RECOGNIZING THE OBVIOUS WHILE MUDDLING THE WATERS: CUBA'S HOUSING SECTOR REFORMS

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A perennial problem in revolutionary Cuba has been the shortage of housing. While it predates 1959, many economic and social policies implemented since, when coupled with demographic and political developments, have accentuated the shortage. The 1960s and 1970s baby boom would several decades later provoke a housing demand surge mitigated by the housing vacated by hundreds of thousands of emigrants. Other contributing factors, particularly in Havana, were policies intended to increase the housing stock in rural areas and secondary cities, as these policies dampened home construction in the country's capital. Housing self-help strategies, such as the micro-brigades, and the adoption of building methods imported from the former Soviet bloc (pre-fabricated housing, mostly in multi-level, apartment buildings) came to be regarded as efficient and economical methods to build units to house the population.

These housing construction strategies led to outcomes far short of expectations. While thousands of housing units were constructed in the last six decades, the number proved insufficient to satisfy demand. Moreover, housing availability was compromised by quality and durability of the new housing stock, as post-1959 vintage housing units failed to pass the test of time. Neglecting to maintain the housing stock inherited from republican Cuba took a major toll as well, as was the equally lax maintenance of much post-revolutionary construction. It was re-

ported in 2017 that about 40% of the more than three million housing units in the country were in poor shape ("Cuba registra" 2017). The evidence is most visible in the dilapidated old Havana districts, resembling Syrian neighborhoods destroyed by Assad's barrel bombs. Almost on a daily basis, building collapses are reported across Cuba.

Certain development policies, as noted, contributed to the contemporary housing shortage. During the early revolutionary years, a disproportionate share of construction resources were redirected away from the housing sector to increase priority investments in social infrastructure (schools, rural health posts) or to pursue ideologically-driven policies with questionable long-term results (e.g., schools in the countryside). During the 1980s, countless thousands of tons of concrete were wasted in the never completed *Juraguá* atomic power plant, a costly white elephant.

Other ambitious but failed development plans—industrial, agricultural—consumed vast construction resources, as did the construction of wasteful defense installations (tunnels, etc.). Lastly, economic shocks derailed ambitious housing construction plans, like the one under way in the 1980s when Cuba was receiving generous economic subsidies that ended with the collapse of the Soviet Union in the 1990s. Low capital investments rates during the Special Period made things even worse. More recently, tourism, the latest economic development priority,

^{1.} As usual, I thank Jorge Pérez-López for his useful suggestions on the paper.

has funneled construction inputs away from housing construction by the public sector.

Equally damming were policies that prevented families from seeking their own self-help housing solutions by interfering with or limiting their access to home building sites and affordable construction inputs. Thus, despite decades of promises to reduce the housing shortage, the situation today appears to be more serious than at any other time in the past.

TRENDS IN HOUSING CONSTRUCTION

These could be assessed since the 1980s with data in Table 1. The highest annual average construction rates were attained during the 1980s, when Cuba received Soviet subsidies. Housing was built mostly through collective efforts, including the establishment of "self-built housing through private efforts and establishment of temporary cooperatives to build multifamily housing," and by professional construction brigades. Between 1959 and 1983, 296,616 housing units were built, or 12,000 per annum, on average (Díaz-Briquets 2009:430-431). The construction pace accelerated considerably between 1984 and 1990, just as the Special Period began, with 334,028 units constructed, or 47,718 a year, and then declined to 37,078 homes annually, or by 22 percent, between 1992 and 2009, when 667,718 units were built.² Since 2010, the construction rate continued to decline, to an average of 28,703 units annually, the 2015 figure being nearly equal to the one for 1992, when housing construction was at is nadir. In total, between 1990 and 2014, 316,595 homes were built. While declines were registered in both the state and non-state sectors, they were more significant in the former.

Recent assessments conducted by the Housing Director General of the Construction Ministry and two National Assembly commissions confirm the trends depicted in Table 1. They indicate housing availability continues to decline rather than improve as planned by the government (Céspedes Hernández

Table 1. Housing Units Constructed, Total and State and Non-State Sectors, 1984–2015

			Non-	Non-State				
Year	Total	State	State	UBPC	CPA	CCS	Private	
1984	39393	25393	_	_	_	_	_	
1985	41170	27265	13905	_	2053	_	11852	
1986	70914	25841	_	_	—	_	45073	
1987	67187	26248	_	_	—	_	40939	
1988	39449	28958	10491	_	3127	_	7364	
1989	39589	28296	11293	_	2899	_	8394	
1990	36326	22510	13816	_	1654	_	12162	
1991	_	_	_	_	_	_		
1992	20030	12334	7696	_	429	_	7267	
1993	27128	16933	10195	_	1993	_	8202	
1994	33465	21813	11652	_	3288	_	8364	
1995	44499	24034	20465	6561	4763		9141	
1996	57318	30206	27112	8013	4672		14427	
1997	54479	26504	27975	5911	3476		18588	
1998	44963	21267	23698	4127	1783	3585	14201	
1999	41997	19347	22650	3249	922	2166	16313	
2000	42940	20670	22270	2783	854	2559	16074	
2001	35805	17202	18603	1879	656	1462	14606	
2002	27460	19643	7817	365	96	195	7161	
2003	15590	7318	8272	120	39	26	8087	
2004	15352	8295	7057	168	63	65	6761	
2005	33919	14585	25334	452	392	132	24538	
2006	11373	29692	81681	1473	1392	676	77480	
2007	52607	22419	30188	1108	831	874	27375	
2008	44775	18729	26046	1013	744	666	23623	
2009	35085	19437	15648	560	681	227	14180	
2010	33901	21687	12214	216	311	254	11433	
2011	32540	22968	9574	255	166	220	8933	
2012	32103	22343	9760	143	208	145	9264	
2013	25634	12868	12766	314	124	111	12217	
2014	25037	12197	12840	68	46	27	12699	
2015	23003	10417	12586	_			12586	

Source: Oficina Nacional de Estadísticas, Anuario Estadístico de Cuba 2008, Table 12.1; Anuario Estadístico de Cuba 2015, Table 12.1, http://www.one.cu

2017b; "Cuba registra" 2017). In addition to the 316,595 units built by the state sector—a total certain to be inflated (see footnote 2)—providing homes to 908,627 residents (2.87 per unit), 183,250 non-State sector units were constructed. The con-

^{2.} We have assumed that 40,000 units were built in 2006. It is known that the actual number for that year was tampered with as documented when former Vice President of the Council of State Carlos Lage revealed that less than half of the officially-claimed 111,000 housing units built in 2006 had in fact been constructed ("Insuperable" 2008).

struction pace proved insufficient, as by the end of 2016, the national home deficit was officially estimated at 883,050 units, or 30,000 more units than in 2015, as fewer homes were built and others lost due to building collapses and neglect. In 2017, the situation continued to worsen as by mid-year only 5,772 homes of the 9,700 planned had been completed, 1,607 by the state sector, 2,088 through self-help initiatives, and 2,027, or 35% of the total as part of the housing construction subsidy program (Céspedes Hernández 2017; "Cuba registra" 2017).

What the official housing construction data masks is that the housing deficit would have been far greater were it not for emigration between 1995 and 2015, when the country saw the highest annualized emigration rates since the revolution: nearly 659,000 Cubans left the country over this period, almost as many as between 1959 and 1994 (Duany 2017). If we assume four emigrants per household, emigration freed 162,500 homes that were occupied by new residents, thus significantly easing housing market pressures. In future years the consequences of emigration on housing availability are likely to diminish given the migration reforms introduced by the Cuban government in 2013. Citizens departing the country for up to two years who return will no longer forfeit ownership rights to their homes.

The assessments concluded that among the reasons for the sector's poor performance were inadequate planning and execution of projects. Because of misallocation of labor resources, for example, completion of home construction projects has to be rushed at the last moment to meet annual targets. Quality control oversight is lax, construction inputs are often unavailable, and skilled workers increasingly move away from the state sector seeking higher wages as self-employed workers. Another major problem is the poor condition of multi-family homes—mostly built since 1959—as they demand comprehensive renovations. Budget allocations for that purpose are insufficient.

One of the reports, revealingly, calls attention to two issues facing the housing sector, one of which has been pending for many years—the failure to do away with earthen home floors. The other is the need to

develop procedures to allow families to build homes in the roofs (*azoteas*) of state-owned buildings (Céspedes Hernández 2017b). That after nearly sixty years of promises earthen floors remain a concern is a sign of the gravity of the housing problem as is the fact that a partial solution to the housing shortage is perceived to lie in the transformation of roofs of publicly-owned building into residential units.

Deliberations regarding the Housing Director General's report were equally instructive regarding the magnitude of the housing crisis. Even though the report described the housing situation as more critical in the country's largest cities (Havana and Santiago de Cuba), during the parliamentary debate a Sancti Spiritus provincial deputy alleged it was even more severe in rural areas. This deputy even suggested that in rural areas self-built housing should be permitted even in sites lacking access to water and sewerage services, a measure in contravention with recent (see below) Instituto de Planificación Física (IPF) directives ("Nuevas regulaciones" 2017).

Construction Ministry data for four of the provinces most challenged in terms of availability of housing, when coupled with 2012 Census of Population and Housing data, can be used to illustrate the gravity of the situation (see Table 2). In these four provinces, the Ministry estimates the housing deficit exceeds half-a-million units. It is numerically more pronounced in Havana (Ciudad La Habana) province, with a population of more than two million people. In relative terms, however, the home deficit is graver in Holguín, a province with a population less than half that of Havana but having a disproportionate higher number of homes in precarious conditions. In these four provinces, accounting for about 40% of the country's population, between one-quarter and 40% of private dwellings, home to more than 1.5 people reside, are in poor repair. For the country as a whole, the figure is likely to exceed three million ("Cuba registra" 2017).

ECONOMIC REFORMS AND GUIDELINES (*LINEAMIENTOS*) APPLICABLE TO HOUSING

A series of policy reforms that began to be implemented as Raúl Castro assumed power and designed

Table 2. Estimates of deteriorated housing units in four provinces and percent and number of inhabitants in such units

-	Number of			Percent living in		Number living in
	deteriorated	Number of private	Population in	deteriorated	Average household	deteriorated
Provinces	housing units	housing units	province	housing units	size	housing units
Ciudad Habana	206,000	709,506	2,090,743	29.0	2.94	605,640
Camagüey	71,000	286,626	769,363	24.8	2.68	190,280
Holguín	147,000	369,725	1,034,215	40.0	2.80	411,600
Santiago	103,000	351,750	1,047,647	29.3	2.98	306,940

Source: Data on deteriorated housing units may be found in "Cuba registra un déficit de más de 880,000 viviendas." www.cubaencuentro.com, July 13 and on private housing units and population in Oficina Nacional de Estadística e Información, Censo de Población y Viviendas, Cuba 2012, La Habana, 2014, Table V.5.

to reactivate the national economy include several housing sector initiatives. The Lineamientos de la política económica y social del Partido y la Revolución (or Guidelines), first made public in November 2010 and subsequently revised following extensive public consultations by the Sixth (2011) and Seventh (2016) Communist Party congresses were meant to update the national economic model by introducing cautiously selected market mechanisms, while preserving the essentials of central planning and continuing to limit private property, both central features of Cuba's socioeconomic and political model. Most notable among these have been guidelines designed to reduce the size of the state labor force, expand self-employment, encourage the growth of rural and urban production cooperatives, introduce banking and social services reforms, and provide for more liberal migration rules (Mesa-Lago and Pérez-López 2013:195-214; see also, Asamblea Nacional 2016).

Eight housing-related guidelines approved by the Sixth Party Congress in April 2011 (Partido Comunista 2011) were eventually revised and reduced to seven during the Seventh Party Congress. They are listed below, as loosely translated English versions from the original Spanish. While some of the guidelines seek to deepen implementation of housing initiatives begun before the guidelines were announced, others are intended to reverse long-standing practices interfering with the productivity and efficiency of the sector. Since 2011 a series of legal and regulatory measures were enacted to institutionalize the reforms in the housing guidelines.

Guideline 230—Continue giving priority attention to housing conservation and rehabilitation, including reverting to their original functions former housing

structures currently used for other purposes, as well as to converting selected institutional structures into housing.

Guideline 231—Continue giving priority attention to the sustainability of municipal housing programs by increasing production and commercialization of available local housing inputs and technologies to allow for increased popular participation, quality improvements, and lower production costs.

Guideline 232—Prioritize the construction, conservation, and rehabilitation of rural housing, while taking into account the need to improve living conditions—a more demanding task in rural areas—by incorporating population ageing policies, with the goal of complementing and stabilizing the agricultural labor force.

Guideline 233—Comprehensibly implement the National Housing Program (*Programa Nacional de la Vivienda*), to include implementation of primary construction directives, construction modalities (by the state and by individuals through own efforts), and rehabilitation of dwellings and neighborhoods, as priorities are identified to eliminate the housing deficit, while promoting improved land use practices and reliance on more efficient technologies.

Guideline 234—Update, regularize and expedite bureaucratic procedures for remodeling, rehabilitating, constructing, renting and transferring housing units.

Guideline 235—Modify the housing legislation in conformity with the national socioeconomic development model to ensure the solution to the housing problem is rational and sustainable, in accordance with the social principles achieved by the Revolution,

as housing construction financing means are diversified.

To what extent the guidelines and associated laws and regulations will prove helpful in alleviating the housing shortage is uncertain as in most respects they did not alter the fundamental market constraints affecting the sector's dynamics, are not accompanied by the resources necessary to satisfy accumulated capital requirements, and because they introduce further bureaucratic distortions. A summary of the ensuing regulatory reforms and a preliminary and brief review of their relative effectiveness follows.

MAJOR REGULATORY AND LEGAL REFORMS

One of the initial reforms, implemented as the initial draft of the *Lineamientos* was being prepared, was to permit the sale of construction inputs at unsubsidized prices for self-help building and repairs (Bustamante Molina 2012). Following this initial policy opening, the pace of reforms quickened with the announcement of a crucial reform allowing for the private sale of residential real estate.

November 2011—Decree-Law 288 and Complementary Regulations

This decree-law and related regulations (Gaceta Oficial Extraordinaria No. 35), issued on November 3, 2011, were intended to eliminate long-standing prohibitions and establish more flexible procedures for the voluntary exchange of residences. The new norms acknowledged, and legalized, the sale, exchange, donation and adjudication—whether through divorce, death, or permanent emigration—of homes between Cuba-based citizens and foreigners residing in the country. The new regulations substantially modified Chapter 5 of the General Housing Law (Ley General de la Vivienda) in conformity with Seventh Party Congress Guideline 234 calling for more flexible property transfer rules. They included provisions for recording transactions in the Property Registry (Registro de la Propiedad) while ratifying that house ownership will continue to be limited to a primary residence and a vacation home per family ("La próxima" 2011).

January 2012—Housing Subsidy Measures (*Disposiciones*) for Most Needy Families

With the intent of assisting families facing extremely deteriorated conditions of their homes or dire socio-economic status (poor health, aged, disabled), these measures provide monetary subsidies to beneficiaries for purchasing construction materials and hiring labor to build, repair, or rehabilitate homes. This policy arose from the growing recognition that self-help efforts must be encouraged to address the continued housing deficits. Priority was to be given to families adversely impacted by natural events such as hurricanes and flooding.

These housing subsidies are alleged to be a major social policy innovation, since it is the first instance that targeted subsidies have been used in the country to benefit needy individuals or families, rather than subsidizing the offer of products or services to all consumers regardless of socioeconomic status (Bustamante Molina 2012). Targeting social subsidies to specific recipients for maximum effect and economic efficiency is a generalized practice in most market economies.

September 2014—Decree-Law 322 and Complementary Resolutions

With an effective date of January 5, 2015, this decree-law (Gaceta Oficial Extraordinaria No. 40) and seven complementary resolutions further modified the 1988 General Housing Law. The law and accompanying resolutions expanded construction options by allowing home construction in empty lots, including in state-owned land and in flat roofs of buildings (azoteas). The Decree-Law's primary goal was to simplify legal norms for the sale, exchange (permutas), and approval for self-construction requests. Complementary resolutions addressed simpler procedures for the transfer and construction of homes, strengthening urban planning regulations, and addressing regulatory construction violations, including homes built on unauthorized unsanitary sites, non-designated residential locations, environmentally protected habitats, and tourism-oriented areas, including beaches.

Through this Decree-Law, the main functions of the National Housing Institute (*Instituto Nacional de la Vivienda*, INV)—later incorporated into the Con-

struction Ministry—were largely transferred to the Physical Planning Institute (*Instituto de Planificación Física*, IPF), with other duties assigned to the Ministeries of Justice Ministry and Labor and Social Security and provincial and municipal Popular Tribunals ("Reestructuran sistema" 2014; Vecino Ulloa 2014). The IPF will have authority to grant state-owned land to petitioners requesting home construction sites, certify the habitability of completed housing units, approve the transfer of unoccupied empty lots and *azoteas*, and conduct technical evaluations.

The IPF is the entity responsible for urban and rural home land use practices, including where structures are allowed and enforcement of compliance with construction regulations. As part of these functions, the IPF has the power to remove unapproved structures, and to otherwise regulate all matters pertaining to human settlements. In 2014, in conjunction with the Universidad Central de Las Villas, the IPF reportedly was conducting a shantytown census. It was also modernizing and updating the national land registry to formalize home ownerships claims, ensure regulatory compliance, and prevent corruption (Vecino Ulloa 2014).

The role of the IPF in the nationally difficult housing scenario is complex. Onthe one hand, it is tasked with facilitating home construction and implementing other measures to increase housing quality and availability. These include, among others, converting former residential units being used for administrative purposes once again into homes (as the size of the state administrative labor force is reduced) and guiding the remodeling of structures originally built for other purposes (schools, factories, warehouses) into housing units. On the other hand, the IPF is aggressively pursuing the forcible removal—as frequently reported in the independent and official press (see, for instance, Pérez Cabrera 2017)—of numerous families residing in precarious structures, including shantytowns. An impetus behind the IPF's so-called ordenamiento territorial (territorial regulation) appears to be buttressing the country's international image while expanding development of tourism sites, particular in coastal areas from where many structures have been removed.

May 2017—Council of Ministers Executive Council Resolution No. 8093

This agreement of the Council of Ministers, approved on May 11, 2017, had five basic objectives:

- modify the subsidy regime for housing repairs;
- legalize the previously unauthorized ownership of self-constructed housing;
- reimburse the state for housing construction subsidies provided in the event a home is sold in contravention to subsidy terms;
- transfer state-owned housing units under construction to individuals committing to complete them; and,
- formulate a reference value (valor referencial) system regarding housing transactions for taxation purposes.

Subsidy regime: The new rules are partly designed to establish a mechanism for the most effective allocation of subsidies since the number of applicants exceeds available financial resources. Henceforth, at least two annual calls for subsidy applications are to be made with decisions to be made within 70 days, rather than the previous 45 days. To address public complaints and minimize bureaucratic delays, the revised regulations will permit the issuance of subsidies to nuclear family members of original petitioners who have died, refused the subsidy, emigrated, or did not use the subsidy for other reasons.

Legalization of unauthorized self-constructed housing: Close to 20,000 families whose residences were destroyed by hurricanes or other natural disasters built unauthorized replacement homes. Because their dwellings were not authorized, these families are ineligible to apply for housing subsidies. To resolve the situation, and on this occasion solely, under IPF and Construction Ministry authorities, affected families will be provided with titles to their homes, including perpetual land usufruct rights.

Subsidy reimbursements: Owners of homes repaired or constructed with subsidies must reimburse the state for subsidies received if they sell the property within 15 years after subsidy award.

Private completion of unfinished housing units: Since for various reasons the state has been unable to complete numerous housing units under construction, the decision was made to authorize, on a one-time basis, the delivery of 16,887 homes under construction to families committing to complete them through own efforts. The units, to be allocated by Municipal Administrative Councils (*Consejos de la Administración Municipal*, CAM), will be assigned to previously identified recipients, with secondary priority accorded to victims of natural disasters, families displaced by home collapses living in emergency quarters (*albergados*), and other social needs. Beneficiaries must complete the homes within five years, including legalizing titles in accordance with IPF norms.

Reference values system: Reference values were introduced as it became clear to authorities that actual transaction values of real estate sales were being under-reported, or sales were being reported as donations to minimize tax obligations (the transaction tax is fixed at 4% to be paid by the seller). Estimated reference values, however, are not necessarily accepted as the legal sale value of a residence. Actual sale prices agreed by buyers and sellers constitute the tax base. In other words, the sales tax should be based on, first, the actual sale price, and second, on the reference value, whichever is higher.

The government's intent is maximizing revenue collection from housing transactions by using realistic sale price yardsticks. Reference values, to be determined by sellers and buyers themselves, are to be arrived at by comparing actual housing characteristic against officially established parameters. These parameters include number of bedrooms, construction type, urban characteristics, nature of settlement, and availability of garages/other parking facilities and backyards (Puig Meneses 2017; "Nuevas regulaciones" 2017). In the case of donations (up to the fourth degree of kinship), inheritance, or divorce, declared legal values will remain as the tax base.

IMPACT OF REFORMS ON HOUSING AVAILABILITY

These could be assessed in terms of their potential short- and medium-term effectiveness in expanding the number and quality of housing units. From a short-term perspective—for this purpose assumed to be from the beginning of reforms to the end of the

current decade—only marginal benefits can be expected given the limited reform scope, enormity of the housing deficit, and generalized lack of resources.

Reforms with Marginal Impact

Some of the reforms, in fact, will have no impact whatsoever in reducing the housing deficit, other than perhaps inducing quality improvements assuming home owners have private resources or manage to access government-provided subsidies to undertake renovations or complete structures. The 20,000 homes illegally constructed by families whose previous homes were destroyed by hurricanes and other disasters who are to be granted legal titles under Executive Council Resolution No. 8093 of 2017 currently exist. The same logic applies to the 16,887 housing units started but not completed by the state that will be transferred to families (under the same resolution), as these units were already part of the projected national housing plan.

Even the presumably more consequential reform, and the one attracting the most international attention (Cave 2011; Burnett 2012; Gupta 2013; Orsi 2013; Peters 2014), allowing for the private sale of homes (2011 Decree-Law 288), will only make a minor dent on housing availability. While a welcome development—to the extent it acknowledges market forces and expands choice for some of Cuba's families—it does precious little to expand the housing stock At best, over the short- and medium-term, this reform will provide some sellers with a financial windfall, while affording them as well as home buyers greater flexibility in responding to specific family needs, such as accessing more adequate living quarters.

Anecdotal evidence suggests many buyers of homes are Cubans with relatives abroad or married to foreigners with foreign currency. Some sellers are said to be elderly people residing in large and mostly empty homes (following the death or emigration of relatives) wishing to downsize, with their homes being purchased by larger families and/or turned—if in desirable neighborhoods—into small business sites. In the first eight months of 2012, some 45,000 homes changed hands, whereas in the first eleven months of 2013, 200,000 property transfers were registered,

80,000 of which were sales, donations, inheritances, and swaps (Peters 2014:7).

Potentially More Consequential Reforms

Potentially more consequential reforms include the free sale of unsubsidized inputs (construction materials) to encourage housing self-construction and the provision of housing subsidies for the repair of existing dilapidated housing units. While these two initiatives offer some promise, their long run potential is constrained by flaws inherent in the socialist system.

Sales of unsubsidized housing materials. The decision to sell construction inputs at market prices could help reactivate the troubled home construction sector by facilitating construction through self-efforts. A secondary benefit is that the policy would result in the hiring of self-employed construction trade workers. The most obvious limitation, often noted, is that the average Cuban family's purchasing power is far lower than what is required to acquire construction materials in unsubsidized, free markets, where prices are considerably higher than in controlled markets.

Some benefits could be expected nonetheless as at least some housing construction is and will continue to be privately financed, regardless of local market conditions, through emigrant remittances. Still, there are numerous accounts suggesting that the effectiveness of the policy initiative continues to suffer due to failure to reliably supply construction materials supplies in retail outlets. Plans are presumably afoot to minimize supply bottlenecks by increasing production of local construction inputs, but whether these plans succeed or not should be held in abeyance since this option has been there all along with no major consequence. Arbitrary price setting is also a problem as potential consumers are subject to the whim of the state as when, for example, in July 2017, the price of cement was increased by almost 50% without explanation or justification (González 2017).

Housing construction/repair subsidies. More promising in the long-term, the housing subsidy reforms are problematic from both design and implementation perspectives. According to an evaluation conducted in January 2015 and more recent ones, this initiative is plagued by major problems. While

considerable financing (by present-day Cuban standards) has been allocated to the subsidy program—3 billion CUP or US\$120 million, of which 70% had been spent by 2016—demand far exceeds budgeted resources ("Cuba registra" 2017). Current and likely future subsidy budgets are meager given gross estimates of the cost of solving Cuba's housing deficit, estimated in 2012 as ranging from US\$3.6 billion to more than double that amount (Burnett 2012).

Between January 2012 and January 2015, in the provinces of Pinar del Río, Matanzas, Santiago de Cuba, Granma and Ciudad Havana, 39,179 subsidies for a total of 988,122,577 CUPs were provided. The results of the investment were rather modest as construction/repair plans were completed in only 44% (some 17,307) of the housing units with approved subsidies. Multiple developments contributed to this outcome. Among the most important were unavailability of construction inputs (e.g., roofing materials, pipes, flooring, toilets, electric fixtures), major delays in approval of subsidy requests, and consistent underestimation of repair costs. The efficacy of the subsidy program was also compromised by the interference of intermediaries (independent actors likely operating beyond officially approved channels), and, in some cases, by corrupt practices. (It is not clear if the alleged corrupt practices related to the selection of subsidy recipients, in the estimation of repair costs, or in some other action.). It has also been reported that in some instances destitute petitioners were denied subsidies even when, under the regulations, such persons are entitled to full subsidies (Alfonso Torna 2016).

Another report affirms that although 53,000 beneficiaries across Cuba had successfully accessed the program, many problems were present. Bureaucratic procedures are described as excessive and convoluted, often complicating the approval process. Delays and discretionary decision-making problems range from determining whether or not petitioners qualify for subsidies, to whether requested subsidies are in line with technical assessments of required repairs. A petitioner must follow multiple steps, involving contacting several government agencies, when requesting a subsidy:

- 1. The applicant must first submit a request at the *Dirección Municipal de la Vivienda*, DMV (Municipal Housing Directorate).
- 2. The applicant's file is then forwarded to the *Dirección Municipal de Trabajo y Seguridad Social*, DMTSS (Municipal Labor and Social Security Directorate) to determine social eligibility (based on household income, other factors).
- Once eligibility is verified, the DMV must conduct a technical evaluation of the validity of the subsidy request in terms of its purposes and costs.
- 4. Once all previous steps are completed, the file is forwarded for approval to the local CAM, the oversight entity with bank subsidy disbursing approval authority.

Some of the problems reported during this process include, for instance, findings of "incongruences" by technical staff conducting preliminary site evaluations. For example, repairs for which subsidies are requested (e.g., remodeling of a kitchen and/or bathroom) are not approved, contrary to the recipient's wishes, as other priorities (e.g., structural issues) identified during technical site visit assessments are given precedence. Technical staff may also complicate the process as they are required to estimate subsidy amounts bureaucratically, relying on a cartilla técnica (technical guide) that provides instructions regarding determination of specific repair costs on the basis of previously established amounts based on considerations such as construction materials, labor requirements, and charges for transporting construction materials from supply warehouses to repair sites.

Such approach is often unreliable since it is inflexible for calculating realistic cost estimates—a single technical cost yardstick cannot account for the full range of possible housing repairs across the whole nation. For example, the size and characteristics of kitchens and bathrooms vary from home to home, some being larger or more elaborate than others. Another complicating factor is that households receiving subsidies may find them insufficient when having to pay what self-employed skilled construction workers request for their services, or what self-employed transportation workers demand for picking up and delivering

construction materials to repair sites (Garcia Casañas et al. 2017).

Construction materials are frequently not available in government-operated stores, even though they can be acquired from private sellers. However, the regulations require that raw materials for repairs covered by subsidies be made exclusively in state-owned stores. That it, even if they wanted to, and were willing to pay higher input prices, beneficiaries could not purchase construction materials from private purveyors. Payments are made directly to state stores with purchasing vouchers issued to beneficiaries by local bank subsidiaries following CAM approval. Other serious concerns are related to the quality of construction materials, a problem also affecting government-sponsored multi-family construction projects in which the quality of pre-fabricated panels is often defective and elemental good construction practices are often ignored (see, among many others, Laffita Rojas 2016).

In summary, four years following the announcement of the housing repair subsidy policy, even though the number of beneficiaries is on the rise, the program's reach has been below expectation due to bureaucratic delays in approving subsidies, sub-optimal implementation of regulations, planning inefficiencies, construction materials supply bottlenecks, and insufficient financing (Reyes 2015). All these factors contribute to the inability of many subsidy recipients to comply with the condition that repairs (or new self-housing projects) be completed within 18 months of the approval of the subsidy.

These delays are often associated with the inability of IPF municipal dependencies to timely process applications due to staffing instability, a process further complicated by the IPF failure to assign construction lots to petitioners in accord with demand. The most critical delays have been reported in the provinces of Santiago de Cuba and La Habana, although delays are also considerable in other provinces. Despite these problems, by the end of 2016, the IPF claimed to have processed 494,625 requests, 92% of which (454,115) had been satisfactorily addressed. Of the 107,981 applications approved in 2017, 56,235 had been completed. It is nearly impossible to ascertain what these statistics mean in terms of results—

homes maintained and repaired and improvement in living standards of citizens—given the Cuban authorities' proclivity to release reams of data with only limited analytical value.

CONCLUSIONS

From the evidence reviewed above, it appears the Cuban authorities finally have come to the realization that the housing policies pursued for nearly six decades responsible for the current housing crisis must be changed. In a broad sense, four long-standing policy orientations produced what Cuba must contend with today:

- Neglecting the housing sector in favor of, at various times, other national construction priorities, such as expansion of social services facilities (health, education), urban and rural development projects, and building defense installations;
- Failing to properly maintain the housing infrastructure inherited from Republican Cuba, as well as that built since 1959;
- Adopting and poorly executing on a grand scale mass housing construction methods imported from the former Socialist camp countries; and,
- Failing to create the proper policy environment for families to assume responsibility for building and maintaining their own homes.

There is no need to elaborate here on the first policy orientation, as those familiar with Cuba's constantly changing political and socioeconomic policy zig zags recognize the severe costs they have exacted on the country's development. In this case, the systematic starvation of capital resources made the housing sector the revolution's social development orphan, one in which failures, due to their visibility, cannot be easily concealed or minimized. The neglect is glaringly reflected in the woeful inattention given to the maintenance of the rather remarkable historical urban infrastructure legacy found in Havana and other major Cuban cities—today the object of world-wide admiration, even as it continues to crumble—in place many decades ago when the country's population was about half as large as it is today.

A different kind of legacy flows from the mass housing construction schemes pursued under the Castro brothers leadership, often praised as innovative when first introduced, such as the multi-family, multi-story housing complexes built in Alamar and elsewhere that used pre-fabricated components and volunteer labor, such as the micro-brigades. The passing of time has shown the limitations of these housing strategies. It is now understood that the quality of prefabricated components was generally deficient and volunteer labor ill-suited to building lasting, quality structures. If we add that routine maintenance of poorly built structures was also neglected, it should not come as a surprise that the post-1959 built-housing is deteriorating much faster than buildings constructed earlier. The best evidence for this assertion is heard today in the streets of Havana: buildings characterized as of "capitalist construction' fetch higher prices and are more desirable than those erected under socialism.

This time differential in home construction quality may also help explain the rather remarkable fact, shown in Table 2, that housing conditions in some of Cuba's secondary cities, such as Holguín, may be as bad, or even worse, than in Havana—presumably urban Cuba's housing deterioration epicenter. Construction of pre-fabricated, multi-family units was relatively more common in some of these secondary urban centers since for years only limited home building projects were executed in Havana. Additional factors may include the recent appearance in the outskirts of Eastern Cuba's cities and towns of flimsy and precarious one-family structures built by migrants displaced from the urban cores (bateyes) of decommissioned sugar mills, and the long-standing, still unresolved, problem of poor quality rural housing.

In summary, implementation of new policies to formalize home ownership and assist home owners maintain their residences are positive but insufficient steps to redress Cuba's housing crisis. In essence, the policy shift belatedly acknowledges the catastrophic failure of socialist housing policies. The underlying logic of the new directives seeks to instill self-interest and "pride of ownership" by assigning a monetary value to homes. By providing subsidies and construction materials—and tapping émigré resources—it is hoped that home owners, hoping to improve their

living conditions, will no longer be beholden to the inefficient nanny state to build, improve, and/or rehabilitate their homes.

Unfortunately, in the Cuba of Raúl Castro, policy reforms will only be allowed to go so far. Excessive bureaucratic procedures, partly to maintain control, prevent corruption and maintain ideological features of what has proved to be an unworkable system, will continue to undermine individual initiative. Examples abound. Two are the referential system used in calculating home sale values and the *cartilla técnica* to estimate home repair subsidy amounts. As Amor has noted (2017), the referential system is a poor instrument to assess home values since it ignores crucial valuation criteria (e.g., differential physical condition

of homes regardless of neighborhood), just as the *cartilla técnica* is a flawed tool to determine rehabilitation subsidy amounts.

These shortcomings, together with the enormity of the housing shortage, insufficient investment capital, and low average incomes, among other constraints, lead to the conclusion that the housing reforms could only produce modest results. Over time, the only solution to Cuba's housing crisis will come about under a different political and socioeconomic system, capable of generating greater economic growth, and in which a range of market-driven options become feasible, including unleashing the drive and creativity of entrepreneurs and investors.

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