

**Mitchell, Ann ; Macció, Jimena**

*Housing and wellbeing: evidence from the informal settlements of Buenos Aires*

**Documento de Trabajo Nro. 52  
Facultad de Ciencias Económicas  
Departamento de Investigación “Francisco Valsecchi”**

Este documento está disponible en la Biblioteca Digital de la Universidad Católica Argentina, repositorio institucional desarrollado por la Biblioteca Central “San Benito Abad”. Su objetivo es difundir y preservar la producción intelectual de la Institución.

La Biblioteca posee la autorización del autor para su divulgación en línea.

Cómo citar el documento:

Mitchell, A., Macció, J. (2015, noviembre). *Housing and wellbeing : evidence from the informal settlements of Buenos Aires* [en línea] Documento de trabajo No. 52 del Departamento de Investigación “Francisco Valsecchi”. Facultad de Ciencias Económicas. Universidad Católica Argentina. Disponible en:  
<http://bibliotecadigital.uca.edu.ar/repositorio/investigacion/housing-wellbeing-mitchell-maccio.pdf> [Fecha de consulta: ....]



*Pontificia Universidad Católica Argentina*  
“Santa María de los Buenos Aires”

**Housing and Wellbeing:  
Evidence from the informal settlements  
of Buenos Aires**

Por Ann Mitchell y Jimena Macció

---

*Facultad de Ciencias Económicas*

*Departamento de Investigación “Francisco  
Valsecchi”*

*Documento de Trabajo en Economía N° 52*

Noviembre de 2015



# UCA

*Pontificia Universidad Católica Argentina*  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

Los autores del presente artículo ceden sus derechos, en forma no exclusiva, para que se incorpore la versión digital del mismo al Repositorio Institucional de la Universidad Católica Argentina y a otras bases de datos que la Universidad considere de relevancia académica.

---

**Housing and Wellbeing:**  
**Evidence from the informal settlements of Buenos Aires<sup>1</sup>**

Ann Mitchell and Jimena Macció (UCA)

**Abstract**

This paper uses data from a household survey carried out by TECHO and UCA to describe the socioeconomic characteristics, housing conditions and wellbeing of the poorest households living in the informal settlements of GBA. The comparison of the characteristics of the surveyed households with other sources of data highlights the extreme level of deprivation and the heterogeneity in living conditions across settlements. We then analyze the relationship between the size and quality of housing and six dimensions of individual and household wellbeing (privacy, sleep quality, physical and psychological health, security and interpersonal relationships) and then use the Alkire-Foster (2008) method to construct a multidimensional poverty measure.

**JEL Codes:** Health, Education and Welfare/Welfare, Wellbeing and Poverty (I3); Urban, Rural and Regional Economics/Household Analysis (R2)

**Resumen**

Este documento emplea datos de una encuesta realizada por TECHO y UCA para describir las características socioeconómicas, las condiciones de habitabilidad y el bienestar de los hogares más pobres de los asentamientos informales del GBA. Se comparan las características de los hogares relevados con otras fuentes de datos, destacándose la extrema privación y la heterogeneidad en sus condiciones de vida. Luego se analiza la relación entre el tamaño y la calidad de la vivienda y seis dimensiones del bienestar (privacidad, calidad del sueño, salud física y psicológica, seguridad y relaciones interpersonales) y se aplica la metodología Alkire-Foster (2008) para construir una medida de pobreza multidimensional.

**Códigos JEL:** Salud, Educación y Bienestar: Bienestar y Pobreza (I3); Economía Urbana, Rural y Regional: Análisis de las economías domésticas (R2)

---

<sup>1</sup> Version presented for the L Reunión Annual de la Asociación Argentina de Economía Política. Salta, 2015.



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

## Introduction

With almost 80 percent of its population living in urban areas, Latin America is the most urbanized region in the world. Although urban population growth rates have slowed in recent decades, as the rural-urban migration flow has subsided, Latin America's cities face important challenges including high inequality, deficits in the quantity and quality of housing and the proliferation of informal settlements (UN-Habitat, 2012).

Buenos Aires, the third largest metropolis in Latin America, embodies some of these challenges. While Argentina has one of the highest incomes per capita in the region, acute inequality and increasing spatial segregation make Buenos Aires a city of stark contrasts in living standards (PNUD, 2009). It is estimated that approximately 10% of the metropolis' 13 million residents live in informal settlements. A study conducted in seven territories of Argentina identified a total of 1,834 informal settlements with around 533 thousand families or 2.5 million people.<sup>2</sup> The Province of Buenos Aires is the jurisdiction with the greatest number of informal neighborhoods: 1,046 settlements which are home to close to 328 thousand households (TECHO, 2013).

The objective of this paper is to provide a close and detailed account of the living conditions of the poorest families living in the informal settlements of Buenos Aires. The analysis focuses on the characteristics of slum dwellings and the relationship between housing conditions and indicators in six dimensions of individual wellbeing and family life: privacy, sleep quality, physical health, psychological health, security and interpersonal relationship.

By describing the living conditions of the poorest slum households and the links between different dimensions of wellbeing the paper aims to contribute to the understanding of how the accumulation of deficits in housing limit the ability of poor slum dwellers to take advantage of the economic dynamism and dense social interaction that cities offer. While for the most educated and fortunate residents, urban slums may be only a temporary place of residence or even "serve as springboards to middle-class prosperity" (Glaeser, 2011: 74), for the poorest residents, the interaction between different dimensions of deprivation may generate a poverty trap that limits their opportunities for accumulating human capital, finding formal employment and progressing, as other authors have suggested (Marx, Stoker y Suri, 2013).

The paper also seeks to respond to the reported lack of empirical research on the nature of poverty in informal settlements, which is related in part to the challenges of accessing slum neighborhoods and the irregular layout of the urban space which make it difficult to apply standard sampling and surveying procedures.<sup>3</sup>

---

<sup>2</sup> These territories cover approximately 60% of Argentina's population.

<sup>3</sup> Empirical research on living conditions in the informal settlements of Latin America includes Arriaga (2000), Field (2007); Perlman (2006 and 2010); Camargo Sierra and Hurtado Tarazona (2011), Galiani



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

The main source of data used in the paper is a household survey conducted in 2014 in the Province of Buenos Aires by the civil society organization TECHO<sup>4</sup> in conjunction with researchers at the Catholic University of Argentina (UCA). The survey was designed to collect data for an impact evaluation of TECHO's emergency housing program and therefore was directed to the settlements' poorest residents. The work also draws on three other sources of survey data on living conditions in informal settlements: the Annual Household Survey produced by the Government of the City of Buenos Aires, a household survey conducted by our interdisciplinary research program at the UCA in 7 "villas" of the City of Buenos Aires and a national household survey carried out by the *Observatorio de la Deuda Social* of the same institution.

The rest of the paper is organized as follows. The first section outlines the household survey data employed in the paper. The second section characterizes the poorest residents of the informal settlements of Greater Buenos Aires and compares their demographic and socioeconomic indicators with those of the residents of other informal settlements in Argentina. The third section provides detailed information on housing conditions in the settlements. The fourth section presents estimates of indicators in six dimensions of individual and household wellbeing and analyzes the association with housing characteristics. The fifth section constructs a multidimensional poverty measure which is then compared with a measure of subjective wellbeing. The paper ends with a discussion of the paper's main conclusions.

## 1. Data sources

The TECHO-UCA survey collected data on a total of 373 households (2001 persons) that were selected to participate in TECHO's emergency housing program during the first semester of 2014. The organization's process for selecting households to participate in the program begins with the application of a detection survey which gathers information on the household's demographic structure and economic and housing characteristics. This information is then used along with qualitative data to classify households according to need (low, medium-low, medium-high and high). The TECHO-UCA survey was applied only to households classified as having medium-high and high need.

Although the survey is not representative of households living in the informal settlements of Buenos Aires (as it was targeted toward the poorest households), we estimate that close to 65 thousand families (or 310 thousand people) in the Province of Buenos Aires have living conditions similar to those that will be described in this paper.<sup>5</sup>

---

et al (2014) and on Argentina includes Cravino (2008); PNUD (2009); Léopore et al. (2012); Simonelli et al. (2013); Suarez, Mitchell y Léopore (2014), among others.

<sup>4</sup> TECHO is a civil society organization that works to fight poverty through community development programs carried out jointly by volunteers and community residents. The organization is present in 19 Latin American countries.

<sup>5</sup> This estimate is based on the fact that historically TECHO has classified on average 20% of households as medium-high or high need in the neighborhoods where it carries out its programs and on



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

The survey respondent was the person that spends most time in the home and was usually the mother of the principal family nucleus. The survey questionnaire covered the following dimensions of analysis: household composition, demographic characteristics, education, work, income, social protection, health, sleep quality, use of time, housing quality and use, security, expectations about the future and perception of wellbeing. The interviewer also had to draw, with the help of the respondent, a sketch of the layout of the house within the parcel of land and identify the location and use of each room and the location and family members that sleep in each bed.

The survey was conducted in 23 informal settlements in the suburban areas of Greater Buenos Aires<sup>6</sup> (GBA) and Greater La Plata.<sup>7</sup> The sample includes settlements in all of the zones of the GBA (north, south and west) and in the first, second and third outer rings (or *cordones*) of the city. It does not include informal settlements in the City of Buenos Aires. The number of families living in each of the settlements included in the sample ranges from 200 to 2500. Although the age of the settlements varies greatly (the oldest was created in 1960 and the newest in 2010), most experienced their most rapid period of population growth between 2007 and 2011.

Only two of the neighborhoods included in the survey can be classified as *villas*, defined as urbanizations that have an irregular layout, accessed through narrow passageways with a high population density and self-made structures often several stories high. The rest of the neighborhoods are classified as settlements, defined as urbanizations that are comprised of blocks that are subdivided into individual land parcels, have a relatively low population density and are usually located in peri-urban areas.<sup>8</sup>

All of the settlements included in the survey have a severe deficit in basic public services. Although the majority of the neighborhoods have access to the electrical network, most families have an illegal connection. Only eight of the 23 neighborhoods are connected to the public water system (with irregular connections in 7 of the 8 cases) and in the rest of the neighborhoods households depend on well water. The most common form of sewage disposal is cesspit, increasing the risk of contamination of the water supply due to the proximity to wells. More than half of the neighborhoods have no paved roads and in another five only the main road is paved.

---

the estimate of the number of households that live in informal settlements in the Province of Buenos Aires according to TECHO (2013).

<sup>6</sup> According to the 2010 National Census the Greater Buenos Aires Metropolitan Area, which includes the City of Buenos Aires (CBA) and 24 suburban municipalities, has a population of 12.8 million. The population of the CBA is approximately 2.9 million (DGEyC, 2010). Throughout the paper we will use the term Greater Buenos Aires although we are referring only to the suburban areas of Greater Buenos Aires (the *Conurbano Bonaerense*).

<sup>7</sup> Due to the continuous expansion of the Greater Buenos Aires Metropolitan Area, all of the settlements covered by the survey form part of the same urban area that extends from Pilar in the north to La Matanza in the west and Greater La Plata in the south.

<sup>8</sup> The definitions of *villa* and settlement are based on TECHO (2013). See Cravino (2008) and INDEC (2010) for other definitions of *villas*.



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

In order to compare the characteristics of the poorest residents with the general population living in informal settlements, the paper employs the results of three other household surveys. The first, the Survey of Family Living Conditions (ECV-CBA),<sup>9</sup> was designed to collect data on the quality of life of the families living in the *villas* of the City of Buenos Aires. The survey was applied in two waves to a sample of 650 households living in seven *villas*.<sup>10</sup> The irregular layout of the settlements and lack of clearly defined blocks made it impossible for us to apply habitual sample selection procedures. The sample was therefore chosen by first dividing each settlement into relatively homogeneous territorial units. Within each unit households were selected using quotas based on the characteristics of the household head.

The second survey is the Annual Household Survey (EAH-GCBA) conducted by the Statistical Office of the Government of the CBA (DGEyC, 2012). For this survey the most recent year for which we are able to obtain statistically representative estimates for the population living in the *villas* of the CBA is 2012.

The third survey is the national household survey of the urban areas of Argentina conducted by the *Observatorio de la Deuda Social Argentina* of the UCA (Salvia, 2014a). As we do not have access to the databases of this survey we present estimates of the demographic and socioeconomic characteristics of the population in *villas* and settlements included in two recent publications. The first provides estimates for the Metropolitan Area of Buenos Aires (MABA) based on the combined (stacked) samples of the ODSA survey for the years 2010-2013 (Salvia, 2014b).<sup>11</sup> The second publication provides nationwide estimates for 2013 (Salvia, 2014a). Although the ODSA survey was not designed to provide a statistically representative sample of the population living in informal settlements, the publications present indicators disaggregated according to the type of residential neighborhood, distinguishing between informal, formal low socioeconomic level and formal high socioeconomic level.

## 2. Socioeconomic characteristics

In this section we compare the socioeconomic characteristics of the poorest residents of the informal settlements of the suburban areas of Greater Buenos Aires based on the results of the TECHO-UCA survey with the results of other surveys. These comparisons provide evidence of the severe state of deprivation of the "poorest of the poor" in Greater Buenos Aires and highlight the heterogeneity in the lives of residents of informal neighborhoods in different territories of the urban continuum.

**Table 1: Socioeconomic indicators in informal settlements**

<sup>9</sup> See Macció (2014) for a more detailed description of the survey.

<sup>10</sup> The survey was applied in 2011 in the *villas* 1-11-14 of Bajo Flores and 21-24 of Barracas and in 2012 in the *villas* Cildañez, INTA, Fatima and Piletones and the precarious neighborhood Ramon Carrillo.

<sup>11</sup> The size of the combined sample of households in the MABA for 2010-2013 is 5,169 households and only around 8% of these households live in informal settlements.





# UCA

Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"

Facultad de Ciencias Económicas

Departamento de Investigación "Francisco Valsecchi"

Indicator	TECHO-UCA 2014	ECV-UCA 2011-2012	EAH-GCBA 2012	ODSA Informal MABA 2010-2013	ODSA Informal Nacional 2013
<b>DEMOGRAPHIC</b>					
Population below age 18	53.9	44.9	42.1	38.2	
Population below age 5	22.9	16.7	16.0	11.5	
Population 65 years and older <sup>1</sup>	1.0	0.7	2.8	7.0	
Average age	19.1	22.4	24.3		
Average number of members in the household	5.4	4.4	4.1		
Households with 5 or more members	58.4	38.9	35.3		
Extended households	30.8	12.3	18.9	29.1	
Demographic dependency ratios	109.1	79.4	74.8		
External migrant	15.1	28.7	33.9	14.6	
<b>EDUCATIONAL</b>					
Adults over age 24 w/ incomplete secondary education or less <sup>2</sup>	86.6	77.4	43.9	81.4	
Population ages 6 to 12 that attend school	97.2	95.0	98.6		
Population ages 13 to 17 that attend school	76.4	88.2	82.8		
Youths ages 18 to 24 that neither work nor study	34.4	25.8	25.7	24.1	
Households with low educational climate	72.0	62.2	49.2		
<b>LABOUR</b>					
Labor force participation rate	52.3	56.3	53.6		
Employed	45.0	50.1	45.8		
Population over age 18 not employed but is actively searching	23.2				18.0
<b>ECONOMIC SITUATION</b>					
Household income per capita (pesos, 4th quarter 2013) <sup>3</sup>	730			1363	1533
Population below the poverty line	86.5	62.8			46.8
Population below the indigence line	51.0	24.6			10.5
Income is not enough to cover monthly expenses	39.4	40.5			71.7
Beneficiaries of public transfer programs	70.0			48.6	
Beneficiaries of public transfer program (excluding non-contributive pension)	63.5	61.0			
Households w/ children < age 18 that receive the AUH <sup>4</sup>	66.3	14.3		52.3	

<sup>1</sup> ODSA figure refers to the percentage of the population 60 years and older.

<sup>2</sup> ODSA figure refers to the maximum level of education of the head of household.

<sup>3</sup> ODSA data are in December 2013 pesos.

<sup>4</sup> ODSA figure refers to the % children 0 to 17 that receive the AUH or the pension for mother's with 7 children.

Sources: TECHO-UCA (2014); ECV-UCA (2011-12); EAH-GCABA (2012); Salvia (2014a); Salvia (2014b).

## 2.1 Demographic characteristics

The people living in the poorest households of the informal settlements of Greater Buenos Aires are in general extremely young. More than half of those surveyed are children or adolescents under age 18, 23% is under age 5 and only 1% is over age 65 (Table 1). The average age is 19 years, five years younger than the average age of the population living in the informal settlements of the CBA (EAH-GCABA).

As in other urban areas of Latin America (Arriagada, 2000), the surveyed households tend to be large, extended and comprised of several generations. The average number of household members (5.4) is far higher than Argentina's national average of 3.3 and also exceeds the average for the *villas* of the CBA. Moreover,

nearly 60% of households have 5 or more members, compared with less than 40% of households in the case of the *villas* of the CBA (ECV-UCA).

The large household size tends to be associated with the strategy of incorporating members of other nuclei (a mother, a daughter or a sibling) or even people from outside of the family. Around half of the households are nuclear families with children and both parents and these households have an average size of 4.9 members. Almost 20% are extended families with both parents present and the average size is 7.9 members. Single parent families represent 22% of the total, and are equally divided between non-extended (with one parent and an average of 3 children) and extended (with an average of 7 members). While the results of the ODSA survey show a similarly high percentage of extended households in the informal settlements of the MABA, the prevalence of extended households is substantially lower in the *villas* of the CBA.

The strategy of extending households is also associated with the cohabitation of several generations.<sup>12</sup> Only 7% of surveyed households have one generation (single member households and couples with no children), while 70% have two generations and 22% three generations.

Approximately three quarters of the surveyed population is native to the Province of Buenos Aires. This group is divided approximately evenly between those that were born in the same neighborhood (27%), those that were born in another neighborhood in the same locality (22%) and those from another part of the province (23%). While those born in the neighborhood are mostly children, 15% of households have more than one generation born in the neighborhood, providing some evidence that the settlements are not just transitory places of residence. The remaining quarter of the surveyed population is split nearly equally between internal migrants (mostly from the northeastern provinces of Chaco, Misiones and Formosa) and foreign immigrants (mostly from Paraguay and to a lesser extent Bolivia and Peru). While the share of the population that is foreign (15.1%) is significantly higher than at the national level (4.5% according to the 2010 Census), and nearly the same as the ODSA estimate for the informal settlements of the MABA (14.6%), it is considerably lower than in the *villas* of the CBA where 34% of the population and 61% of household heads were born abroad (EAH-GCBA, 2012). In the case of the *villas* of the CBA, foreign immigrants tend to be attracted by the proximity to jobs in the city center and may also be due to the path dependent nature of immigrant social networks.

Although the TECHO-UCA survey did not ask the family's year of arrival in the neighborhood, we used information on the age and place of birth of each member to put a lower bound on the number of years that each household could have been

---

<sup>12</sup> The number of generations in a household was calculated based on the position of each household member in relation to the survey respondent. We consider 5 generations: G1: grandparents, G2: parents, parents-in-law or uncles/aunts of the respondent, G3: respondent, their spouses, siblings, siblings-in-law, cousins; G4: sons and daughters, sons and daughters-in-law, nephews and nieces of the respondent; G5: grandchildren.

living in the settlement.<sup>13</sup> Based on this analysis we can conclude that 6% of households have been living in the settlement for more than 30 years, 12% for more than 20 years and 24% for at least 10 years. These results suggest that for at least one in four households, the settlement is far from being a temporary place of residence.

## 2.2 Education

The social context of the life of the poorest families in the informal settlements imposes restrictions on opportunities for self-realization in education and work. Among surveyed adults over age 24, 31% has not completed primary school and 87% has not completed secondary school; in contrast, in the CBA only 44% of the adult population has not completed secondary school (according to the EAH-GCBA) or 77% (according to the ECV-UCA). The illiteracy rate for persons 10 years and older is 5%, almost three times higher than the national figure of 1.9% (based on the 2010 Census).

While school attendance rates at the primary school level among the surveyed households (97%) are nearly as high as those at the national level (99%, according to the 2010 Census), they are notably lower at the preschool and secondary school levels. Only 4 out of 10 children between the ages of 3 and 5 attend nursery school and only 3 out of 4 teenagers attend school. When asked why children and adolescents are not attending school, the three most frequent answers were the need to work or help with household chores (22%), lack of interest (20%) and pregnancy or parenthood (19%). However, the motivations for not attending school are not just related to the social or economic situation of families: 1 out of 4 children or adolescents do not attend school due to problems related to access (9% found no vacancy in a nearby school, 9% do not attend because their family recently moved and had problems finding a new school and 5% do not attend because they do not have an identification document).

Low school attendance is not the only issue. Among those who do attend, there are high repetition rates and consequently many students attend a lower grade than expected for their age: 26% of adolescents ages 13 to 17 attend primary school and 20% of youths ages 18 to 24 attend either primary or secondary school. In our sample, 34% of youths ages 18 to 24 do not work nor attend school and almost half of the households have at least one youth in this situation. The percentage of youths in this situation is about 10 percentage points lower in the *villas* of the City of Buenos Aires (EAH-GCABA and ECV-UCA) and among the general population of the informal settlements of the metropolitan area (ODSA-MABA).

These findings are consistent with the results of other studies that describe the challenges of achieving the educational inclusion of children and adolescents living in informal settlements (Mitchell and Peregalli, 2014). In these contexts, low educational achievement may be associated with the characteristics of the

---

<sup>13</sup> This estimate likely significantly *underestimates* the true number of years that each household has been living in the neighborhood, since it essentially assumes that for each a household, a new family member was born in the same year as the household moved to the settlement.

neighborhood (related to connectivity<sup>14</sup> problems, access to school and peer influence) and the household (the educational "climate" of the home, lack of resources to buy school supplies or clothing and the lack of space in the house where children can comfortably do their homework). The survey results indicate that 72% of surveyed households have low educational climate,<sup>15</sup> at least 10 percentage points higher than the rate in the *villas* of the CBA.

### 2.3 Work

The labor force participation rate of the surveyed population 10 years and older is 52%, very close to participation rate in the *villas* of the CBA (ECV-UCA and EAH-GCBA), but 7 percentage points below the national rate (INDEC, 2015).<sup>16</sup> The employment rate of 45% is slightly below the rate of 50% in the *villas* of the CBA (ECV-UCA). Also the employment rate is markedly higher for men (59%) than for women (31%), a difference which is likely related to the high fertility rates and also the discouraged worker effect as unemployment rates are also far higher among women. The percentage of adults 18 years and older that are not working and are actively searching for a job is about 5 percentage points higher than the rate corresponding to informal settlements nationally (ODSA-National).

The low labor market participation rate among women and the large number of children lead to high dependency ratios among surveyed households. On average, there are 1.3 passive members for each active member, and 17% of the households have more than 2 passive members for each economically active member. Moreover, 7.5% of households have no members who work.

The principal occupations among women are domestic service (33%), temporary employments or "*changas*" (9%), employment in a local shop (7%), construction (3%) and trash collector or "*cartonero*" (2%). For men, construction is the main occupation (38%), followed by "*changes*" (15%), "*cartonero*" (5%) and employment in a local shop (3%). Other kinds of employment include public sector employees, private or public security, nurses, teachers, street vendors, plumbers and electricians.

### 2.4 Income and social protection

The average monthly income of the surveyed households was only \$3145 pesos or \$730 pesos per capita, equal to close to half of the income per capita of families living in the informal settlements of the MABA (\$1363) and below half of the

<sup>14</sup> Connectivity refers to a territory's capacity to connect with other territories in the metropolitan area and with the city center. Connectivity is defined by the availability and quality of infrastructure and transport networks (Lépore and Macció, 2014).

<sup>15</sup> A household has low educational climate when the adult members have on average completed the primary school level or less.

<sup>16</sup> INDEC website,

[http://www.indec.mecon.ar/nivel4\\_default.asp?id\\_tema\\_1=4&id\\_tema\\_2=31&id\\_tema\\_3=58](http://www.indec.mecon.ar/nivel4_default.asp?id_tema_1=4&id_tema_2=31&id_tema_3=58) (consulted March 4, 2015).



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

nationwide estimate (\$1533). We estimate that 51% of the surveyed population has income below the indigence line and 86.5% below the poverty line.<sup>17</sup> Using comparable poverty lines, we estimate that 24.6% of the population in the *villas* of the CBA has income below the indigence line and 62.8% below the poverty line (ECV-UCA), whereas based on the nationwide ODSA survey only 10.5% of the population living in informal settlements is indigent and 46.8% is poor. These comparisons provide some evidence of the variations in living standards across informal settlements.

The TECHO-UCA survey also asked households about their perception of their economic situation. Almost 40% of households responded that their income did not cover their monthly expenditures, 49% that their income covered their monthly expenses but they could not save and 11% that they were able to save. The results of the ECV-UCA survey in the *villas* of the CBA produced notably similar results: 40.5% of households responded that their income did not cover their expenditures. In contrast, according to the national ODSA survey, 72% of households living in informal settlements have sufficient income to cover their expenses.

According to the TECHO-UCA survey, 70% of households are beneficiaries of at least one social assistance program. The benefit received by the largest proportion of households is the *Asignación Universal por Hijo*,<sup>18</sup> (received by 61% of households), followed by the non-contributive pension<sup>19</sup> (14% of households). Only 4% of households are beneficiaries of the National Food Security Program and 6% are beneficiaries of social plans with work requirements. The percentage of families that receive some form of transfer benefits is substantially higher than in the informal settlements of the MABA (48.6%), which is likely due to the fact that the households covered by the TECHO-UCA survey are substantially poorer.

When we exclude from the calculation households that only receive a non-contributive pension, the percentage of households that benefit from social assistance (63.5%) is practically the same as that corresponding to households living in the *villas* of the CBA. The fact that these rates are so similar, despite the fact that the first group is substantially poorer, suggests that the residents of the *villas* of the CBA are disproportionately targeted for public assistance. It may also be due to the fact that the dense network of civil society organizations operating in the *villas* of the CBA help facilitate access to social programs.<sup>20</sup>

<sup>17</sup> Given that the official poverty line in Argentina is highly questionable due to the underestimation of changes in the Consumer Price Index, we have used alternative poverty lines proposed by the ODSA. Our estimates are based on the minimum indigence line of \$617 pesos per adult equivalent and the poverty line of \$1283 pesos per adult equivalent corresponding to the 4<sup>th</sup> quarter of 2013 (Salvia, 2014: 40). When we recalculated the rates using the official indigence line of \$255 pesos and poverty line of \$577 per adult equivalent, the percentage of the population that is indigent fell to 7.2% and the percentage that is poor to 37%.

<sup>18</sup> The *Asignación Universal por Hijo* is a conditional cash transfer program introduced in 2009 that provides a subsidy to children whose parents are unemployed or work in the informal sector and earn less than the minimum wage, conditional on school attendance, health check-ups and vaccination.

<sup>19</sup> Non-contributive pensions include the pension provided to women with 7 or more children and disability pensions.

<sup>20</sup> See Mitchell (2015) for an analysis of the role of civil society organizations in the informal settlements of the CBA.

The above analysis has shown that the poorest households of the informal settlements of Greater Buenos Aires have many of the traits that typically characterize urban slum populations but that the traits are even more accentuated. That is, the poorest of the poor are even younger, have larger families, less education, higher unemployment rates and lower incomes.

### 3. Housing characteristics

Walking down the street in an older section of an informal settlement in Moreno on the western edge of Greater Buenos Aires, one is struck by the sharp contrast in the quality of the houses lining the street. A small house on a corner made of hollow exposed bricks is followed by a sturdy two story structure with plaster finishing and then by two wooden shacks with tin roofs and dirt floors. None of the residents of the neighborhood have formal title to their property, yet the quality of housing appears to be a strong indicator of the economic situation of the household.

As the TECHO-UCA Survey was targeted on the poorest households, most of the surveyed families have severe a deficit in the quality and/or size of their dwelling. But even within this group, there is considerable variation in the degree of housing deprivation. The structural component that has the most problems is the roof. Nearly 72% of surveyed households have a roof made of tin (almost always without insulation), 19% made of wood, 2% made of canvas, cardboard or straw and only 6% made of tiles or cement (Table 2). The poor quality materials means that 80% of households have at least one problem with the roof: in 76% of households water enters through the roof, in 41% wind enters and in 23% the roof is unstable. Although 28% of the dwellings have walls made of brick, 64% of wood, and only 7% made of tin, canvas or cardboard, the poor *quality* of the materials, means that they do not provide adequate protection. One out of four houses has a dirt floor and 20% of houses were built on contaminated land.

**Table 2: Size and quality of dwellings**





# UCA

Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"

Facultad de Ciencias Económicas

Departamento de Investigación "Francisco Valsecchi"

	Mean or percentage	Standard error
<b>SIZE AND COMPOSITION</b>		
M <sup>2</sup> of land	259.6	8.34
Dwelling size (M <sup>2</sup> )	28.7	1.06
Dwelling size per capita (M <sup>2</sup> )	5.9	0.23
Number of shacks	1.1	0.02
Number of rooms <sup>1</sup>	2.7	0.07
Number of windows	1.8	0.09
Dwelling has no windows (%)	20.9	2.11
Dwelling has additional separations (%)	30.5	2.39
Moderate overcrowding (%) <sup>2</sup>	77.0	
Critical overcrowding (%) <sup>3</sup>	34.2	2.47
Overcrowding by M <sup>2</sup> (%) <sup>4</sup>	48.9	2.63

<sup>1</sup> Total number of rooms, including bath and kitchen.

<sup>2</sup> Has 2 or more persons per room (excluding bath or kitchen).

<sup>3</sup> Has 3 or more persons per room (excluding bath or kitchen)

<sup>4</sup> Has less than 5 m<sup>2</sup> per person.

	Mean or percentage	Standard error
<b>QUALITY OF CONSTRUCTION</b>		
Roof has some problem <sup>1</sup>	79.0	2.10
Walls have some problem <sup>2</sup>	71.4	2.40
Floor has some problem <sup>3</sup>	57.6	2.60
Dirt floor	24.2	2.20
Dwelling is very humid	58.1	2.60
Mold forms inside the dwelling	41.5	2.60
Dwelling is excessively hot or cold	73.3	2.30
Dwelling infested with insects	66.2	2.50
Dwelling built on contaminated land	19.5	2.10
Floods when it rains	45.0	2.60
Highly deficient quality of construction <sup>4</sup>	73.1	2.30

<sup>1</sup> Water or wind enters through roof or roof at risk of collapsing.

<sup>2</sup> Water or wind enters through walls or walls are unstable.

<sup>3</sup> Filtrations of water or dirt through floor or built on contaminated land.

<sup>4</sup> Problems with at least 2 of the 3 dwelling components (roof, floor, walls).

Source: Authors' calculations based on TECHO-UCA (2014).

The proximity of many informal settlements to rivers along with the insufficient elevation of the construction makes them highly susceptible to flooding. Almost half of all households responded that their dwelling floods when it rains and six out of ten households have to take immediate action to protect their home when it rains to avoid damage from water entering through the walls and roof.

Overcrowding constitutes one of the most acute problems faced by families living in the informal settlements. The results of the TECHO-UCA survey indicate that the average dwelling size is 28.7 m<sup>2</sup>, or only 5.9 m<sup>2</sup> per person. There is, however, considerable variation in dwelling size (ranging from 4 to 150 m<sup>2</sup>) even among the poorest residents. Nearly half of all households experience overcrowding based on the square meter definition (having less than 5 m<sup>2</sup> per person). According to the traditional measures of overcrowding, 77% of households experience moderate overcrowding (more than 2 persons per room) and 35% critical overcrowding (more than 3 persons per room).

The small dwelling size means that each living space takes on many uses. Only one out of ten households has a room used exclusively for cooking and 56% of households use the same room for cooking and sleeping. The lack of proper ventilation is even more severe in the 21% of dwellings that have no windows.

The dwellings in the informal settlements tend to be in constant transition and transformation. Damage caused by storms and flooding is repaired, portions of the roof or walls are changed as higher quality materials become available and windows or separations are added so as to make the dwelling more comfortable and improve privacy. Also as families grow they tend to add on new rooms in an effort to reduce overcrowding. Single room dwellings<sup>21</sup> (43% of the total) have on average 4.2

<sup>21</sup> The calculation of the number of rooms excludes the bathroom and the kitchen.

members, those with two rooms (27%) have an average of 5.3 members and those with three rooms (16%) 6.3 members.

Just over half of the households responded that their dwelling had suffered some type of damage during the previous year and three out of four of these households had made investments to repair the damage. The principal motives for not fixing the damages were lack of money (77%), lack of time (11%) and lack of an alternative place to live (3%).

The results of the TECHO-UCA Survey indicate that 45% of households made some form of housing improvement during the previous year. The most frequent types of improvement were the building of a cement floor (20%), painting (16%), expansion of the dwelling size (12%), addition of a window (9%) and roof improvements (8%). The principal reasons given for not making more improvements were the lack of money (69%) and time (11%).<sup>22</sup> Only 8% of households responded that they did not make further improvements due to lack of perspective or because it was not worth it, possibly alluding to the temporary nature or insecurity of tenancy. While the investments made by these families may not be as large as they would have been if they had a formal property title—as Galiani and Schargrotsky (2010) have shown—households may still have an incentive to make investments in housing improvements if they feel that having a higher quality structure will improve their chances of avoiding eviction and eventually obtaining a formal property title.

When the respondents of the TECHO-UCA Survey were asked about their expectations for the future with regard to housing, 66% of respondents stated that they expect to live in the same neighborhood in 10 to 15 years and 21% on the same plot of land. Also, 34% of respondents imagine that their children will live in the same neighborhood (12% on the same plot of land as themselves). At the same, half of the respondents imagine that one day they will live in a better quality house (“*una casa de material*”) and the most frequently mentioned means for achieving that goal are to buy construction materials little by little or to save. These results suggest that the poorest families tend to believe that they will continue to live in the settlement for many years to come and that they will improve their housing conditions by making gradual improvements over time in their dwelling.

#### 4. Housing and dimensions of human and family life

There is an ample body of literature that associates housing characteristics with quality of life. The social benefit of housing that has been most studied is health. This literature tends to study the pathological effect of a specific aspect of the built environment such as poor ventilation, low quality construction materials, inadequate heating and risks posed by unsafe construction (Newman, 2008). Overcrowding has also been shown to influence physical health (Fonseca et al., 1996; Murtagh et al., 1993) by favoring the propagation of illness.

---

<sup>22</sup> This finding coincides with the results of one study which showed that the residents of the informal settlements of Greater Buenos Aires tend to designate resources to home improvements when resources become available and that these decisions do not depend critically on whether or not they have a formal property title (Ostuni y van Gelder, 2008).





*Pontificia Universidad Católica Argentina*  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

Poor housing can influence mental health both due to the direct effect of poor ventilation, noise, exposure to light and the concern and stigma of living in deficient housing, and indirect effects when overcrowding increases social demands, diminishes the feeling of self-control and impedes the development of strong interpersonal relationships (Evans, 2003; Gove, Hughes y Galle, 1979; Krieger y Higgins, 2002). Lack of space can lead to conflicts between members and produce psychological distress among both adults and children (Evans, 2003). Some studies have also shown a positive relationship between the quality of housing and indicators of self-perception of wellbeing (Matte y Jacobs, 2000).

A dimension of human life that has been emphasized in recent work is the effect of inadequate housing on sleep quantity and quality. The literature affirms that sleep is facilitated by feelings of safety in one's environment (Salminen et al., 2010 cited in Simonelli et al., 2013). Housing that does not provide adequate insulation from noise, heat, cold and rain, and that can even force residents to take action to protect the dwelling in the case of intense rain or storms, can influence sleep routines and quality. (Cardinali, 2014). Concerns over the housing safety or the risk of robbery or occupations may also influence sleep.



# UCA

Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"

Facultad de Ciencias Económicas

Departamento de Investigación "Francisco Valsecchi"

**Table 3: Dimensions of wellbeing related to housing**

	n	% or mean	Std Error	Overcrowding			Very deficient quality of construction		
				Yes	No	Sig. <sup>1</sup>	Yes	No	Sig. <sup>1</sup>
PRIVACY									
Household members do not have space to get dressed in private	364	38.7	2.56	51.1	27.4	*** †	41.4	30.9	*
Household members do not have space to be alone	367	66.2	2.47	80.2	54.1	*** †	69.5	56.7	**
Household members do not have space to store their personal belongings	368	49.7	2.61	59.3	41.8	*** †	53.2	39.2	**
In the household at least one bed is overcrowded	371	69.5	2.39	89.7	53.0	*** †	67.7	75.3	
In the household all beds are overcrowded	371	19.1	2.05	28.0	10.8	*** †	19.0	20.6	
QUALITY OF SLEEP									
Persons that have difficulty falling asleep or that usually wake up during the night for reasons associated with housing	2001	18.3	0.87	18.5	18.4		21.1	12.4	***
Hours the respondent sleeps at night <sup>2</sup>	366	7.3	0.12	7.3	7.3		7.1	7.8	**
Respondent has bad or very bad quality of sleep	371	22.4	2.17	25.4	20.9		23.6	18.2	
Respondent has problems staying awake during the day	369	29.0	2.37	27.0	30.2		30.7	22.7	
Rain affects respondent's sleep	368	68.8	2.42	76.0	65.3	**	76.2	49.0	***
Other climatic conditions affect respondent's sleep	367	64.9	2.50	66.9	63.6		69.8	51.5	***
At least one member has difficulty falling asleep or usually wakes up during the night for reasons associated with housing	373	61.4	2.52	64.6	59.8		64.7	52.5	**
HEALTH									
Persons that experienced highly frequent cough or congestion during the last year	1939	9.5	0.67	10.2	9.3		11.0	6.6	***
Persons that experienced bronchitis, bronchiolitis or pneumonia during the last year	1952	11.2	0.71	10.0	12.1		11.4	10.5	
Persons that experienced highly frequent joint pain during the last year	1989	6.5	0.55	4.8	7.8	***	7.4	4.2	***
Personas that experienced diarrhea for more than a day during the previous month	1343	14.8	0.97	21.7	10.5	***	15.3	12.9	
Children < 6 with diarrhea for more than a day during the previous month	265	23.6	2.28	30.5	18.1	***	23.6	20.5	
At least one member had highly frequent cough or congestion during the last year	371	31.0	2.40	35.4	28.9		34.5	22.2	**
At least one member had bronchitis, bronchiolitis or pneumonia during the last year	370	40.3	2.55	42.4	38.7		40.3	38.1	
At least one member had highly frequent joint pain during the last year	373	27.1	2.30	22.0	29.9		29.7	18.2	**
SECURITY									
Respondent is concerned about the physical structure of the dwelling	369	62.1	2.53	65.1	60.5		69.2	41.4	***
Respondent is concerned that the building could collapse	369	37.4	2.52	30.7	40.9		47.0	11.1	***
Respondent is concerned that the house could be occupied if left alone	362	40.3	2.58	40.3	40.3		42.2	33.7	*
Experienced robbery during the past year	367	18.0	2.01	17.5	18.3		17.7	18.4	
Respondent does not feel at all secure in the dwelling	370	12.4	1.72	10.3	13.5		13.9	8.1	*
INTERPERSONAL RELATIONS									
Frequent conflicts in household due to lack of space	362	24.0	2.25	33.6	19.0	***	21.4	28.1	
Never receive friends or family in their home	370	14.6	1.84	11.8	16.0		15.3	12.2	
Feels uncomfortable receiving friends or family in their home	318	31.4	2.61	42.1	25.5	***	32.5	26.4	
PSYCHOLOGICAL HEALTH									
Respondent experienced stress because of household conflicts	369	44.4	2.59	42.1	45.5		47.4	34.7	**
Respondent frequently experienced stress because of household conflicts	363	19.6	2.08	23.0	17.8		22.1	12.5	**
Respondent had negative feelings during the previous month	370	61.1	2.54	58.7	62.1		65.2	49.0	***
Respondent had negative feelings almost every day during the previous month	361	22.2	2.37	23.0	21.4		24.1	15.8	*
PERCEPTION OF QUALITY OF LIFE									
Respondent considers his/her quality of life to be bad or very bad	368	20.4	2.10	22.6	18.9		22.9	10.3	***

<sup>1</sup> Statistical significance refers to the Chi-square independence test, except where noted.

<sup>2</sup> Mean values. The test corresponds to an F-test of difference of means between groups.

† Overcrowding is based on the square meters measure instead of the critical overcrowding measure.

\* significant at the 10% level.

\*\* significant at the 5% level.

\*\*\* significant at the 1% level.

Source: Authors' calculations based on TECHO-UCA (2014).

Recent impact evaluations have shown the effects of improvements in housing quality on indicators of health, sleep quality, security, satisfaction with housing and perception of quality of life (Cattaneo, 2009; Simonelli, 2013; Galiani et al, 2014).

In this section we present estimates of indicators in six dimensions of individual wellbeing and family life: privacy, sleep quality, physical health, psychological health, security and interpersonal relationships. For each indicator we present the average for the full sample. Then in order to analyze the relationship with housing we present separate estimates within groups according to the following two indicators of deficits in housing size and quality: (i) overcrowding (either critical overcrowding or crowding based on  $m^2$ ) and (ii) highly deficient housing quality (problems with two or more housing components: floor, walls and roof).

#### 4.1. Privacy

The lack of privacy produced by overcrowding affects different aspects of family life. In 66% of surveyed households the members have no space to be alone, in 39% the members do not have room to dress themselves in private and in 50% the members have no space to store their personal belongings (Table 3). Moreover, we find that these percentages increase by at least 10 percentage points in households that experience critical overcrowding: that is, 80% have no space to be alone, 51% cannot dress themselves in private and 59% have no space to store their belongings. The Chi-square test indicates that the differences in estimates between the two groups are statistically significant at the 1% level.

Acute overcrowding and the ownership of few assets mean that lack of privacy extends to sleeping arrangements. Seven out of ten households have at least one overcrowded bed, meaning that there is more than one person per bed space.<sup>23</sup> In 19% of households all of the beds are overcrowded. Moreover, in 3% of households a bed is shared by members of different family nuclei. Among children the most common situation is to share a bed with an adult (43%), whereas 20% of children share a bed with other children, 11% with adolescents and 4% with adults and adolescents.<sup>24</sup> While a larger share of adolescents have their own bed (49%), 15% have to share a bed with another adolescent, 20% with children, 8% with adults and 8% with adults and children. Nearly two thirds of all couples sleep in a bed with at least one other family member.

There is also an association between the overcrowding of beds and overcrowded housing. The percentage of households in which all of the beds are overcrowded is nearly three times higher in households with less than 5  $m^2$  per person (28%) than in the rest of the households (11%).

#### 4.2. Quality of sleep

Both the overcrowding of beds and deficiencies in housing construction can influence the quantity and quality of sleep. The survey results indicate that nearly 1 in 5 individuals have difficulty falling asleep or wake up at night for reasons associated with housing. Moreover, in at least 6 out of ten households at least one member experiences these sleeping problems. The reasons for sleep problems most

<sup>23</sup> More than one person in a twin size bed or more than two people in a full size bed.

<sup>24</sup> For the analysis of the overcrowding of beds, the population was divided into the following age groups: 0-10 years (children), 11-17 years (adolescents) and  $\geq 18$  years (adults).

frequently mentioned are outside noises (18%), rain (14%), anxiety (10%), fear of robbery (9%).

Nearly a third of survey respondents affirmed that they have difficulty staying awake during the day and 22% that they sleep less than 6 hours per night. More than two thirds of respondents affirmed that climatic conditions affect their sleep, a finding that coincides with the fact that 6 out of 10 households have to take immediate action when it rains even at night in order to avoid damage to the dwelling.

The proportion of households in which the members have sleeping problems is markedly higher among those that live in highly deficient dwellings. For example, the percentage of individuals that has difficulty falling asleep or wake up at night among those that live in highly deficient dwellings doubles the rate corresponding to those that live in less deficient dwellings. Also the respondent's usual number of hours of sleep is lower on average among those that live in highly deficient housing than among the rest of the households and the F-test indicates that the difference is statistically significant at the 5% significance level. Moreover, adverse climatic conditions affect a greater proportion of households living in highly deficient dwellings than the rest of the households.

#### **4.3 Physical health**

The TECHO-UCA Survey collected information for each family member on the occurrence of different health problems usually associated with inferior housing. The survey results indicate that 9.5% of individuals experienced highly frequent cough or congestion, 11.2% bronchitis, bronchiolitis or pneumonia and 6.5% very frequent joint pain during the previous year, while 14.8% of individuals had diarrhea during the previous month as did 23.6% of children under age 6.<sup>25</sup> The prevalence of illness is even more apparent when one analyzes the data at the household level. In 31% of households at least one member suffered highly frequent cough or congestion, in 40% of households at least one member had bronchitis, bronchiolitis or pneumonia and in 27% of households at least one member suffered highly frequent joint pain during the previous year.

As shown in Table 3, the incidence of highly frequent cough and congestion and highly frequent joint pain is significantly higher among households that live in highly deficient dwellings compared with the rest of households and the Chi-square test indicates that the difference is statistically significant at the 1% level. Moreover, consistent with the idea that overcrowding increases the risk of transmission of contagious diseases, the percentage of individuals that experienced diarrhea during the previous month within households with critical overcrowding more than double the percentage corresponding to households without critical overcrowding. The difference in the incidence of diarrhea among children under age 6 living in each type of household is also substantial (30.5% versus 18.1%).

---

<sup>25</sup> The following definition of diarrhea was used to clarify the term during the survey: Loose or watery stools three or more times during the day (or with greater frequency than normal for the person).

#### **4.4 Security**

The residents of informal settlements face insecurity both with regard to the physical structure of their homes and the risk of crime or occupation of their dwelling. The results of the TECHO-UCA survey indicate that 62% of respondents are concerned about the physical structure of their dwelling, 37% fear that the dwelling could collapse, 40% are concerned that the dwelling could be occupied if left alone and 12% feel not at all secure inside the dwelling. Also, one in five households had suffered a robbery during the previous year.

The indicators of insecurity tend to be higher for households that experience a more acute deficiency in the quality of construction of their dwelling. For example, the percentage of respondents that is concerned that their dwelling could collapse is 47% in households that live in a highly deficient dwelling and only 11% in the rest of the households. The Chi-square test indicates that the differences in estimates between the two groups are statistically significant at the 10% level or greater for all of the indicators except that which refers to the occurrence of robbery.

#### **4.5 Interpersonal relationships**

The problems of overcrowding and the stress associated with living in an insecure environment can influence both interpersonal relationships within the home and the ability to socialize with friends and neighbors. One in four respondents affirmed that they have frequent conflict in the home due to lack of space. Also almost 15% of respondents stated that they never receive family or friends in their home. Among those that do receive guests, 31% stated that they do not feel at all comfortable doing so.

In the case of interpersonal relations there also appears to be a relationship between the degree of problems with the size and quality of housing and the occurrence of problems in interpersonal relationships: whereas 34% of households with severe overcrowding have frequent conflict in the home due to lack of space, the percentage falls to only 19% among households that are not severely overcrowded. Also the percentage of respondents that feel very uncomfortable receiving family or friends in their home is higher among households with critical overcrowding (42%) than in the rest of the households (26%).

#### **4.6 Psychological health**

The poorest residents of the informal settlements tend to experience stress and anxiety over their housing situation. For example, 44% of respondents reported feeling stress or tension during the previous month due to conflict within the home and 20% experience stress due to conflict at least five times per week. Moreover, the tension caused by concerns over the security of the dwelling along with problems described above related to lack of privacy, sleep problems, poor health, interpersonal conflict and limited opportunities for socialization can produce general psychological distress and influence perceptions of overall wellbeing. In fact, 61% of respondents stated that they had had negative feelings, such as sadness, anxiety,

desperation or depression during the previous month. In over a third of these cases, the respondent experienced these negative feelings almost every day.

The prevalence of anxiety and concern over the security of the home and indicators of psychological wellbeing are all significantly higher among respondents who live in a highly deficient dwelling than among the rest of the respondents. For example, whereas 65% of respondents that live in dwellings with a very deficient quality of construction stated that they experienced negative feelings during the previous month, the percentage is only 49% in the rest of the households.

## **5. Multidimensional measure of poverty**

In the preceding sections we documented both the prevalence of different forms of wellbeing deprivation among the poorest households living in the informal settlements of Buenos Aires and the association between these indicators and the quality and size of housing. In this section we use the methodology proposed by Alkire and Foster (2008) to construct a multidimensional measure of poverty associated with the built environment. The measure is based only on dimensions of wellbeing that are related to the impact of housing. The measure does not consider other dimensions of wellbeing (such as education or work) or housing resources.

The method developed by Sabine Alkire and James Foster consists in a multidimensional extension of the FGT uni-dimensional poverty measures (Foster, Greer y Thorbecke, 1984). Like the FGT measure, the Alkire-Foster measure is a family of indices:

- Headcount (H): measures the percentage of persons that are multidimensionally poor
- Adjusted headcount (M0): measures the frequency and breadth of multidimensional poverty. It is equal to the product of H and A (the average number of deprivations).
- Adjusted poverty gap (M1): measures both the breadth of poverty across dimensions and the depth of deprivation in each dimension. It is equal to the product of H, A and G (average depth of deprivations).
- Adjusted FGT measure (M2): measures the severity of poverty. It takes into account the breadth and depth of poverty and also the inequality among the poor, giving greater weight to the most poor.

An important characteristic of the Alkire-Foster method is that it employs two forms of poverty cutoffs. The first is the threshold that identifies deprivation in each specific dimension. The second indicates the number of dimensions (k) in which a person must be deprived in order to be considered multidimensionally poor.

In the following analysis we estimate the multidimensional headcount index (H), leaving the estimation of A and M0 for future work.<sup>26</sup> Table 4 presents the dimensions and indicators used in the previous section to calculate the multidimensional poverty headcount. We employ the same six dimensions used to analyze the relationship between housing characteristics and quality of life. Within each dimension we have chosen either one or two dichotomic indicators that most closely measure capabilities (for example, the ability to dress in private) or functionings<sup>27</sup> (experience pain in joints) that are associated with the housing conditions. In some cases the indicator refers directly to the collective deprivation of the household (for example, in interpersonal relations) and in other cases the indicator aggregates the situations of deprivation of the household members (for example, in health and sleep). In the psychological health dimension the indicator is based on the condition of the survey respondent who, as explained above, is the person that spends most time in the home and is usually the mother of the principal family nucleus. In this case we assume that the psychological state of the respondent represents the general mood of the family.

**Table 4: Dimensions and indicators used in the calculation of multidimensional poverty**

Dimension	Indicator	Dimension weight	Indicator weight within dimension	Combined weight	Weight
PRIVACY	No space to dress in private	1/6	1/2	1/12	0.83
	All beds in household are overcrowded		1/2	1/12	0.83
QUALITY OF SLEEP.	At least one member has problems falling asleep or wakes up at night for reasons related to housing	1/6	1	1/6	1.67
PHYSICAL HEALTH	At least one member had bronchitis, bronchiolitis or pneumonia during the previous year	1/6	1/2	1/12	0.83

<sup>26</sup> The M1 and M2 indexes cannot be calculated with dichotomic indicators.

<sup>27</sup> *Functionings* are defined as the various things a person may value doing or being and *capability* refers to the freedom to enjoy various functioning (Alkire and Deneulin, 2009).



	At least one member had frequent joint pain during the previous year		1/2	1/12	0.83
PSYCHO-LOGICAL HEALTH	Respondent had highly frequent negative feelings, such as sadness, anxiety or despair	1/6	1	1/6	1.67
INTER-PERSONAL RELATIONS	Frequent conflict in the home due to lack of space	1/6	1/2	1/12	0.83
	Never receive friends or family in the home		1/2	1/12	0.83
SECURITY	Respondent fears that the dwelling could collapse	1/6	1/2	1/12	0.83
	Dwelling suffered a robbery during the last year		1/2	1/12	0.83

We have chosen to use equal weights for each of the dimensions (Table 4) and also equal weight to the indicators within each dimension. The final weight of each indicator is calculated such that the sum of the weights equals the total number of indicators (10 in this case). Taking into account these weights, the range of values of the aggregate measure is [0,10].

The definition of the second threshold—the poverty threshold—consists in determining the sum of the weighted indicators ( $k$ ) in which a household must be deprived in order to be considered multidimensionally poor. Due to the way in which the weights were defined, if  $k$  is set equal to 1, a household would need to be deprived in at least two indicators in the dimensions of privacy, physical health, interpersonal relations and security (those dimensions with two indicators) in order to be considered multidimensionally poor.<sup>28</sup> The household would need to be deprived in only one indicator in the dimensions of psychological health or quality of sleep in order to be considered multidimensionally poor.

The results of the construction of the multidimensional poverty headcount ( $H$ ) are presented in Graph 1. Graph 1A shows that 14% of households are deprived in less than one weighted indicator of deprivation, 12% are deprived in between one and two weighted indicators of deprivation, 15% in two, etc. Therefore, as shown in

<sup>28</sup> Note that if the household were deprived, for example, in one indicator of health and one indicator of privacy, that that would be sufficient in order to classify the household as multidimensionally poor when  $k=1$ .





# UCA

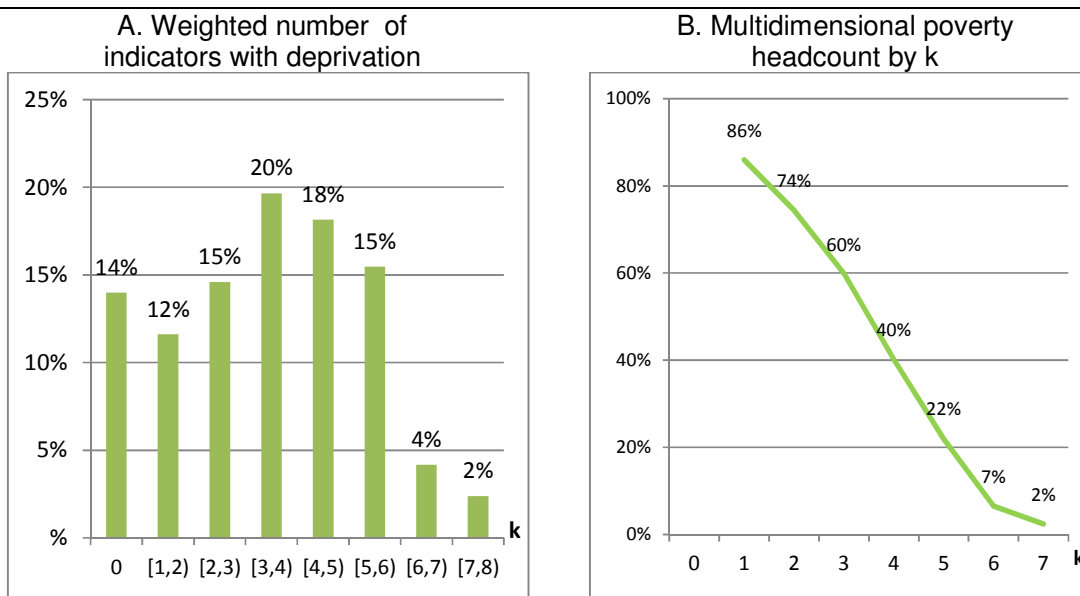
Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"

Facultad de Ciencias Económicas

Departamento de Investigación "Francisco Valsecchi"

Graph 1B, when  $k=1$ , 86% of households are classified as multidimensionally poor, when  $k=2$  74% are classified as multidimensionally poor, etc. Note that no households are deprived in all 10 indicators, as 7 is the maximum observed number of weighted deprivations.

**Graph 1: Weighted number of deprivations and multidimensional poverty headcount (H) with variations in  $k$**



Source: Authors calculations based on TECHO-UCA (2014).

The multidimensional headcount index (H) can be decomposed in the same way that the FGT unidimensional indices are decomposable.<sup>29</sup> We use this property to determine the levels of deprivation experienced by households with different levels of perceived wellbeing. The comparison of the indicator of subjective wellbeing with the multidimensional poverty index, constructed based on objective indicators, allows us to test the extent to which the indicators of quality of life used in the paper are perceived (and recognized) by the survey respondents. Our interest in making this comparison stems from the fact that despite the generally high incidence of different types of objective deprivation, only 20% of respondents stated that his or her quality of life is quite bad or very bad.

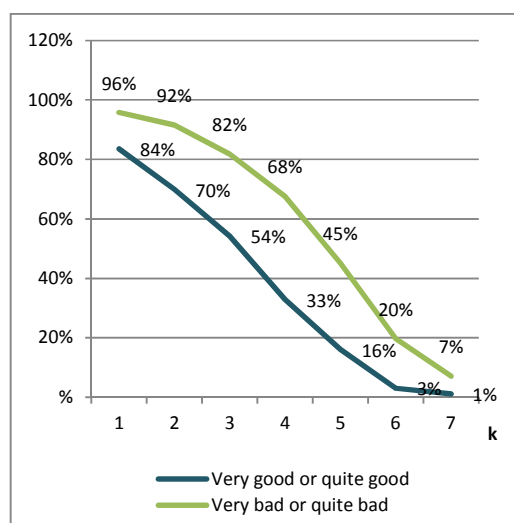
Graph 2A shows that the households in which the respondent considers her quality of life to be quite bad or very bad accumulate a larger number of objective

<sup>29</sup>The multidimensional Alkire-Foster poverty measure satisfies a number of desirable properties or axioms. Theorem 1 states that "for any given weighting vector and cutoffs, the methodology  $M_{k\alpha} = (\rho_k, M_\alpha)$  satisfies: decomposability, replication invariance, symmetry, poverty and deprivation focus, weak and dimensional monotonicity, nontriviality, normalization, and weak rearrangement for  $\alpha > 0$ ; monotonicity for  $\alpha > 0$ ; and weak transfer for  $\alpha > 1$ " (Alkire and Foster, 2008, p. 23).

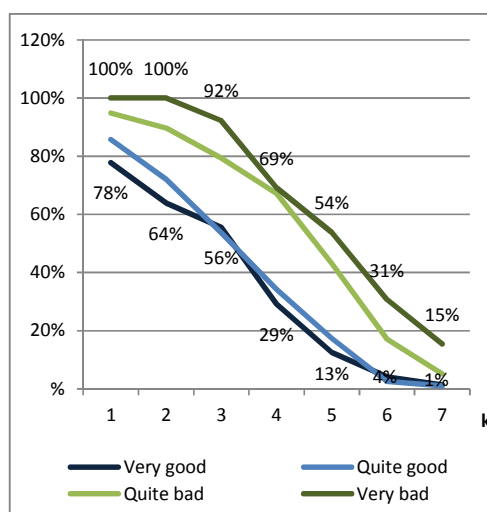
deprivations than in households in which the respondent considers her life to be quite good or very good. When we disaggregate the multidimensional headcount index according to the four possible responses (very good, quite good, quite bad, very bad), the gap between the two extremes widens. Moreover, all of the households in which the respondent stated that her quality of life was very bad are deprived in at least two weighted indicators of deprivation.

**Graph 2: Decomposition of the Multidimensional poverty index H by level of perceived wellbeing**

A. Multidimensional poverty headcount by k, according to level of perceived wellbeing (2 categories)



B. Multidimensional poverty headcount by k, according to level of perceived wellbeing (4 categories)



Source: Authors calculations based on TECHO-UCA (2014).

The results, however, also show the dispersion in the degree of multidimensional deprivation among respondents with the same level of subjective wellbeing. For example, one third of those who responded that their quality of life is quite or very good, are deprived in at least 4 weighted indicators of deprivation and more than half have at least 3 weighted indicators of deprivation.

This result is likely related to the fact that vulnerable groups tend to naturalize situations of difficulty (or do not know another reality).<sup>30</sup> The problem is that subjective measures of wellbeing or feelings of happiness can be distorted by

<sup>30</sup> We found a similar result in the case of measures of satisfaction with state of health. Despite the relatively high incidence of respiratory problems (and the fact that chronic health problems like diabetes and high blood pressure were repeatedly mentioned during the surveys although not included in the survey questionnaire), 78% of respondents affirmed that they are quite or very satisfied with their health.



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

adaptive preferences (Sen, 1984).<sup>31</sup> Prolonged periods of deprivation may lead to mental conditioning that lowers expectations concerning states of wellbeing, thereby causing the poor to be satisfied with very low levels of objective wellbeing. Also, the poor may compare their personal situation, not with living standards in the general society, but with others within their geographical or social proximity. If this is true then increasing spatial segregation may cause the difference between objective and subjective measures of wellbeing to increase.

## Conclusions

Although much more work is needed in order to fully understand the relationship between housing and wellbeing, we begin to draw some tentative conclusions from the analysis presented here. First, the comparative analysis of the demographic and socioeconomic characteristics of the poorest residents of the peri-urban informal settlements of Greater Buenos Aires has shown that while many of their traits match those of the general population living in the informal neighborhoods of Argentina, these traits tend to be even more accentuated. That is, this group is even younger, lives in larger and more extended households and has even less education and lower incomes. Just as within any society there is a distribution of levels of human and social capital, incomes and living conditions, the living standards and opportunities of slum dwellers varies widely.

Second, the analysis of the relationship between housing conditions and indicators of wellbeing indicates that even among the poorest households—all of whom live in deficient housing—the incidence of illness, sleep problems, poor health, psychological distress and perception of insecurity are higher within households with relatively more deficient housing quality, whereas the level of privacy and the quality of interpersonal relationships is significantly lower in households that experience more acute overcrowding.

Third, through the construction of a multidimensional indicator of poverty we were able to illustrate the accumulation of deprivations associated with housing: 3 out of 4 households are deprived in at least in at least two weighted dimensions and half in at least 3 dimensions. Moreover, the decomposition of the multidimensional poverty measure according to a measure of perceived wellbeing illustrates that there is a direct, although weak, relationship between objective and subjective measures of wellbeing among the poor.

We believe that these findings provide some support for the idea that at least the poorest slum dwellers may be caught in a poverty trap, as has been suggested by some recent studies (Marx, Stoker and Suri, 2013). The extremely low levels of education of the poorest slum residents combined with health problems seem likely to impose limits on social mobility across generations. Moreover, when housing conditions are extremely precarious, the accumulation of deficits in several dimensions of wellbeing and the interrelationship between dimensions (for example,

---

<sup>31</sup> As Sen states "If a starving wreck, ravished by famine, buffeted by disease, is made happy through some mental conditioning (say, via the "opium" of religion), the person will be seen as doing well on this mental-state perspective, but that would be quite scandalous"(Sen, 1984: 188).



*Pontificia Universidad Católica Argentina*  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

between physical and mental health and sleep quality)<sup>32</sup> could produce a vicious cycle that keeps the poorest groups from benefiting from the "urban advantages." Therefore, while for the most highly educated and fortunate residents, the informal settlement may be a stepping stone on their path to a better quality of life in other parts of the city or through the upgrading and integration of informal neighborhood into the city, the poorest residents are unable to advance or attain a better quality of life for their children.

---

<sup>32</sup> The circular relationship between different dimensions of wellbeing (especially between sleep and physical and mental health) has been suggested by Simonelli, et al (2013:167). They find that the introduction of housing improvements generated a "cycle of serenity."



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

## References

- Alkire, S. and Foster, J.E. (2008) "Counting and Multidimensional Poverty Measurement." Oxford Poverty & Human Development Initiative (OPHI) Working Paper 7.
- Alkire, S. and Deneulin, S. (2009) "The Human Development and Capabilities Approach" in Deneulin, S. and Shahani, L. (eds.) *An Introduction to the Human Development and Capabilities Approach*, New York: Routledge.
- Arriagada, C. (2000) Pobreza en América Latina. Nuevos escenarios y desafíos de políticas para el hábitat urbano, Serie medio-ambiente y desarrollo, CEPAL, Santiago de Chile.
- Cardinali, D. P., Espinola, G.S.S.R., Salvia, A. and Vigo, D.P.C.D.E. (2014) Sleep, Slums and Shelter: Impact of a Slum-housing Upgrading Program, *Bread and Brain, Education and Poverty*, Pontifical Academy of Sciences, ScriptaVaria 125, Vatican City 2014.
- Cattaneo, M. D., Galiani, S., Gertler, P. J., Martinez, S., and Titiunik, R. (2009). Housing, health, and happiness. *American Economic Journal: Economic Policy*, 75-105.
- Cravino, M.C. (2008) Análisis cuali-cuantitativo de casos en el Gran Buenos Aires en Cravino, M.C. (coord.) *Los mil barrios (in)formales: aportes para la construcción de un observatorio del hábitat popular del área metropolitana de Buenos Aires*. Los Polvorines: Universidad Nacional de General Sarmiento.
- DGEyC (2012), Encuesta Anual de Hogares 2012 Ciudad de Buenos Aires Síntesis metodológica. Gobierno de la Ciudad de Buenos Aires.
- Evans, G. (2003). The built environment and mental health. *Journal of Urban Health*, 80, 536-555.
- Field, E. (2007). Property Rights, Community Public Goods, and Household Time Allocation in Urban Squatter Communities: Evidence from Peru. *William and Mary Law Review*, 45, 837.
- Fonseca W., Kirkwood B.R., Victora C.G., Fuchs S.R., Flores J.A. and Misago C. (1996) Risk factors for childhood pneumonia among the urban poor in Fortaleza, Brasil: a case-control study. *Bulletin World Health Organization*, 74, 199-208.
- Foster, J., Greer, J. and Thorbecke, E. (1984) "A Class of Decomposable Poverty Measures" *Econometrica*, Vol. 52, No. 3.
- Galiani, S., Gertler, P., Cooper, R., Martinez, S., Ross, A., and Undurraga, R. (2014). Shelter from the Storm: Upgrading Housing Infrastructure in Latin American Slums IDB Working Paper No. IDB-WP-528.



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

Galiani, S. and Schargrodsky, E. (2010) Property Rights for the Poor: Effects of Land Titling *Journal of Public Economics*, 94, 9-10, 700-729.

Glaeser, E. (2011) *Triumph of the City. How our greatest invention makes us richer, smarter, greener, healthier and happier* New York: Penguin Books.

Gove, W. R., Hughes, M., and Galle, O. R. (1979). Overcrowding in the home: An empirical investigation of its possible pathological consequences. *American Sociological Review*, 59-80.

INDEC (2010) Censo Nacional de Población, Hogares y Vivienda. <http://www.censo2010.indec.gov.ar/>

Krieger, J., and Higgins, D. L. (2002). Housing and health: time again for public health action. *American Journal of Public Health*, 92(5), 758-768.

Lépore, E., Lépore, S., Mitchell, A., Macció, J. and Rivero, E. (2012). *Capacidades de desarrollo y sociedad civil en las villas de la ciudad*. Buenos Aires: EDUCA.

Lépore, E. and Macció (2014) Capítulo 3: Condiciones de habitabilidad en las villas de la CBA, Informe para la Secretaría de Hábitat e Inclusión, Gobierno de la Ciudad Autónoma de Buenos Aires.

Macció, J. (2014) Apéndice. Fuentes de datos del Programa interdisciplinario sobre desarrollo humano e inclusión social in Suarez, A.L., Mitchell, A. and Lepore, E. (eds.) *Las villas de la Ciudad de Buenos Aires. Territorios Frágiles de Inclusión Social*, Buenos Aires: Educa.

Matte, T., and Jacobs, D. (2000) Housing and health: Current issues and implications for research and progress. *Journal of the Urban Health Bulletin* New York Academy of Medicine, 77, 7-25.

Marx, B., Stoker, T. and Suri, T. (2013) The Economics of Slums in the Developing World, *Journal of Economic Perspectives*, 27(4), pp. 187-210.

Mitchell, A. and Peregalli, A. (2014), "Inclusión educativa: Evidencias y desafíos en las villas de la Ciudad" en Suarez, A. L., Mitchell, A. y Lépore, E. (eds.) *Las villas de la Ciudad de Buenos Aires: Territorios frágiles de inclusión social*, Buenos Aires, Educa.

Mitchell, Ann (2015) "Civil Society Organizations in the Informal Settlements of Buenos Aires: Service Providers and Forces for Change" *Voluntas* forthcoming.

Murtagh P., Cerqueiro C., Halac A., Avila M., Salomon H. and Weissenbacher M. (1993) Acute lower respiratory infection in Argentinian children: a 40 month clinical and epidemiological study *Pediatric Pulmonology*, 16, pp. 1-8.



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

Newman, S. J. (2008). Does housing matter for poor families? A critical summary of research and issues still to be resolved *Journal of Policy Analysis and Management*, 27(4), 895-925.

Ostuni, F. and J. L. van Gelder (2008) "No sé si legal...pero legítimo es!". Percepciones sobre seguridad en la tenencia y títulos de propiedad en barrios informales del Gran Buenos Aires en Cravino, M. C. et al. *Los mil barrios (in)formales: aportes para la construcción de un observatorio del hábitat popular del área metropolitana de Buenos Aires*, Los Polvorines: Universidad Nacional de General Sarmiento.

Perlman, J. (2006), "The Metamorphosis of Marginality: Four Generations in the Favelas of Rio de Janeiro", in *Annals of the American Academy of Political and Social Science*, 606, Chronicle of a Myth Foretold: The Washington Consensus in Latin America, pp. 154-177.

Perlman, J. (2010) *Favelas. Four Decades of Living on the Edge in Rio de Janeiro*. New York: Oxford University Press.

PNUD (2013) *Aportes para el Desarrollo Humano en Argentina 2009. Segregación residencial en Argentina*, Buenos Aires.

Salvia, A. (2014) *Un régimen consolidado de bienestar con desigualdades sociales persistentes, claroscuros en el desarrollo humano y la integración social 2010-2013*, 1ª edición, Buenos Aires: Educa.

Sen, A. (1984) Well-Being, Agency and Freedom: The Dewey Lectures 1984 *The Journal of Philosophy*, Vol. 82, No. 4 (Apr., 1985), pp. 169-221.

Simonelli, G., Leanza, Y., Boilard, A., Hyland, M., Augustinavicius, J. L., Cardinali, D. P. and Vigo, D. E. (2013). Sleep and Quality of Life in Urban Poverty: The Effect of a Slum Housing Upgrading Program. *Sleep*, 36(11), 1669.

Suarez, A. Mitchell, A. and Lepore, E. eds. (2014) *Las villas de la Ciudad de Buenos Aires. Territorios Frágiles de inclusión social*, Buenos Aires: Educa.

TECHO (2013) *Relevamiento de asentamientos informales, 2013*.

TECHO-UNICEF (2013) *Las voces de los adolescentes en villas y asentamientos de Buenos Aires*.

UN-Habitat (2012) *State of Latin American and Caribbean Cities 2012. Toward a New Urban Transition*.



## **Facultad de Ciencias Económicas**

### **Departamento de Investigación “Francisco Valsecchi”**

#### **Documentos de Trabajo**

- Nº 1: Millán Smitmans, Patricio, *“Panorama del Sector de Transportes en América Latina y Caribe”*, Noviembre de 2005.
- Nº 2: Dagnino Pastore, José María; Servente, Ángeles y Casares Bledel, Soledad, *“La Tendencia y las Fluctuaciones de la Economía Argentina”*, Diciembre de 2005.
- Nº 3: González Fraga, Javier A., *“La Visión del Hombre y del Mundo en John M. Keynes y en Raúl Prebisch”*, Marzo de 2006.
- Nº 4: Saporiti de Baldrich, Patricia A., *“Turismo y Desarrollo Económico”*, Abril de 2006.
- Nº 5: Kyska, Helga, y Marengo, Fernando, *“Efectos de la Devaluación sobre los Patrimonios Sectoriales de la Economía Argentina”*, Mayo de 2006.
- Nº 6: Ciocchini, Francisco, *“Search Theory and Unemployment”*, Junio de 2006
- Nº 7: Ciocchini, Francisco, *“Dynamic Panel Data. A Brief Survey of Estimation Methods”*, Junio de 2006.
- Nº 8: Molteni, Gabriel, *“Desempleo y Políticas del Mercado Laboral. Análisis Internacional de Políticas Públicas: Algunos Casos Exitosos”*, Julio de 2006.
- Nº 9: Gentico, Fernando, *“Duración de los Sistemas de Tipo de Cambio: Bretton Woods, un Punto de Inflexión”*, Agosto de 2006.
- Nº 10: O'Connor, Ernesto, *“Algunas Consideraciones acerca de la Eficiencia del IVA en la Argentina”*, Septiembre de 2006.
- Nº 11: Millán Smitmans, Patricio, *“Modernización del Estado e Indicadores de Desempeño del Sector Público”*, Octubre de 2006.
- Nº 12: Resico, Marcelo, *“Las Reformas Económicas y la Modernización del Estado”*, Noviembre de 2006.
- Nº 13: Díaz, Cecilia, *“Universidades Indianas del Período Colonial”*, Noviembre de 2006.
- Nº 14: Dagnino Pastore, José M., *“Los Efectos Económicos de la Promoción Regional”*, Marzo de 2007.





Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

- Nº 15: Valsecchi, Francisco, *"La Reconstrucción de la Ciencia Económica sobre el Fundamento Ético-Cristiano"*; *"El Sentido de la Escuela de Economía de la Universidad Católica Argentina"*. Prólogo de Patricio Millán, Junio de 2007.
- Nº 16: Ciocchini, Francisco y Molteni, Gabriel, *"Medidas Alternativas de la Pobreza en el Gran Buenos Aires, 1995-2006"*, Julio de 2007.
- Nº 17: Sabater, Javier, *"El Financiamiento de la Educación Superior. Propuestas para Argentina"*, Julio de 2007.
- Nº 18: Rodríguez Penelas, Horacio, *"Aportes del Cardenal Wyszyński en la Gestión de Laborem Exercens. El Tema de la Espiritualidad del Trabajo"*, Agosto de 2007.
- Nº 19: Giordano, Osvaldo, *"La Reforma de los Seguros Sociales en la Argentina"*, Septiembre de 2007.
- Nº 20: Saporosi, Claudia, *"Paralelo entre la Crisis de 1890 y la de 2001 en Argentina"*, Octubre de 2007.
- Nº 21: Millán Smitmans, Patricio, *"La Necesidad de Nuevas Políticas Públicas para Disminuir las Desigualdades Regionales de la Argentina"*, Diciembre de 2007.
- Nº 22: Rubio, Alberto, *"La Trama del Presente"*, Febrero de 2008.
- Nº 23: García Bossio, Horacio, *"Génesis del Estado Desarrollista Latinoamericano: el Pensamiento y la Praxis Política de Helio Jaguaribe (Brasil) y de Rogelio Frigerio (Argentina)"*, Abril de 2008.
- Nº 24: Carballo, Carlos Alberto, *"La Política Monetaria en los Tiempos de la Caja de Conversión"*, Mayo de 2008.
- Nº 25: Llosas, Hernán, *"Reformas en el Sistema Presupuestario de los Estados Unidos de Norteamérica"*, Junio de 2008.
- Nº 26: Dagnino Pastore, José María, *"La Riqueza en (y de) Argentina"*, Agosto de 2008.
- Nº 27: Coria, María Marta, *"Eficiencia Técnica de las Universidades de Gestión Estatal en Argentina"*, Noviembre de 2008.
- Nº 28: Ciocchini Francisco J., Gabriel R. Molteni y M. Elena Brenlla, *"Análisis de la Autopercepción de Felicidad en la Argentina, 2005-2007"*, Febrero de 2009.
- Nº 29: Martiarena, Ana, *"La Empresa y sus Alianzas Intersectoriales en Pos de la Inclusión Sociolaboral"*, Marzo de 2009.



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

- Nº 30: Villanueva, Javier, *"El Desarrollo Económico en Juan Bautista Alberdi"*, Mayo de 2009.
- Nº 31: Oberst, Tomás, *"El Pensamiento del Dr. Carlos Moyano Llerena. Hacia un Desarrollo basado en Valores"*, Julio de 2009.
- Nº 32: García-Cicco, Javier y Montero, Roque, *"Modeling Copper Price: A Regime-Switching Approach"*, Febrero de 2011.
- Nº 33: Landro, Alberto y González, Mirta, *"Acerca de los 'Fundamentos de la Teoría de la Probabilidad' de A. N. Kolmogorov"*, Marzo de 2011.
- Nº 34: Ciocchini, Francisco J., *"Solving Linear Rational-Expectations Models by means of the (Generalized) Schur Decomposition"*, Julio de 2011.
- Nº 35: Mitchell, Ann., *"Alcance, Mapeo y Caracterización de las Organizaciones de la Sociedad Civil de las Villas de la Ciudad de Buenos Aires"*, Septiembre de 2011.
- Nº 36: Montoya, Silvia y Giordano, Virginia, *"Immigrants Wage Gap in the Great Buenos Aires Labor Market: How Important Are Differences in Human Capital?"*, Abril de 2012.
- Nº 37: Cruces, Juan José y García-Cicco, Javier, *"Grading Latin American Presidents: A View from the Stock Markets"*, Junio de 2012.
- Nº 38: Millán Smitmans, Patricio, *"La Exclusión Social de los Jóvenes en Argentina: Características y Recomendaciones"*, Agosto de 2012.
- Nº 39: Colina, Jorge, *"Proyecto Jóvenes y Empleo: Propuesta de un Sistema Integral para Promover el Empleo Juvenil"*, Noviembre de 2012.
- Nº 40: Preziosa, María Marta, *"Educación para la Responsabilidad en la Profesión Contable"*, Febrero de 2013.
- Nº 41: Preziosa, María Marta y Lucchetta, Camila, *"La Enseñanza de la Ética de los Negocios en una Universidad Católica. Identidad Institucional y Objetivos de Formación. Encuesta de Opinión de Alumnos"*, Marzo de 2013.
- Nº 42: Preziosa, M. Marta, Díaz Arburúa, M. Cecilia y Martiarena, Ana C. *"Responsabilidad Social Empresaria y Servicios Públicos: Valores en Juego en la Industria del Gas"*, Abril de 2013.
- Nº 43: O'Connor, Ernesto. *"Una Explicación para la Tendencia Estructural de Fuga de Capitales en la Argentina,"* Septiembre de 2013.
- Nº 44: Montoya, Silvia y Volman, Víctor. *"¿Cuáles son los Determinantes de la Calidad Educativa en la Ciudad de Buenos Aires? Los Índices de Calidad y Equidad Porteños,"* Enero de 2014.



Pontificia Universidad Católica Argentina  
"Santa María de los Buenos Aires"  
Facultad de Ciencias Económicas  
Departamento de Investigación "Francisco Valsecchi"

- Nº 45: Montoya, Silvia y Volman, Víctor. *"Carrera Docente en la Ciudad de Buenos Aires. Una Mirada desde los Incentivos,"* Agosto de 2014.
- Nº 46: Jacobo, Alejandro y Tinti, Bernardo. *"Un Panorama sobre la Complementariedad Comercial y Comercio Intraindustrial entre el MERCOSUR y sus Principales Socios Europeos: 1992-2012,"* Septiembre de 2014.
- Nº 47: García-Cicco, Javier y Kawamura, Enrique. *"Central Bank Liquidity Management and 'Unconventional' Monetary Policies,"* Septiembre de 2014.
- Nº 48: Montoya, Silvia. *"Presentismo y Licencias en el Sector Docente de Gestión Estatal de la Ciudad Autónoma de Buenos Aires. Análisis y Propuestas de Reforma,"* Diciembre de 2014.
- Nº 49: García-Cicco, Javier y Enrique Kawamura. *"Dealing with the Dutch Disease: Fiscal Rules and Macro-prudential Policies".* Diciembre de 2014.
- Nº 50: Dagnino Pastore, José María. *"Los valores en la Argentina. Ideales y Realidades".* Abril de 2015.
- Nº 51: O'Connor, Ernesto A. y Marcelo F. Resico. *"Estrategias de desarrollo económico y rol del Estado en América Latina (2000-2014)".* Agosto de 2015.
- Nº 52: Mitchell, Ann y Jimena Macció. *"Housing and Wellbeing: Evidence from the informal settlements of Buenos Aires".* Noviembre de 2015.
-