies create a similar number of jobs as the VIS-housing acquisition subsidies (244,000 versus 282,000) – but non-structural retrofitting, at 400,000 jobs, surpasses both alternatives.

By adding the direct, indirect, and induced jobs generated by the different programs, we can conclude that non-VIS subsidies create approximately 824,000 jobs across the economy, almost four times more than VIS subsidies and the highest figure seen in the graph. However, this employment generation is nearly matched by one alternative: promoting home retrofitting by leveraging financial-sector resources through microcredits. This policy would create 807,000 jobs – and most of them, as discussed above, would benefit vulnerable populations involved in unskilled labor. The upgrading policies, despite creating fewer jobs per unit, could match the employment generation of acquisition-approach alternatives because they would reach a substantially higher quantity of households, and are propelled by a higher employment multiplier for both indirect and induced effects.

FIGURE 46 | **Employment created by housing program alternatives**



SOURCE: Original calculations for this publication, based on data from DANE 2018.

6.4 Achieving Policy Objectives Cost-Effectively

As discussed in the previous chapter, the constraints on Colombia's national public expenditure are compounded by the current COVID-19 crisis. In a context in which every dollar spent must count, it is critical to justify housing investments and their impact not only on the housing deficit but on Colombia's broader policy objectives. Housing policy should be an effective mechanism to improve indicators across the socioeconomic spectrum, including employment, GDP growth, poverty reduction, human capital formation, and measurable welfare for vulnerable populations.

The upgrading-approach programs not only have greater potential to achieve these policy objectives, but they tend to do so more cost-effectively than the acquisition-approach programs (see figure 47). This is because the upgrading approach tackles the qualitative deficit more intensively and is more economical per household, which boosts its potential to generate employment, its positive spillover effects, and its impact on poverty reduction.

FIGURE 47 | Housing programs' cost and alignment with public policy objectives

Fulfillment: None Low High

		TOTAL COST PER HOUSEHOLD	NPV COST PER HOUSEHOLD	Public Policy Objective Fulfillment					
ACQUISITION APPROACH	1 Free housing	70-90 MMW US\$16,000-22,000	70-90 MMW US\$16,000-22,000						
	2 Housing subsidies (Ministry + CCF)	68 MMW US\$16,000	64 MMW US\$15,000						
	3 Housing subsidies (Ministry)	48 MMW US\$11,000	44 MMW US\$10,000						
	4 Non-VIS subsidies	42 MMW US\$10,000	33 MMW US\$8,000						
UPGRADING APPROACH	5 Structural retrofitting	18 MMW US\$4,000	18 MMW US\$4,000						
	6 Locative retrofitting	5 MMW US\$16,000-22,000	5 MMW US\$16,000-22,000						
	7 Microcredit subsidies	2.3 MMW US\$500	2.1 MMW US\$500						

SOURCE: Original figure for this publication.

As was the case for the housing deficit specifically, the most cost-effective scheme in terms of broader policy results involves subsidizing microcredits for housing retrofitting; this option addresses most of the policy objectives for the lowest cost. Structural and non-structural retrofitting subsidies are relatively cheap, but because they are one-offs, they require the government to have a high cash level, making them less cost-efficient than the microcredit subsidies.

The acquisition-approach programs have a narrower impact on the policy objectives, addressing only one or two each, and tend to be more expensive. Non-social housing subsidies have significant impact on GDP growth, but they are also among the options with the least impact on poverty and deficit reduction; large investments in this program are regressive by design.

This analysis does not imply that the upgrading approach is necessarily better than the acquisition approach, as they target different issues. Colombia's housing policy should balance each policy approach according to its impact and cost; currently, Colombia's housing deficit and poverty levels call for greater investment in the upgrading policy approach.

This is especially true in the context of COVID-19, as the health, economic, and social crises generated by the pandemic impose major budgetary constraints. The upgrading approach could help to dynamize the economy during the crisis, generate employment and economic output once it is over, boost human capital by improving health and education outcomes, and alleviate poverty – while improving the general welfare of the most exposed and vulnerable populations in Colombia.



RECOMMENDATIONS

Four Strategic Mechanisms for Social Housing

In developing a comprehensive housing policy, Colombia should focus on four strategies, committing to them a budget of US\$1 billion (a sum equivalent to the expenditure on non-social housing subsidies slated for 2020–2022):

1. Improving financial instruments for home retrofitting based on subsidized microcredits
2. Prioritizing direct retrofitting interventions in urban areas, to be implemented by the Ministry of Housing in coordination with local authorities
3. Increasing expenditure for rural households
4. Developing neighborhood upgrading projects as an essential part of the retrofitting program by increasing financing to local authorities

These strategies alone are not sufficient to create a balanced, comprehensive social housing policy. They must be part of a thoughtful range of tools and programs, extant and new, demand-side and supply-side. Recently initiated or revitalized housing acquisition programs will continue to play a role. Additionally, a crucial part of any policy initiative is an enabling environment and a well-functioning housing market, which require effective institutional arrangements and an enabling legal and regulatory framework. Housing policy is a holistic enterprise.

However, the four mechanisms outlined here are a necessary step toward a balanced policy. These are the strategies that most directly speak to Colombia's specific current needs in the housing sector and respond to its distinctive circumstances. They are designed to maximize the effectiveness of social-housing policies and expenditures; they would address the qualitative housing deficit; and they would reach the poorest income groups. Below, we will discuss each in more detail. We will then present a hypothetical scenario in which US\$1 billion is invested equitably among these four strategic mechanisms.

First Strategy: **Improving Financial Instruments**

Microfinance is an appropriate financial tool for reducing the housing deficit in Colombia's lowest income households, and could be supported by both national and local authorities. Housing microfinance can be defined as any financial tool to support investments in housing components, land purchase or access, provision or improvement of services, full or incremental house construction, and renovation or maintenance. It can serve as a powerful tool for reducing the housing deficit in developing countries where a large proportion of the population cannot access mortgage finance. As such, it is particularly relevant for countries like Colombia, where one-third of households cannot afford even the least expensive developer-built unit through traditional mortgage schemes, even with all available government subsidies.

Although lower-income families may access finance to upgrade their housing units, there is still no financial product specifically targeted at this population. According to information gathered by the World Bank in July 2019,³² there were 63,000 active housing-improvement loan operations in Colombia, amounting to almost US\$110 million. This represented 9 percent of the portfolio, but only 2.5 percent of the operations of the 12 institutions surveyed.

³² This information was directly provided to the authors by the World Bank.

As detailed in Chapter 2, formal mortgages in Colombia are concentrated in households with the highest income levels; poorer families have very little access to traditional housing finance. Caps on loan-to-value ratios, loan-to-income ratios, and interest rates, as well as the obligation of insuring housing units against certain risks, make it impossible for a vast segment of the population to meet their housing needs. This is the sector of the population that might benefit most from housing micro-finance schemes.

Housing Microfinance in Colombia

Financing for home retrofitting in Colombia is generally granted through three main tools: mortgages, free-use loans, and microcredits. Mortgages are the instrument of choice for financing home improvement but, as with finance for housing acquisition, workers with an informal source of income have very limited access to the mortgage market. Home-improvement mortgages for low-income households are typically granted to families that purchased an incomplete social housing unit and have proven financial reliability by making steady payments on their original mortgage. This type of loan fails to reach low-income families whose homes were constructed informally through a self-building process – precisely where the qualitative housing deficit is concentrated.

The second instrument that families use to finance home improvements are free-use loans, or loans without a specific destination. These loans are categorized under the consumption portfolio. As their name indicates, free-use loans can be used any way applicants wish, with requirements that are less restrictive than mortgage finance obligations. Free-use loans are primarily granted by banks, although lower-income households access the tool mainly through cooperatives and union funds. While these types of institutions do target low-income families, they lack the sufficient funds to cope with demand.

Microcredits are the third source of funding that lower-income households use for retrofitting projects. Microcredits were established in Colombia as an accessible financing source for the promotion of productive activities and the establishment of small businesses. Housing microfinance is similar to these traditional schemes (in which the revenue derives from productive activities that enable small businesses to repay their loans). Larger financial institutions tend to stick to the original goal of microcredits, and do not offer specific tools to finance housing improvements. However, smaller financial institutions, social security networks for formal workers, NGOs, and specialized institutions have used the microcredit model to finance housing improvement projects. Microcredits granted to perform structural alterations or home improvements may be seen as a form of housing micro-finance, especially considering that these loans are being granted by collaborative networks. Still, the provision of housing microcredits remains low. In 2014, only seven institutions offered housing microcredits (*Banca de Oportunidades* 2014).

The main limits to expanding these operations are low funding and a lack of technical capacity (*Banca de Oportunidades* 2014). Furthermore, unlike microfinance aimed at productive activities, housing microfinance has developed slowly in Colombia, and the country does not have a clear institutional framework for this type of instrument. Housing improvements may be financed through all kinds of financial institutions, even those that are not overseen by the national government. One of the main challenges in estimating the impact of housing microfinance is quantifying the portfolio value and the number of clients, because there is no standardized way to classify the loans. Financial institutions account for these loans under different portfolios. As a result, it is nearly impossible to accurately estimate the number of housing microfinance loans, making it difficult to quantify the access of lower-income families to housing microfinance. The first task of the national government is to develop

a clearer and more robust framework that incentivizes the participation of different stakeholders in order to meet existing demand.

Households can also participate in a home-upgrading scheme through *Casa Digna, Vida Digna* (see Chapter 3). However, since this program is based on a 100-percent subsidy on home retrofitting, its scope and the number of families that can access its benefits are limited.

The main challenge to establishing a housing microfinance scheme backed by the national government is guaranteeing that private finance entities have enough resources to finance housing. To help resolve this issue, the government can subsidize a proportion of the microcredits earmarked for home upgrading.

Colombia can structure microcredits for the housing market in three ways. First, it can supplement households' payments to the financial institution directly, as the ABC programs do. This kind of program should incentivize a good payment history and focus on reducing the microcredit's interest rates for households. It can be designed as a flat subsidy and follow a progressive approach, as the Ministry of Housing is proposing for the new ABC scheme. Colombia's second option is to define a guarantee scheme with the *Fondo Nacional de Garantías* to incentivize this type of lending by reducing the risk for financial institutions. Thirdly, the government could set a re-discounted rate by compensating the resources with second-tier development banks (FINDETER and Bancoldex). The first of these mechanisms would supplement household resources, the second would expand market access, and the third would reduce borrowing costs for households.

TABLE 21 | **Housing microcredit characteristics**

CHARACTERISTIC	VALUE	
Average loaned amount	Col\$9 million	US\$2,500
Minimum loaned amount	Col\$1 million	US\$300
Maximum loaned amount	Col\$93 million	US\$25,000
Average loan period	42 months	
Minimum loan period	7 months	
Maximum loan period	70 months	
Maximum (mode) loan period	59 months	
Annual interest rate	31.8%	
Installment in average term	Col\$339,000	US\$92
Installment in mode term	Col\$282,000	US\$76

SOURCE: World Bank Survey, July 2019; data provided directly by the Ministry of Housing.



THERE ARE ECONOMIES OF SCALE FOR DIRECT RETROFITTING INTERVENTIONS IN COLOMBIA.

Second Strategy: **Prioritizing Direct Retrofitting Interventions in Urban Areas**

Currently, the qualitative housing deficit outstrips the resources allocated to programs aiming to reduce it. In 2020, the Ministry of Housing's total budget for home retrofitting was less than US\$8 million. The program could be grown in the coming years, in an incremental fashion to overcome the operational challenges that may arise.

Elements of a Retrofitting Intervention

Colombia's geographical concentration of housing deficits generates economies of scale for direct retrofitting interventions. For home-improvement programs financed by the government, efficiencies arise when interventions are spatially concentrated and multiple upgrades are performed in the same housing unit. Fortunately, current information enables micro-level planning of required interventions, enabling Colombia to capitalize on such economies of scale.

The five housing deprivations that should be prioritized in a holistic retrofitting intervention are inadequate wall materials, poor floor materials, lack of access to adequate space for cooking, unstable roofing, and poor water and sanitation conditions. These deprivations can be addressed with complementary interventions, and doing so would have a significant impact both on the qualitative housing deficit and on multidimensional poverty indices.

TABLE 22 | **Unitary costs of interventions**

The average area of a housing unit was obtained using artificial intelligence algorithms fed with data obtained by drones and Google Street View imagery, supplied by the Global Program for Resilient Housing.

	AVERAGE COST (COL\$)	AVERAGE COST (US\$)
Walls	53,345 (per m ²)	14.22 (per m ²)
Floors	66,560 (per m ²)	17.74 (per m ²)
Roof	74,174 (per m ²)	19.77 (per m ²)
Kitchen	2,038,000 (total)	543 (total)
Sewerage/ bathroom	2,309,000 (total)	615 (total)

SOURCE: Original estimations for this publication, based on data provided by Ministry of Housing 2019.

The Ministry of Housing and the Department of Social Prosperity have comprehensively quantified the costs of these interventions, facilitating the implementation of this type of project for local entities. In Colombia, costs of home improvements are standardized, and information is available for prioritizing neighborhoods and families, both of which make it easier to quantify the cost of an integrated retrofitting intervention. This is an enormous advantage, one that the national and local government should use more intensively. Table 22 presents the average cost per unit for the five proposed interventions.

Prioritizing Interventions

Large-scale retrofitting projects must prioritize interventions in communities with the greatest housing needs. To that end, we have developed an intervention prioritization methodology, available in Annex J. The methodology combines two sources of information. From the census, we can determine the city blocks that have the greatest proportion of homes with deprivations. From an analysis made as part of the Global Program for Resilient Housing (GPRH), we can identify physical characteristics – and certain deprivations – of some homes and neighborhoods in Neiva, Cartagena, and Soledad. Using these databases together enables us to prioritize the city blocks most in need of intervention and to more precisely estimate the costs – in other words, to determine where retrofitting investments will provide the most benefit.

To illustrate, Annex J presents a holistic retrofitting intervention scenario for the city of Neiva and estimate its cost. The results suggest that 818 blocks conform to the critical prioritization zone. A retrofitting project intervening in these areas would cost US\$13.59 million and benefit 7,174 families. Alternatively, if intervention were limited only to the 511 blocks that conform to the very critical prioritization zone, the cost would be US\$11.05 million.

This framework is designed to allow local and national entities to prioritize intervention zones for retrofitting projects within their cities. However, this prioritization methodology is feasible only when policy makers have enough information to correctly locate vulnerable families, which is why administrative data must be complemented by geospatial information. Such information, like that generated by the GPRH, is crucial in characterizing housing deficits and strengthening housing retrofitting projects.

Third Strategy: **Increasing Expenditure for Rural Households**

According to Colombia's National Department of Statistics (DANE 2018), 2.3 million rural families suffer from a housing deficit, representing 46.2 percent of the national housing deficit. Although the recently promoted rural housing policy is a step toward meeting the housing needs of families living outside urban areas, the program has a low number of beneficiaries and thus may not have a significant impact on the housing deficit. While rural housing policy does incorporate certain strategies to improve its implementation efficiency, its efficiency is inevitably limited, as rural households are by definition not spatially concentrated. The policy also does not take into account alternative housing solutions, like modular units or prefabricated houses, which could benefit a greater number of beneficiaries at a lower cost.

The Ministry of Housing will allocate US\$44.2 million between 2020 and 2022 to the first comprehensive rural housing policy in the history of Colombia (Ministry of Housing 2020). Although this number is significant, it is not sufficient to cover the housing necessities of all the rural families that are currently living in substandard conditions. The national government is offering 35,000 subsidies to rural families, while the Ministry of Housing has announced 200,000 subsidies that will benefit urban households. It may be argued that given the spatial concentration of urban families living with inadequate housing, the efficient decision is to allocate resources in cities where economies of scale may be realized; be that as it may, the newly implemented rural housing program will only serve 1.53 percent of rural families with a housing deficit. This calls for a greater effort in the allocation of funds to this segment of the population.

The allocation model developed by the Ministry of Housing incorporates a prioritization strategy. The agency aims to use this prioritization scheme to distribute rural housing subsidies so as to reach the most vulnerable households, even in the most remote locations. The prioritization index is built upon seven strategic variables for rural conditions and classifies municipalities into "red" and "green" categories according to their score. Red municipalities have a greater severity of socioeconomic and housing conditions and are therefore prioritized.

The rural housing program implemented a participatory process that involved multiple stakeholders, including rural community leaders, to develop housing solutions that can be adapted for local environments and that respect cultural traditions. The six typologies of housing units that were developed also take into account specific productive activities that usually take place inside rural homes.

However, these typologies do not consider alternative methods to increase construction efficiency. Adopting appropriate technologies would reduce consumption of both materials and capital, lowering the cost of a house and resulting in greater affordability for rural populations (Kumar 2014). The next step in developing rural housing solutions in Colombia is to incorporate more efficient production methods that lower the mean production price, expand the number of beneficiary families, achieve a larger scale in more concentrated interventions, and create a pool of successful operators that gradually increase their capacity to execute solutions. The proposed intervention in rural housing should include free housing for those in critical need, microcredits in the rural sector, and non-structural retrofitting.

Fourth Strategy: **Neighborhood Upgrading as an Essential Part of Retrofitting Projects**

Neighborhood-improvement projects in Latin America have been developed as an answer to the rapid, organic, and disorganized urbanization process that the region experienced during the second half of the 20th century. These experiences have suggested several best practices for such programs. For one, technical assistance is crucial to ensure a positive impact on living conditions in slums. Additionally, national governments must work with local communities to effectively implement slum-upgrading policies. However, national-level funding for neighborhood-improvement programs is limited. This section introduces financing tools that could help expand the city-level implementation of neighborhood-upgrading programs.

One such program currently active in Colombia is *Casa Digna, Vida Digna* (CDVD). As discussed in Chapter 3, *Casa Digna, Vida Digna* combines non-structural retrofitting of individual units with neighborhood-improvement projects. CDVD is a great example of how housing retrofitting must be incorporated alongside neighborhood improvement, with the recognition that in order to integrate informal settlements into the formal areas of a city, residents must have access to public goods. However, although CDVD's interventions, which are planned and financed by national and local authorities, promote the participation of the community in order to better understand their needs and characteristics, there is still no clear methodology for participation.

The program has had successes in the past, one excellent example being the neighborhood-improvement project implemented in Valledupar in 2019 (see Annex K). The problem, however, is that only three neighborhood-retrofitting projects were approved in 2019, meaning that CDVD could be more effective in reaching every Colombian living in inadequate neighborhood conditions. This is especially true for mid-sized municipalities that have had greater population growth rates during the last decade and have limited access to external resources. These municipalities must develop strategies to implement neighborhood-retrofitting projects. To do so, they can draw lessons from major cities, which have developed medium-term strategic programs instead of performing individual interventions.

For example, Bogota's latest retrofitting program for vulnerable zones ("Holistic neighborhood improvement with citizen participation") is an example of a long-term strategic framework for the implementation of upgrading projects that benefit a greater number of vulnerable people. The program has also been presented as a countercyclical policy to mitigate the negative impacts of COVID-19 on the local economy. Bogota's local authorities have identified eight priority zones (figure 48). The proposed retrofitting projects would benefit 1.94 million citizens. The municipality has prioritized three

FIGURE 48 | **Holistic neighborhood improvement prioritized zones in Bogota, 2020–2024**



SOURCE: Alcaldía Mayor de Bogotá 2018.

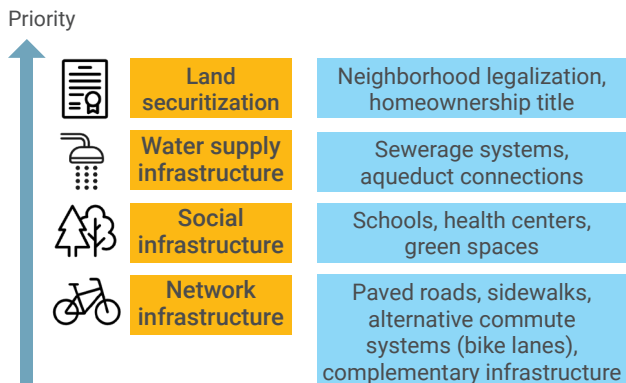
types of interventions: sewerage systems, road networks (which includes sidewalks and alternative local commuting infrastructure appropriate to the topology of these neighborhoods), and parks and other public spaces. As the name suggests, community participation is a key element of the program. Bogota has allocated US\$30 million over a four-year period to demarginalize vulnerable populations living in informal neighborhoods. These resources will come from local tax revenue, although alternative financial sources may be required for expansion of the program.

Unlike Bogota, however, the majority of municipalities in Colombia do not have enough tax revenue to finance holistic retrofitting programs on their own. For this reason, external resources are required to improve the conditions of informal neighborhoods. However, projects co-financed by the national government can encounter coordination problems. National and local authorities may not be in alignment on prioritization of interventions, and project implementation could drag on if interaction takes place through unnecessary intermediaries. Most critically, resources for these kinds of programs are limited. Indeed, as Bah, Faye, and Geh (2018, 231) note, “a trend towards decentralization in many countries suggests that the provision of infrastructure and services is increasingly becoming the responsibility of city and municipal governments alone.” The major barrier that cities face in implementing slum-upgrading initiatives is obtaining the financing for necessary infrastructure and services. Alternative financing mechanisms need to be implemented to meet these challenges.

Findeter, a second-level development financial institution, is a relevant source of financial resources that municipalities can use to develop holistic neighborhood retrofitting projects. Given its social purpose, Findeter offers lower interest rates than other alternatives. The institution’s real annual interest rates range from 3.5 to 4.95 percent, depending on the loan term.

Despite these lower interest rates, however, municipalities may still find it too costly to finance holistic retrofitting projects. An alternative that could potentially increase access to finance is a subsidized interest rate. Below, we propose a model in which municipalities develop a long-term holistic neighborhood-upgrading program that prioritizes the interventions presented in figure 49. They would then be eligible for a zero-percent-interest loan provided by Findeter. The national government would cover the interest payments and also provide a guarantee in case of default. The goal of this proposal is to enable municipalities to increase their efficiency by implementing large-scale neighborhood-improvement programs, instead of the isolated interventions to which their financial constraints currently limit them.

FIGURE 49 | **Prioritized interventions for holistic neighborhood improvement programs**



SOURCE: Original figure for this publication.

Effects of Investing US\$1 Billion in the Proposed Housing Policies

By our calculations,³³ if US\$1 billion were invested equitably among the four strategic mechanisms described above, Colombia's total housing deficit would decrease by 19.8 percent. The deficit would shrink by 7.25 percentage points, from 36.6 percent to 29.35 percent. This change would be mainly driven by a reduction in the qualitative deficit, which would drop to 19.6 percent (a decrease of 7.21 percentage points). Furthermore, the investment could generate 784,000 jobs during the four-year implementation process.

Microfinance for housing retrofitting is the most cost-efficient option for reducing Colombia's housing deficit. However, many households with multiple deprivations or with very low income would not benefit from a microcredit even if it were subsidized. Direct home retrofitting has a lower impact on housing deficit than the microfinance alternative, but it is more cost-efficient. Finally, free housing should be available for the most vulnerable populations for which housing retrofitting is not a viable solution. Free housing is the least cost-efficient alternative to address the housing deficit: a given budget allocated to free housing would have five times less impact on housing-deficit indicators than the same budget allocated to non-structural retrofitting.

TABLE 23 | Costs and impacts per proposed intervention

	PROGRAM	COST OF INTERVENTION (US\$, MILLIONS)	BENEFICIARIES (HOUSEHOLDS)	INTERVENTIONS	REDUCTION IN HOUSING DEFICIT (% POINTS)	DIRECT JOBS CREATED YEARLY	EFFECT ON MPI (% POINTS)
Urban housing	Microfinance for retrofitting	248.8	630,785	708,623	-4.23 p.p. (qualitative)	105,525	-0.89 p.p.
	Direct retrofitting intervention	252.0	160,422	215,000	-1.5 p.p. (qualitative)	26,870	-0.13 p.p.
Rural housing	Microfinance for retrofitting	100.8	234,236	280,503	-1.08 p.p. (qualitative)	39,195	-0.52 pp.
	Direct retrofitting	97.8	59,325	83,749	-0.4 p.p. (qualitative)	13,902	-0.6 p.p.
	Free housing	49.0	5,009	5,009 (free housing)	-0.04 p.p. (quantitative)	11,200	0.04 p.p.
Neighborhood interventions		250				12,000	

SOURCE: Original calculations for this publication, based on data from DANE 2019b.

Despite its significant impact on the national housing deficit, however, allocating US\$1 billion would not address housing deprivations for all households in need. Each of the four programs would have to develop a prioritization strategy to maximize the beneficiary families and ensure it reaches the most vulnerable households.

- **Microfinance:** This strategy should be targeted to households suffering from a qualitative housing deficit that present two or fewer housing deprivations. The prioritization strategy for housing microfinance must incorporate poverty indicators, such as the SISBEN score (the national poverty score which identifies vulnerable groups based on a survey). Since the monthly payment on the loan must represent less than 30 percent of the household's monthly income and requires the intermediation of microfinance institutions, targeting should be concentrated on poor families but not necessarily those in extreme poverty.

³³ Using the national household surveys (GEIH 2019), we identified the possible beneficiaries for microfinanced retrofitting, direct retrofitting, and free housing in urban and rural areas. We also identified the number of housing deprivations for this targeted population. By knowing the number of deprivations that could be fixed through each program, we can estimate the number of jobs created per program using the job multiplier indexes described earlier.



MUNICIPALITIES CAN INCREASE THEIR CAPACITIES AND EFFICIENCY TO IMPLEMENT NEIGHBORHOOD-IMPROVEMENT PROGRAMS.

- **Direct retrofitting:** Direct retrofitting should be targeted to households that present three or more housing deprivations, meaning that their income is not sufficient to cover the monthly payment associated with a retrofitting microcredit loan. Targeting should be both spatially and at the household level on the basis of need. The first step for direct housing retrofitting is to spatially locate the concentration of qualitative deficit within cities, finding pockets of qualitative deficit. Once these pockets have been defined, a process of neighborhood formalization and titling should be designed. The second step would be targeting of individual families based on SISBEN data, and should be concentrated on families in extreme poverty.
- **Rural strategy:** The rural strategy also incorporates the microfinance and direct retrofitting tools, along with free housing. The prioritization of families for rural free housing should follow the successful example of urban free housing, which considers families located in non-mitigable risk areas, families classified by SISBEN as being in extreme poverty, and families who have been displaced by the armed conflict. Additionally, the rural strategy should prioritize households living in nucleated areas in order to increase the scope of the intervention. The targeting mechanisms should be designed by the Ministry of Housing in coordination with the DPS, and should exclude the possibility of political manipulation by local or national authorities.
- **Neighborhood retrofitting:** Neighborhood retrofitting interventions should be prioritized in denser urban areas with low access to public services and higher rates of housing informality. They can also be allocated on the basis of complementarity with other types of housing programs.

Policy Solutions for Leaseholders

Colombia is currently dealing with concurrent crises, including the Venezuelan migrant and housing crisis and the economic crisis resulting from the COVID-19 pandemic. When it comes to housing, both of these crises have a severe impact on leaseholders. Most Venezuelans in Colombia rent rather than own their homes; and although Colombians lease their homes at a considerably lower rate than do Venezuelan migrants, Colombian leaseholders are significantly threatened by the current economic downturn. It is therefore recommended that Colombia implement policies to lower rental payments or provide additional access to rental solutions for those who need them most.

According to Peppercorn and Taffin (2013), there are three different types of policies to subsidize rental housing. The first type has as its ultimate aim the provision of full ownership – for example, programs in which the tenant pays for the house progressively and eventually owns it. In the second type of policy, shared ownership of the house continues in the long term. Policies of the third type rely on cooperative housing. Tenants pay a low rent in exchange for equity in the cooperative; they cannot sell the house, only their participation in the entity.

When implementing a rental subsidy, some standard best practices may be taken into account (Peppercorn and Taffin 2013). Focusing on the demand side, the rental option must be made preferable to ownership, meaning that the net present value of the payments made by a tenant must be lower than those made to buy a house during the same period. Since the payments must be affordable, the policy scheme should reduce the price of rentals by increasing the housing supply. In the case of Venezuelan migrants in particular – most of whom rely on informal income and who tend to have low financial inclusion as a consequence – it is important to analyze and take into account the payment capacity of possible beneficiaries. On the supply side, the policy's implementation must ensure sufficient return on the investment in rental housing, meaning that the after-tax return on equity must be at least as high as that on a government bond plus a risk premium. If these conditions are met, a rental subsidy could be effective.

BOX. Improving Tenant Migrants' Housing Conditions in Jordan

A well-documented program that aimed to improve living conditions for migrants was established in Jordan's Bader District for Syrian refugees and host communities. Households were selected for home improvements – specifically, to masonry, plumbing, electricity, doors, and windows – in exchange for three months of a tenant's rent. The projects included technical assistance in the construction phase and on legal and engineering topics. To increase the economic impact and positive spillover effects in the region, at least 20 percent of the labor force used for the improvements was required to come from the same district. This program was highly successful. It allowed owners to participate in the process and improved the living conditions for tenants. A program like this one could be a useful model for Venezuelan migrants in Colombia.

Leaseholders Affected by the Venezuelan Migrant Crisis

To alleviate living conditions for Venezuelan migrants in Colombia, the national government must implement new policies or redirect the current housing policy. Since 88.4 percent of Venezuelan migrants living in Colombia are leaseholders, suffering a higher housing deficit than their Colombian peers, it would be strategic to provide them with rental subsidies to improve their housing conditions and living standards.

Based on the current situation and regulatory framework in Colombia, we suggest two possible solutions for improving the housing conditions of Venezuelan migrant families. The first is to enable Venezuelans to access current housing programs, such as by expanding access to the Family Housing

Subsidy in order to facilitate temporary solutions for leaseholders. This type of program offers flexibility, such as the special conditions that are implemented when displaced persons or victims of the armed conflict apply for the subsidy; similarly, the flexible rules of the Subsidy for Natural Disaster (established through Decree 1017 of 2015) allow people to apply without having to show a high level of savings. This flexibility can facilitate access for possible beneficiaries – not only nationalized migrants, but also those who have been granted asylum or have status under the Special Permission for Migrants (PEP) – to finance their rent. The compulsory requisites for a subsidy of this type could be relaxed to enable access for the 60 percent of Venezuelans currently excluded from housing policies. Alternatively, the government could increase its current efforts to provide Venezuelans with legal status that housing programs would consider to be valid. This latter approach would provide even informal workers with a way to report and legalize their income as independent earners. The policy would increase the quality of migrants' living conditions, enable this informal population to access higher-quality housing, and prevent them from being forced to illegally establish themselves in high-risk areas; it would also boost local economies through rent payments.

The second solution focuses on home improvements by Colombian households that would make new spaces available for Venezuelan migrants to rent, thus reducing the quantitative housing deficit. An example of this kind of subsidy program is *Plan Terrazas* in Bogota, a program intended to densify some neighborhoods in the city. Through home retrofitting and the addition of second or third floors to selected houses, it aims to create more habitable space in the city – which could be used by Venezuelan immigrants – and allow landlords to improve their properties and collect additional rental income. It is important to consider, however, that *Plan Terrazas* or any similar program developed by local authorities requires capacity building and technical supervision and training. The first stages of such a program should build on national and local experience, starting with small interventions and scaling up if the program succeeds.

While the Colombian government cannot halt the Venezuelan migration, these steps will make progress toward alleviating the housing crisis for this vulnerable population.

Leaseholders Affected by the COVID-19 Economic Crisis

In the context not only of the Venezuelan migrant housing crisis but also the concurrent COVID-19 economic crisis, the national program *Semillero de Propietarios* should develop a pilot program to offer temporary rental subsidies that work like vouchers. Currently, the program subsidizes rent only when the beneficiary family is intending to acquire a home. However, the tightening of the financial system and the current increase in non-performing loans will make additional financial inclusion more difficult. Therefore, program resources could be partially used to subsidize rent, detached from the eventual goal of buying property.

This is particularly crucial during the current economic downturn resulting from the COVID-19 crisis, when renting households have a higher risk of being evicted. The Colombian government has acted to delay eviction processes and to promote common agreements between tenants and landlords, but this emergency solution may not be sustainable in the medium or long term. A viable alternative is to subsidize rental payments non-conditional to the acquisition of a housing unit.

Vouchers for renting have proven to be a beneficial solution for low-income families – including migrant households – that struggle to make their monthly rent payments and whose income is insufficient to enter the homeownership market. As in other some countries (e.g., the United States, Canada, and the Netherlands), low-income families would be eligible for a “renting voucher” that they could use to rent the housing unit of their preference. Rental vouchers enable relocation flexibility,

which allows families to adjust to their changing needs while also forestalling the spatial concentration of low-income families in segregated neighborhoods, as families may opt for locations with better public services infrastructure. Rental vouchers have also been causally linked to the improvement of employment and earnings, and to positive impacts on childhood outcomes (Fischer 2015). This type of subsidy is already being implemented by the municipalities of Bogota, Medellin, and Cali; at the national level, voucher-like rental subsidies are also offered by the National Unit for the Disaster Risk Management (*Unidad Nacional para la Gestión del Riesgo de Desastres*, or UNGRD) for families living in high-risk areas that need to be relocated or families that have been affected by a disaster.

While the operation of this type of program may be easier than other housing policies, it also presents three major setbacks that would need to be considered and, to the greatest extent possible, mitigated. Firstly, this policy could have a higher fiscal cost, depending on the term for which families may be beneficiaries of the program. Without a fixed time period for the benefit, or a fixed number of beneficiaries, cohorts' annual payments may accumulate, making the program fiscally unviable. Secondly, the conditions inherent in the scheme force households to use this new "income" on housing rather than freely using it according to their needs, imposing expenditure conditions upon already vulnerable people (Freeland 2007). Finally, there may not be sufficient supply of social housing units, or landlords may refuse to rent their units if they perceive a higher risk of default and if property rights are weak. For a voucher system to work, long-term rental subsidy programs also need to take into account the lessons learned during the implementation of *Semillero de Propietarios*.

Nevertheless, rental vouchers in Colombia could be implemented as a temporary housing solution during the current situation to prevent evictions. Families who rely on informal labor income have high vulnerability, and a rental voucher program would incentivize the formalization of this population segment. This consideration – combined with the lack of capacity during the COVID-19 crisis to provide additional units that qualify for the renting subsidy under the current form of *Semillero de Propietarios* – makes a strong case for implementing temporary rental vouchers.

Policy Recommendations

While the four strategies presented earlier are large-scale, thematic directions intended to maximize the effectiveness of housing expenditures, the following section contains specific, nuts-and-bolts recommendations for Colombia's housing policy going forward. The guidance can be categorized under four overriding themes:

1. Simplify institutional arrangements and improve coordination to facilitate the upgrading approach
2. Develop new financial instruments and resource streams to fund retrofitting, rural housing, and neighborhood upgrading
3. Improve targeting of resources and policies
4. Reform land-use planning schemes to combat suburbanization and loosen zoning restrictions to enable retrofitting in high-risk areas

The recommendations below are derived not only from the information collected in the foregoing report, but also from interviews with policymakers and experts on how to develop a more comprehensive housing policy. These interviews were conducted with urban development professors and researchers from Universidad de los Andes, Universidad Nacional, and Fedesarrollo; current and former Directors, Deputy Directors, and Deputy Ministers of Housing;³⁴ a former Secretary of Planning of Bogota; and construction professionals.

Simplify Institutional Arrangements and Improve Coordination to Facilitate the Upgrading Approach

- **Unify retrofitting resources under the Ministry of Housing and guarantee sufficient fiscal resources for the program.** The separation of functions between the Department of Social Prosperity (DPS) and the Ministry of Housing is a complex arrangement that has not helped to address the challenges Colombia faces. This separation has resulted in multiple issues: difficulties in standardizing interventions; diseconomies of scale in procurement processes; redundancies in administrative costs; bypassing of urban regulations; and reduced transparency in the selection of beneficiaries. The Ministry of Housing may have better institutional capacity than DPS to unify the program.
- **Improve coordination between water and sanitation and housing policies within the Ministry of Housing.** The Ministry should plan holistic, integrated investments for WASH solutions in urban and rural areas, based on a project development and management framework. A coordinated, sequential progression could be implemented, from primary water and sanitation municipal projects, to home connections, to in-house solutions for kitchens, pipes, and restrooms. Once a service network is built, in-home solutions should be a priority for the Ministry. Additionally, the Ministry does not have a clear roadmap of network expansions, and should develop a medium-term plan in this regard. Information should be shared between the Deputy Ministry of Water and Sanitation and the Deputy Ministry of Housing. The latter should determine priorities based on full information provided by the former about past and future projects and needs related to home improvements. The execution of retrofitting projects by the Deputy Ministry of Water (in

³⁴ The conclusions in this report do not represent the official position of the Colombian government.

Enterritorio) and the Deputy Ministry of Housing (with Findeter) should be unified.

- **Improve WASH capacity** by increasing Fonvivienda's legal capacity to implement WASH and neighborhood upgrading solutions.
- **Improve both extant information within the system and the use of new technologies.** Data analysis should be conducted and data architecture revised to build a single system of subsidy allocation, integrating information from the Ministry of Agriculture, DPS, Water and Sanitation (data on in-house solutions), CCFs, Fonvivienda, and the poverty database (SISBEN). Information technology should be used to track construction progress made by project contractors, building information modeling (BIM) technologies to save costs, and artificial intelligence to define territorial- and household-level prioritization. Progressive improvements should be sought – for example, sequencing title formalization, the development of WASH infrastructure in given neighborhoods, domestic WASH connections, and bathrooms and kitchens.
- **Include the social component through alliances with CCFs and local governments, and through the creation of a specialized unit in the Ministry of Housing.**
- **Improve subsidy allocation and construction times.** The first home retrofittings financed by the Ministry of Housing in 2019 experienced difficulties with subsidy allocation, especially during the current social-distancing restrictions, since presenting physical paper work was part of the process. In order to improve subsidy allocation and construction times, the government should:
 - **Redefine the role of Findeter**, limiting it to contract support and the auditing and evaluation of competitive alternatives. Currently, Findeter performs a family verification that is also performed by the municipalities and could be systematized by the Ministry of Housing. The role of Findeter should be concentrated on supporting the constructor's procurement process.
 - **Simplify subsidy allocation.** Sequence and clearly define the roles to avoid the duplication of steps: i) Define a clear targeting mechanism between DPS and the Ministry of Housing; ii) Micro-target beneficiaries based on SISBEN and census data; and iii) Allow municipalities to coordinate social assistance within the targeted areas and families.
 - **Simplify the licensing process for retrofittings.** Programs may develop an increasing reliance on structural retrofittings, for which formal licenses are required.
- **Simplify the process of neighborhood validation.** The rules for neighborhood upgrading should be modified to delegate this process to local governments, establish a clear protocol for defining risk areas, propose legal changes restricting the fiscal and administrative responsibility of constructors and government officials, and allow improvements to neighborhoods that are not defined in the Territorial Development Plan (POT) as prioritized areas for these interventions.

Develop New Financial Instruments and Resource Streams to Fund Retrofitting, Rural Housing, and Neighborhood Upgrading

Retrofitting

- **Develop an ecosystem for formal home retrofittings.** Guarantees should be created for microcredits that fund home retrofittings. Public development banks like Findeter and Bancoldex should be allowed to extend development loans for microfinance institutions that want to invest in retrofitting. Additionally, the Ministry of Housing should subsidize loans for low-income housing.

- **Develop new financial products for retrofitting by publicly owned financial institutions to foster the housing policy ecosystem.** In particular, the Rural Bank (*Banco Agrario*) should increase the number of credit options for home retrofitting, and the *Fondo Nacional de Ahorro* should also develop this product line.
- **Allow companies to charge fees on their investments in in-home connections to WASH services, and create a system of guarantees in case of non-payments.** Companies currently do not have an incentive to invest in in-home solutions, which affects network development. The government should reduce risk in the system by securing recovery rates and allowing the deferment of payments as part of the monthly charges.
- **Create more incentives for CCFs to invest in home retrofittings.** CCFs have accumulated unspent resources; the Ministry should develop a coordinated agenda with the largest CCFs in the country and with their Associations (*Asocajas*).

Rural Housing

- **Adopt retrofitting as the central strategy for rural housing and augment its baseline funding,** with adequate fiscal and procurement planning for the next few years. Colombia's current fiscal situation is critical, so additional expenditures will be highly restricted by the Ministry of Finance. One exception, however, is rural housing, since, according to Bill 546 of 1999, at least 20 percent of social housing resources must be assigned to rural housing. The allocation of future resources for urban social housing in future commitments (*vigencias futuras*) ensures the availability of funding for rural housing through 2025. These funds should be augmented, but this baseline enables planning for projects over the next few years.
- **Evaluate the creation of a financing instrument that would channel resources from the sale of WASH services in interconnected areas to non-interconnected areas.** The tax created by Bill 633 of 2000 in the energy sector is a useful example in this regard.

Neighborhood Upgrading

- **Develop a line in Findeter for loans to municipalities seeking to invest in neighborhood upgrading.** In the context of the COVID-19 economic crisis, such programs will serve as a countercyclical public intervention; it is thus in the national government's interest to ensure they can be carried out. The national government could subsidize the interest rate on these loans, and future increments in property taxes could finance the interventions.
- **Simplify the mechanism by which royalties are approved for upgrading programs.** The approval process is overly complicated, requiring multiple steps, including a per-household diagnosis of the intervention to be approved. The complexity of the process deters local governments from investing royalty resources in retrofittings. Neighborhood upgrading projects could be simplified by standardizing projects and designing a project prototype.
- **Allow the creation in POTs of areas designated for neighborhood and home upgrading,** similar to how the process of renovation involves the creation of intervention units (*zonas de actuación*). Develop a public–private partnership (PPP) model by which operators can improve neighborhoods and access resource streams from national or local budgets.

Improve Targeting of Resources and Policies

- **Focus resources.** Resources should be concentrated on municipalities agglomerated to the largest cities; on rural areas and on urban areas under 100,000 inhabitants; on racial minority groups; among workers with an income lower than two monthly minimum wages; and among Venezuelan immigrants. Additional resources should be assigned to rural areas and to regions with a large population of racial minorities.
- **Make rural housing policies and expenditures efficient and effective by ensuring they are well targeted:**
 - **Concentrate rural resources in nucleated centers.** This will increase efficiency and limit the minimum level of interventions per municipality to avoid extreme dispersion of the program, which was a big operative challenge for the Ministry of Agriculture.
 - **Develop a housing and water and sanitation policy for WASH solutions that separately targets nucleated and dispersed rural areas.** Strategies for rural areas must be differentiated to serve nucleated populations and those that are more dispersed. The type of solution for each is different: residents of nucleated areas need public water supply, sewerage, and garbage-collection systems, while the most dispersed populations require individual water purification systems, septic tanks, and mechanisms for the local disposal of most garbage with periodic collections of hazardous materials. Water and sanitation companies, NGOs, local authorities, and the Ministry should have a clear program for improving WASH access in rural areas.
- **Evaluate through impact evaluations the convenience of allocating additional resources for subsidies to non-social housing customers to those already approved between 2020 and 2022, given their regressive impact.**
- **Focus acquisition-approach subsidies on families earning less than two monthly minimum wages:**
 - **Advance the government's proposal to create a flat interest-rate subsidy regardless of the value of the credit.** This would benefit households that buy lower-value housing from among the VIS options, and would allow families in income deciles 4 and 5 who rely on formal employment to buy a home.
 - **Guarantee that banks take interest-rate subsidies into account when calculating payment capacity.** This is currently not the case, and the result is that families are rejected by the bank when, in reality, they would be able to afford the monthly mortgage payment.
 - **Study the possibility of increasing the loan-to-income ratio for low-income housing to between 35 and 40 percent, and the loan-to-value ratio to between 80 and 90 percent.** Loosening the restrictions in this moment could have a countercyclical effect on Colombia's economy as it struggles with the economic effects of the COVID-19 pandemic.

Reform Land-Use Planning Schemes to Combat Suburbanization and Loosen Zoning Restrictions to Enable Retrofitting in High-Risk Areas

- **Improve transparency around the capacity and need for resettlement in order to implement adequate implementation plans.** Medium- and high-risk areas in which the risk can be mitigated are home to a significant percentage of the population that cannot be resettled. For these homes to be made safer, a legal and administrative norm must be developed so as to exonerate public servants of fiscal or criminal responsibility should the risk be manifested, provided that adequate risk analysis was performed when the land was identified for improvement measures. In the case of rural areas, where risk is even higher, this could become a critical issue in order to advance with a retrofitting program.
- **When resettlement is not possible due to logistical challenges or high costs, focus efforts on the collection of risk data.** Local governments should focus on gathering data on threats to gain a better understanding of risk zones in cities. Adequate risk measurements would inform and enable the appropriate risk-mitigation actions to be performed during retrofitting projects. The ability to mitigate risk would clear the way for less-restrictive zoning codes that may create incentives for retrofitting and improvement policies.
- **Reform and coordinate land-use planning schemes to reduce and mitigate the effects of unsustainable suburbanization:**
 - **Ensure the provision of land for the development of housing projects, particularly social housing projects.** Authorities from major cities could achieve this through redevelopment schemes or by making available the nearest plots that are currently restricted for urban development.
 - **Improve coordination between “node” cities and their agglomerations.** When the land-use plans of municipalities are not in alignment, population growth and the availability of social housing tend to be decentralized, as is the case for Bogota and Cali (see Chapter 4). City systems that are not properly established as metropolitan areas must integrate a regional perspective into their land-use planning schemes.

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