POTENTIAL INNOVATIONS ADDRESSING INFORMAL SETTLEMENTS IN THE METROPOLITAN AREA OF BUENOS AIRES

Prepared by Summer 2019 Masters Students of the University of Southern California’s Sol Price School of Public Policy
Executive Summary

This report is based on observation, field study, and literature research to address the informal housing issue within the metropolitan area of Buenos Aires (AMBA) from four perspectives: land use, transportation and infrastructure, employment and income, and governance. The purpose of this report is not to suggest reactive measures such as upgrading housing projects, constructing social housing, and installing new infrastructures, but to discuss potential solutions that prevent future informal settlements. Our overarching recommendation is to adapt the city to a polycentric model and develop satellite cities around the AMBA area using transit-oriented development, workforce development hubs, and metropolitan planning organizations to support this shift. This report outlines a theoretical framework and includes successful case studies across the world for further context and policy consideration.

Resumen Ejecutivo

Este reporte se basa en la observación, el estudio y la investigación del tema de viviendas informales en el área metropolitana de Buenos Aires (AMBA) con aplicación en cuatro perspectivas: uso de suelo, transporte e infraestructura, empleo e ingresos y gobernanza. Este reporte no se propone a sugerir más medidas reactivas como el mejoramiento de proyectos de vivienda sociales ni su construcción, ni la construcción de nuevas infraestructuras en las áreas informales, sino que se enfoca en presentar soluciones que puedan evitar asentamientos informales en el futuro. Nuestra recomendación en este aspecto se enfoca en implementar soluciones que puedan contribuir a que el área metropolitana de Buenos Aires pueda desarrollarse en una área policéntrica y que la área pueda desarrollarse en ciudades satélite sobre el rededor del área AMBA por medio de desarrollo orientado al tránsito (TOD), centros de desarrollo de la fuerza laboral y organizaciones de planificación metropolitana. Este informe presenta un contexto teórico e incluye estudios prácticos de diferentes lugares del mundo que demuestran cómo ciudades se han formado según este modelo para servir como base de consideración relativa a la política pública.
**Land Use and Housing**

**Introduction**

While acknowledging the unstable macroeconomic conditions and limited budget on housing in Argentina, the land use sector group will attempt to address informal settlements in Argentina through a sustainable way in the long term rather than focusing on specific villa upgrading or infrastructure installment. Given that Argentina is rich in natural resources, having world-class wind and solar energy potential, and ranked as the fourth highest shale oil reserves in the world, the World Bank 2018 Report sees the good potential of Argentina’s economy. The land use sector group is aligned with the World Bank and believes these resources will have significant opportunities in manufacturing subsectors and high-tech, innovative services with proper institution intervention and economic policy. Such rich resources are the key to boost the overall economy while alleviating the informal housing issue in Buenos Aires.

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**Vivienda y Uso de Suelo**

Reconociendo las condiciones macroeconómicas y los presupuestos limitados de la vivienda en Argentina, el sector del uso de suelo se enfocó en recomendar políticas concentradas en evitar los asentamientos informales en Buenos Aires por medio de planear políticas de vivienda y zonificación a largo plazo. Argentina, rica en recursos naturales, como el potencial de energía eólica y solar y que también ocupa el cuarto lugar en el mundo por sus reservas de petróleo, tiene enorme potencial económico. Por lo mismo el sector del uso de suelo cree que estos recursos proporcionarán oportunidades significativas para ayudar a desarrollar subcentros policéntricos que más tarde podrían atraer negocios, industria e inversiones innovadoras.

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**Polycentric metropolitan urban structure**

Polycentricity aims to make efficient use of land and infrastructure efforts outside of urban areas to help ease the effects of housing demands and increase accessibility in a metropolitan area (Bergsli, Harvold 1). In polycentric models, workplaces are centralized in specific areas, but dispersed throughout a metropolitan area, attracted by various criteria, predominantly transportation hubs and access to the main urban area, where local goods and services are shared. In this model, workers commute to a discrete set of identifiable employment sub-centers—including but not restricted to the central business district (CBD)—located throughout the metropolitan area, where these centers also benefit from the ability to form partnerships and share a common pool of workers [and] share knowledge with each other” (Angel, Blei 3). Essential to the model is the idea that several key districts can exist simultaneously and can benefit residents of the main urban area, while still functioning wholly as an independent sub-center.

In their work on spatial structures in American cities, Angel and Blei describe the rationale for polycentric urban cities, where all workplaces simply cannot be concentrated at the city center. This rationale breaks down to several fronts. Most vital to the rationale for polycentric cities is the idea that the competition for land substantially increases prices as well as competition for land close to services. Additionally, continuously investing in maintenance of overburdened infrastructure and regeneration of land in city centers to accommodate changing needs is not as efficient as investment in new construction on land in surrounding areas. If new city centers are
created, they will attract workplaces away from the old city center and into other areas around the main metropolitan area. (Angel, Blei 3).

Thus, the polycentric model is designed to develop nearby city centers to reduce overcrowding and inadequate access to resources. The plan for satellite cities also aims to develop the sub-centers that are economically self-sustainable and providing housing options for people in all income brackets (Haseeb, 2017). In this case, this polycentric urban development strategy is especially suitable for Buenos Aires, as it helps increase the housing supply to make housing prices more affordable to low-income residents. It also helps to generate more job and education opportunities and increasing wage level by making the sub-centers economically self-sustainable.

The land use sector recommends the polycentric model to resolve the informal housing issue in the metropolitan area of Buenos Aires (AMBA) by having more than one city center within AMBA. Right now, AMBA serves as the combination of political, economic, technology, education, and transportation center for Argentina. Such a structure creates many job opportunities within the AMBA region that draw all income level residents to the city center. Based on the law of Supply and Demand, when there is a high demand for properties in a particular region and a lack of supply of quality properties, the prices of houses tend to rise (Hall, 2018). Low to medium income people can not afford the high housing price, so this shortage of housing supply forces the medium and low-income people into informal housing.

Currently, approximately 25% of the population in metropolitan Buenos Aires live below the poverty line (The World Bank Group, 2019), with the unemployment rate reaching about 10% nationally. (Goodman, 2019). The existing informal housing in BA is mostly lacking infrastructure such as sewage pipes, drainage systems as well as basic services such as gas, electricity, and clean water. To address the poverty issue, we believe that building self-sustained and well-planned sub city centers will be a better strategy in terms of allocating public resource and balancing housing supply, rather than draining resources within AMBA and increasing the pushing more people into informal housing.

By building self-sustained polycentric cities, more resources can be offered by the sub-centers, rather than all of the capital being generated from one city center. Residents from the sub-central area will also have more accessible to the workplaces. To prevent people from moving back to informal settlements, it is essential to provide corresponding infrastructure and services in the sub-centers. Providing job opportunity and educational opportunities is the key to the sustainability of these housing projects.

One possible solution to make the sub-center self-sustained is to construct a company hub or build a leading industry that brings together the companies in different or a specific industry. This will provide more job incentives for residents and skilled workers nearby. One well-known example is the Silicon Valley, where many high-tech companies are headquartered in the United States. The establishment of a cultural, education and community center can also attract people by providing sports, art and other venues.

To further the efficiency of the polycentric urban model works, leaders can also think of having different leading industries or unique character for each sub-center. Kyoto is excellent an example to look at. Kyoto, unlike Tokyo, which is known as Japan’s leading industrial center, focuses on the preservation of Japanese traditional culture. It not only aims to attract tourists but also young college students. This economic model made Kyoto have a different focus than Tokyo as it is heavily based on tourism and education. Thus, Buenos Aires can learn from this model. Each sub-center can have its own theme and the entire city can be connected in series through the
TOD model and public transit tools, such as railways. In doing so, a mature polycentric city will organically develop.

The polycentric model aims to create housing that is available to all income levels, which is considered a future trend of developing a sustainable city. According to research conducted by METRANS Director Genevieve Giuliano, one of the main reasons for these residents to live in a remote area of the city center is because of the parks and recreation area located there (1995). Developing sub-centers in the outer areas of the city allow them to have more green spaces and scenic areas (Haseeb, 2017). In this case, sub-centers created on the farther area away from city center can both attract lower-income residents by increasing affordable housing supply and attract higher income residents by having better access to green spaces (Haseeb, 2017).

Thus, we recommend through developing nearby cities to incentivize overall development and reduce the demand for housing in the center of Buenos Aires.

Criteria and Influences

Key to understanding the polycentric model is also the criteria involved in driving the development of sub-centers. Although many case studies prove the model can come to fruition as a result of important factors like GDP, population, land-use mix and employment, outlined herein are a few of the primary aspects that seemed to recur in scholarly literature highlighted by one compelling example from China also later discussed in case study section.

In a 2015 comparative paper by Liu and Wang, which studied 318 cities in China, researchers were driven largely by population centers as criteria for polycentric cities. However, the researchers suggested that the model could be approached through “single cut-offs” like employment centers (employment) and GDP as well as other aspects including functional, relational and political conditions. These aspects can then be measured in various ways like “city rank size methods” (ranking cities by size) and equality measures (Gini coefficient), among others. For this study though, the researchers used a hybrid approach using land grids and minimum density cutoffs (Liu and Wang, 4). Once employed, the study showed that various aspects affected polycentricity in China. One aspect, the type of land had such an impact, where varied landscapes and availability of land demonstrated more centers (6). Socioeconomic conditions also played a role whereas more lax control from the state over development helped small cities along China’s eastern coast, open up and economically progress through decentralization, globalization, an open economy and capitalization of location (7). Last among the study’s influences were those of political impact, wherein one area outside of Shanghai, a comprehensive master plan includes merging surrounding cities, one of which chiefly produces steel, to create 9 satellite cities (60 towns and 600 settlements). This consolidation combines uneven infrastructure and development efforts, attracting other business and residential projects (8).

Case studies

In this section, we chose two examples from China to see why some cases fail and some succeed in the end for comparison for Buenos Aires. China started using the polycentric model in the early 1990s when Shanghai introduced its master plan in 1999, called the “1-9-6-6 model.” The objective was to alleviate the dramatic growth in the city center of Shanghai. A new concept of the urban structure redefined the hierarchy of the Shanghai area into a three-layered model. The three-layered structure is defined by one city center oriented towards the service sector, nine decentralized “key cities” that serve as administrative centers (300,000 to 1,000,000 residents), and sixty small towns (50,000 to 150, 000 residents). Six hundred villages (2,000 residents) are also included, completing the “1-9-6-6 Model.” The idea of this plan is to re-house one million people from the city center in the outlying areas. However, it did not achieve good results and
many selected sites became ghost towns. The analysis from *Problems of megacities and construction of satellite cities – policy suggestions to the construction of our satellite cities* shows several reasons why this model failed. In the initial phase, the satellite city lacked public transportation to the city center. Thus, although many residents desired cheaper rent and were willing to move further from the city center, a more difficult commute dissuaded many from doing so. The lack of affordable and efficient public transportation prevented many people from moving to the satellite cities. Secondly, many of these sites lacked sustainable economic development. Jun Yang recommends that every satellite city should have one potential industry in order to maintain sustainable economic development. Third, there is no corresponding policy for the “floating population”, which usually resides within the informal sector. These individuals are not eligible for renting and buying the property because they are not in the local Hukou registration system, which ties a person’s rights to public services to where they are born. Thus, although new housing projects are built, the population that needs them most are not eligible to apply.

Compared to Shanghai, Beijing is successful in developing sub-centers. It has 14 sub-centers, of which the most famous is Shunyi. The reason Shunyi succeeded is that it has a strong industry background, which provided a large number of employment opportunities and promoted the rapid development of the local economy. Based on this example, recommend selecting sites that have some form of existing industry. In terms of housing, the price of housing in Shunyi is about half of the price in Beijing, so that people who cannot afford to live formally in the city center may have the ability to afford to live in Shunyi, whether it is owning or renting. In terms of land use, the government implements the policy of compensated transfer of land-use rights, which makes land and capital elements more accessible. The development of urban construction is no longer just relying on governmental investment. Different industries and investors are willing to fund for the construction of the Shunyi city center. A safe and fast public transportation system connects Shunyi to Beijing, shortening the traveling time to less than one hour to the city center of Beijing. Under such urban infrastructure, commuters who work in Beijing can still live in Shunyi. From the case of Shunyi, we know that in the construction of the polycentric model in Buenos Aires, we must have support from industry employment, public facilities, and governance.

**Zoning**

Regarding zoning regulations to support the polycentric model and efficient use of transportation, we propose the use of zoning for mixed-use establishments. As Angel states in his analysis of spatial structure in American, polycentric cities, “where most people commute to dense concentrations of workplaces in sub-centers outside the CBD or to the CBD itself, we should support light rail networks that connect these dense employment centers to each other; a dense system of public transport lines and bike lanes within these employment centers; as well as regulations that permit mixed land uses within them, [which allow] residences and workplaces to intermingle” (1). The idea then is to utilize zoning as a tool to promote efficient use of transportation and establishments, then marry these with policies that include permissive and incentive zoning. These policies would then promote denser uses of land near transportation, which can be easily complemented by developer investments in infrastructure that are built to grow. Under these auspices, bonuses like increases in project density would be given to developers in exchange for infrastructure benefits or services provided to the new development e.g. green building and affordable housing. This approach is supported in research about growing polycentric cities. The World Bank also sets aside specific conditions for the successful development of land in conjunction with these zoning policies including: the availability of nearby vacant and developable parcels, support for land use changes by local residents, complementary public
improvements like upgrades to sidewalks and utilities and the lack of physical space constraints like private land or large structures (Suzuki, Hiroaki, et all, 178).

In addition to these zoning uses, other incentives could also be used to promote investments, particularly those related to transportation and further increase the advancement of mixed-use land developments in strategic, polycentric areas. According to a recent study on transportation investment and urban land use, suggestions for this type of promotion included:

- **Conditional zoning**—allowing a new office project only if it is located within a specified radius of a high-density residential area or retail complex;
- **Incentive zoning**—allowing a certain number of additional square feet of office space for every square foot of retail space the developer provides;
- **Tax concessions**—because mixed-use activity centers tend to place less of a burden on infrastructure and can reduce vehicle miles traveled (VMT), property tax credits can be granted to developers who diversify the activities contained in their projects; and
- **Performance standards**—prior to formally applying for a construction permit, a developer can be informed of how many trip ends the project will be allotted at some point in time, thus creating an incentive to mix land uses to include housing and other uses that attract fewer trips (Forkenbrock et all, 94).

**Housing Projects**

Based on our observation and research, we found many housing projects focus on improving existing villas, such as providing pedestrian streets, adding infrastructure, and building new social housing next to original sites. Most of these projects are funded by local governments, federal governments, and international organizations such as the World Bank and the Inter-American Development Bank. According to Professor Goytia of Universidad Torcuato di Tella, the expense of installing new infrastructure within established villas costs four times than the expense of building it in the first place. Also, the improved living condition can attract future informal settlers. Thus, to follow the pattern of the polycentric metropolitan urban structure, we recommend a budget allocation emphasizing on developing new projects in selected satellite cities instead of building social housing projects and overusing lands next to original city center while unable to demolish the old villas. To compensate for the original residents, it is necessary to provide job training and employment opportunities. The original sites can be diminished or used for other urban planning purpose. Since informal settlements can be part of Argentina’s culture, it is suggested to preserve several sites to build future tourism attraction sites.

**Potential results and sustainability**

Developing sub city centers pose potential challenges. The primary challenge is the uncertainty of continuous funding since large infrastructure usually takes years to put in use. Thus, it is important to collaborate with the government and other international organizations to form a Master Planning Organization within AMBA to ensure funding. Currently, the World Bank has several housing projects in Buenos Aires. The way they fund the these transformation projects is to sell old properties and use old neighborhoods for filming. Also, we found that the common financial tools that Buenos Aires has used are microloans and subsidies, yet these projects are funded by the federal or local government without a specific housing/land use organization. Thus, land use sector should collaborate with the governance sector to make sure there will be specific and continuous funding for informal settlements.

When discussing sustainability, it is possible one may object to the idea of polycentric urban model by discussing the unintended potential consequence of gentrification. As we discussed earlier in regards to bringing in leading industries like technology companies,
developing university city or developing tourism, the great influx of capital and wealthier people may bring up the land values for properties (POV. 203).

**Transportation/Infrastructure**

**Overview of Public Transportation within AMBA**

Currently, the metropolitan area of Buenos Aires has a “more consolidated public transport system than comparable metropolitan areas internationally,” as indicated in *Leveraging the Potential of Argentine Cities: A Framework for Policy Action* (2017). However, one major issue of public transportation within the AMBA region is that it lacks the high quality and safe service from the city center to the periphery regions, which impedes the effective delivery system for goods and other services to nearby lower-density urban areas.

Moreover, the municipal governance does not react quickly and comprehensively towards overall increasing public transit demands (Muzzini, 2017). Based on the observation, we did not notice the long-term planning responding to the increasing demand. Thus, it is difficult to increase the transit coverage within the AMBA and connect among each municipality.

**Proposal**

We propose the Transit Oriented Development as a practical solution to urban growth addressing an increasing urban density growing conflcitions by supporting dense, walkable communities, which might significantly reduce the need for driving by up to 85% (Transport Oriented Development Institute, n.d.)

Transit Oriented Development (TOD) is an exciting fast-growing trend in creating vibrant, livable, sustainable communities with the creation of compact, walkable, pedestrian-oriented, mixed-use communities centered around high-quality train systems (Transport Oriented Development Institute, n.d.). TOD relies on not only light rail systems but also other transportation
vehicles. The metropolitan Buenos Aires area can be serviced by bus routes that run on existing streets and take advantage of technological advancements utilizing GPS to assist in controlling the light signals for the buses uninterrupted travel.

This option reduces the infrastructure development costs while still achieving the goal of the last mile. There are a variety of options to connect stations, including walking, bicycle, pedicab, bus, streetcar, light rail, or underground rail (Transport Oriented Development Institute, n.d.). This plan is also scalable versus light rails which are not practical due to cost, rider volume, or lack of available space.

**Develop Transit-Oriented Community (TOC) to achieve an affordable, environmentally sustainable community with a superior quality of life**

According to the 3-D hypothesis of Density, Diversity, and Design (Cervero, Kockelman, 1997), TOD can achieve a vehicle miles travel (VMT) reduction and enhance transit use. More affordable housing projects should be provided near transit stations and an increase in job opportunities around transit lines to increase population density. Meanwhile, it is crucial to advocate for a land-use mix of housing, commercial activity, supportive services, public or green space within 0.5 mile radius buffer area walking distance of transit station. TOD will re-shape the functions of public transportation and improve the congested private transit mode situation in Buenos Aires.

![Map of Buenos Aires](image)

**Design the pedestrian and bicycle friendly neighborhood**

To have greater connectivity and accessibility to other neighborhoods, it is important to have greater accessibility of bicycles to the nearest transit stations. Furthermore, people living in the informal settlements which have narrowed and cul-de-sac streets can get rid of auto vehicles but instead choose bicycle or other flexible modes of transport. Detailed solution of the first-last mile including scooters, cable cars, informal transportation modes such as minivans, motorbikes, share transit modes, and specific parking facilities shall be introduced. To keep a safe neighborhood, well-organized lines will be provided: pedestrian, bike, and other transit modes lines will be separated to increase the safety of each settlement.
Create sub-center of the city and regenerate local economy
Referring to the case study of Minami-Machida Station, Japan

In order to commute between Pilar and metropolitan Buenos Aires area, people can transfer their lines in Hurlingham. Hurlingham is the place with medium-density and high human development index, setting as a good base achieving the idea of TOD and could be chosen as the sub-center of the city.

Referring to the case of Minami-Machida Station, Japan, which shares the similar location and functions of the city, Tokyo created a sub-center by building an outlet mall there during the first stage to agglomerate the population and boost economic growth. When the line opened in 1976, the number of people living in the vicinity of the station was about 5,300. However, in 2016, the number of people living in the vicinity of Minami-Machida Station was about 37,000, which was six times higher than the initial period. The second phase of the development is to remove the outlet mall and redevelop it into a combination of green and commercial spaces. Set to open in fall 2019, the new space aims to create a more livable and safer environment.

Address the problem of “First-Last Mile” by improving infrastructure, station design, and smart technology
The metropolitan area should form an accessible street network with safe crosswalks to separate pedestrian and bikes. Block scale should be suitable for pedestrian and non-vehicle users. Signals and traffic signs should be clear to guide the pedestrian flow. To discourage private car dependency, rideshare parking zones should be a primary consideration and provided in connecting stations. Stations should also provide regulated parking spaces, bike share facilities, pick-up and drop-off locations, and bike storage spaces. The station should be clean, and the trains should be on schedule. Furthermore, more smart technology can be introduced to create smart district, such as Sensor Networks and Internet of Things, Broadband, Microgrids, Smart Parking District, smart irrigation and reuse, smart lighting, electric charging and digital information kiosks.

**Policies**

**Formalized existing informal transit modes (minivan/trolley) and add suitable transit forms according to current urban form**

Though alternative modes of transport like motorbikes and minivans are currently being used in lieu of a public transport system, they might be a practical way to solve the transportation problems within the informal settlement as addressed to their distinct urban form. Motorbikes and minivans can fit well in the narrow and cul-de-sac streets, and they are relatively affordable and accessible. Instead of completely demolishing and replacing them, regulations can be implemented to formalize these modes such as regular safety check, smog check and official driver license issue. Also, more sustainable transit mode can also be provided to residents according to current street network condition such as cable cars.

**Public-private partnership**

**Referring to the case study of Hong Kong MTR (Rail plus Property)**

The transportation infrastructure needs in China financially exceed what the government can provide. Although the government does provide and develop public funded transportation projects like highways, for example, efficiency can undoubtedly be improved with public private partnerships. The Hong Kong Government established the Mass Transit Railway Corporation (MTRC) which was initially solely owned by the government. The MTRC was partially privatized in 2000 with the sale of equity shares in a Hong Kong Stock Exchange release. The government takes the lead in designing and implementing the partnership while representing the public’s interest and controlling the fund allocations. The public-private-partnership (PPP) is tasked with finding projects that will improve the community and be attractive to business and promote future development. Revenue generation from transit fares and property development makes rail projects financially viable business projects. “The key is a business model called ‘Rail plus Property’ (R+P). For new lines, the government provides MTR with land ‘development rights’ at stations and depots along the route” (Leong, 2016, para. 5). The key to long-term success in a PPP is developing sustainability that provides benefits to all involved parties which has been proven with the R+P model. This partnership is not without risk. As stated by Mak & Mo (2005), “the transport infrastructural development is inherently uncertain as forecasts are influenced by many external factors, many of which are not directly controllable at the time the forecasts are made” (p.8). The government is tasked with continuing to explore new and existing private sector relationships that enhance growth and business opportunities. The financial sustainability exists from the government allowing MTR to generate revenue from the increase in land values following rail line construction. The exact replication of Hong Kong’s model of R+P may not be sustainable in every city, but promoting commercial and residential development along routes and transit stations is replicable.
Employment and Income

Background

The unemployment rate in Argentina averaged 9.40 percent from 2002 until 2018, reaching an all-time high of 20.80 percent in the fourth quarter of 2002 and a record low of 5.90 percent in the third quarter of 2015 (Trading Economics API, 2019). In the Buenos Aires metropolitan area, where a quarter of Argentina's 44 million population lives, the unemployment rate is 12.4 percent in 2018 (France 24: AFP, 2018). There is no correlation between economic growth and unemployment levels. While many areas face a dearth of skilled workers, a large number of unskilled workers find it impossible to land a job. The education system has done little to prepare the workforce for today’s needs in the marketplace. Claudio Flores, head of the human resources firm, said that “requests from companies seeking skilled workers in chemistry, the oil industry, metal-working, mining, engineering and software development are piling up in Argentina, but there is no one available to fill the posts” (IPS: Economy- Argentina, 2011). Additionally, women are underrepresented in the Argentinian workforce. 75% of men participate in the labor force compared to 41% of women, even though women are more highly educated (Tojeiro, 2018). This challenge of accessing child care affects women more than men, as data from 2005 in showed that “mothers provide 60% of all time spent on childcare, while fathers provide 20%” (Esquivel, 2012, p. 6). When women are kept out of the labor force, the economy overall suffers: the 2015 McKinsey Global Institute report asserted that every economy worldwide could improve by having more female workforce participation and “$28 trillion... could be added to the global GDP by increasing women’s workforce participation” (Woetzel, 2015, p. 1). In 2018, the International Monetary Fund found that equal labor force participation can “boost economic growth and productivity, support higher corporate profits, increase economic resilience, and support bank stability” (International Monetary Fund, 2018, pp. 5-7).

The American Recovery and Reinvestment Act of 2009 (ARRA) (Pub.L.111-5), also called the Recovery Act, was a stimulus package enacted by the 111th U.S. Congress and signed into law by President Barack Obama in February 2009. The rationale of this plan was based on the Keynesian economic theory that government should offset the decrease in private spending with an increase in public expenditure to save jobs and stop further economic deterioration. Furthermore, the primary objective of ARRA was to protect existing jobs and create new ones as soon as possible. Other objectives were to provide temporary relief programs for those most affected by the recession and invest in infrastructure, education, health, industry, and renewable energy. The result of this Act was that, in 2012, the IGM Forum poll conducted by the University of Chicago Booth School of Business found 80% of leading economists agreed unemployment was lower at the end of 2010 than it would have been without the stimulus. However, the approximate cost of the economic stimulus package was estimated to be $787 billion, later revised to $831 billion between 2009 and 2019. Thus, we recommend that the Argentinian government initiate a private-public partnership called the Metropolitan Buenos Aires Workforce Development Hubs through a mechanism similar to the ARRA, but with less budget spending. The purpose of this project is to create a service system that fosters a collaborative partnership between government, the private sector, non-profits, and education institutions. It provides training and employment services to low-income jobseekers in the region to lower the unemployment rate and prevent the proliferation of more villas.
Case Study- New York City

The idea for the Metropolitan Buenos Aires Workforce Development Hubs was generated from a case study of New York City. New York City established a city-wide Workforce Field Building Hub that aimed to unite and strengthen key stakeholders across the workforce development field. The Hub brings together key interdisciplinary leaders from the workforce community to identify common problems and solutions. Their primary objectives are to construct an Information Infrastructure Fund by creating a dedicated fund to support ongoing systems of information sharing and analysis; build partnerships to Support Genuine Career Pathways Capacity by investing more deeply in fewer organizations; and launching a Professional Advocacy Campaign by organizing an alliance of powerful stakeholders. This model has worked due to a coordinated, professional, and well-funded City workforce strategy that emphasizes impact over scale.

Solution

To address the employment and income challenges in Metropolitan Buenos Aires, we recommend creating the Metropolitan Buenos Aires Workforce Development Hubs, a public-private partnership between government, the private sector, non-profits, and education institutions located in Buenos Aires and at the sub centers around Buenos Aires. The Hubs will provide education and training, exchange labor market information, and support child care access to increase employment opportunities and improve the economy.

Features of the Hub (A): Exchange Labor Market information

The Metropolitan Workforce Development Hubs can provide a labor market information service that can be funded on a project-by-project or contract basis. They can also generate funds to provide multi-year analyses of the labor market information in Buenos Aires. The rationale of this analysis service is to provide private sectors/industries and other stakeholders with an overview of available labor in the city and create an information exchange system.

Features of the Hub (B): Education and Training

The Metropolitan Workforce Development Hubs include major Buenos Aires agencies and programs, nonprofit and for-profit service providers and intermediaries, labor training resources and education institutions, and employers. The Hubs can serve as a conduit between secondary education and higher education. Since the labor market has a deficit of qualified workers in certain industries (IPS: Economy- Argentina, 2011), the Education Department should encourage a portion of high school graduates to attend vocational and trade schools instead of four year universities. The government could promise grants for these students through investment from the private businesses that have a worker shortage. The government could also encourage students to
become entrepreneurs to create more job opportunities. Third, the Hubs can promote partnerships with universities and the private sector. The partnerships’ purpose will be to promote innovation, targeted skills upgrading, and education programs relevant to the needs of the private sector, encourage knowledge transfer, and develop knowledge centers. We recommend that city agencies contract with colleges to provide sector-specific training, internship, and work experience opportunities. Additionally, similar to the ongoing CeDEL program in Villa 31, the Hub can organize a Career Pathway program that helps residents identify their occupational interests, determine education and training needs, and establish an action plan for achieving career goals.

**Features of the Hub (C): Universal Child Care**

The motivation to implement child care policies is partly because it is seen as a right (Tojeiro, 2018; Sihto, 2016, p. 91), but primarily due to its poverty-reducing abilities (Misra, Moller, Strader, and Wemlinger, 2011, pp. 120 - 123) through the inclusion of women in the workforce (Misra, et. al., 2011, p. 122; Kuronen, Kroger, Anton-Alonso, Cucca, Escobedo, Jensen, and Sabatinelli, 2015, p. 127). Governments treating child care as a right might help explain why poverty levels among (single) mothers is much lower in places such as Sweden, versus countries such as the United States, where it is seen as an individual responsibility (Misra, et. al., 2011, p. 113).

Argentina has been actively working to address the challenges related to accessing child care. Policies and programs include: the Universal Child Allowance for Social Protection (Maurizio, 2014), the Educational Funding Act (Esquivel, 2012, p. 14), the National Education Act (Esquivel, 2012, p. 14), and the Child Development Centres (Esquivel, 2012, p. 15). There are numerous other programs and policies targeting child care needs in metropolitan Buenos Aires, but despite these services, many barriers remain to accessing child care. For example, “existing legislation only applies to employees of the formal sector, which means that those who work in the informal sector (most of whom are women) are unprotected by governmental legislation” and “there is a shortage of provisions for care services for children” (Tojeiro, 2018). Additionally, “the declared right to childcare services for employed women often remains trapped on paper. In addition, access to guaranteed, labour-related childcare rights has been adversely affected by labour-market flexibility and widespread informality” (Tojeiro, 2018). To supplement the work already being done and address these deficiencies, child care programs and policies in other countries can serve as inspiration.

There were commonalities that each location shared, although execution differed; the government subsidized a portion of public and non-profit child care centers, with public centers receiving the most funding and nonprofits receiving less (Sihto, 2016, p. 96; Kuronen, et. al., 2015, pp. 127 - 129; Kispeter and Yeandle, 2015, p. 102). Child care is also not completely free. All locations require some form of contributions from parents, although how payments were determined varied by location. For example, in Leed, England, parents pay for the second half a day of daycare at the center’s rates, while the government covers the first half (Kispeter and Yeandle, 2015, p. 102). While in Jyvaskyla, Finland, rates are at a sliding scale based on household income (Sihto, 2016, p. 91 – 92). All locations that were examined had some marketization of child care centers, with a mix of public, not for profit, and for-profit models (Kispeter and Yeandle, 2015, p. 108; Sihto, 2016, p. 92; Kuronen, et. al, 2015, p. 127). The idea behind allowing a mix is rooted in cost-effectiveness, as well as providing families with multiple options to select child care that they feel best meets their needs (Kuronen, et. al, 2015, p. 127; Sihto, 2016, p. 92)

**Recommendation**
We suggest a focus on full-time, public and non-profit child care funded through a combination of a minimal local tax and parent contributions. Further evaluations would be necessary to calculate expected revenue needed to cover expenditures of a public care center versus subsidizing non-profit centers. We must stress that this would not be a free service; all families will need to pay an amount towards the service based on income and a progressive rate, with low-income families paying the least, and high-income families paying the most. Fostering the development of non-profit child care centers over for-profit ventures should, theoretically, help keep costs low. Ideally, there should be a public or non-profit child care center located within each Workforce Development Hub spread throughout economic sub centers. Accessibility to child care is a determining factor for more vulnerable populations when deciding whether or not to work (or even what jobs are possible) (Chaudry, Pedroza, Sandstrom, Danziger, Grosz, Scott, and Ting, 2011, p. 120). Having access to child care at a convenient location along major transportation routes provides freedom to parents (especially mothers) in job selection (Chaudry, et al., 2011, pp. 21 - 29, & pp. 120 - 123). Most importantly, it can encourage the engagement of a large percentage of Buenos Aires’ qualified, but otherwise unemployed population. A municipality providing child care is more effective than attempting to implement a child care policy on a national scale (Fraisse and Escobedo, 2014, p. 116). Municipalities can do more for their citizens by providing child care (Fraisse and Escobedo, 2014, p. 116). The provision of care is something that does not appear to require provincial or federal oversight, so it can be contained locally. User fees and a tax would help offset costs for the local government while benefiting many families through cost reduction. We are operating under the assumption that the new tax would be low, and families would be making contributions on a progressive rate based on household income. This is similar to methods used in Jyvaskyla, Finnnland, and Terrassa, Spain. Like Terrassa, greater amounts of subsidies would go to public-run child care centers, while non-profits receive some subsidies but not as much (Kuronen, et. al, 2015, p. 127). This would be combined by using a sliding scale approach similar to Jyvaskyla in determining the amount that households pay (Sihto, 2016, p. 91 – 92); A mixture of how funding is received will allow child care to be a self-sustaining program.

Conclusion

Developing Metropolitan Workforce Development Hubs located within the Autonomous City of Buenos Aires and at the sub centers throughout the metropolitan region will provide much-needed education, training, child care support, and the ability to exchange labor market information. It will also develop and strengthen public-private partnerships, creating a more cohesive and integrated approach to addressing the employment challenges in Buenos Aires.

Governance and Institutional Design

Overview

The issue of informal settlements and their consequences is a political issue. Political will and leadership are crucial to face the challenges resulting from informal settlements: 1) scaling up social and urban integration; 2) avoiding deterioration of housing; 3) preventing future informal settlements; 4) leveraging existing land for sustainable and inclusive urban growth; and 5) using the metropolitan governance model (Beatriz Puig, World Bank, May 21, 2019). Therefore, presenting ideas and solutions to politicians to do the most good for the most people, their constituents, may allow them to see that their personal opportunity costs may actually achieve something greater for society, with life-changing impacts. Vivienda y Habitat de Pilar, LLC (Pilar Model) has a structure that stands out as a possible starting point as a solution to meet the
challenges Beatriz Puig outlined. The Pilar model is an anomaly in its financial approach and desire for a cultural and attitude shift from residents’ not paying for public services to paying for public services.

Gobernanza y Diseño Institucional

La cuestión de los asentamientos informales y sus consecuencias es cuestión política. La voluntad política y el liderazgo son fundamentales para hacer frente a los retos especialmente:
1) la necesidad de reforzar la integración social y urbana;
2) la deterioración de la vivienda;
3) la prevención de asentamientos informales en el futuro;
4) el uso de suelo para un crecimiento urbano sostenible e inclusivo y
5) la falta de gobernanza a través de el área metropolitana de Buenos Aires (Beatriz Puig, 21 de mayo de 2019).

Por lo tanto, presentar ideas y soluciones a los políticos para que hagan el mayor bien a la mayoría de las personas puede permitirles ver que sus costos de oportunidad personales pueden realmente lograr algo que mejora la sociedad y que pueda cambiar vidas. Vivienda y Hábitat de Pilar, LLC cuenta con una estructura distinta que puede servir como una idea inicial para afrontar los retos referidos por Beatriz Puig. El modelo Pilar es una anomalía en su enfoque financiero y el deseo de crear un cambio cultural y de actitud entre los residentes de pagar por sus servicios públicos.

Metropolitan Planning Organizations (MPO)

Metropolitan areas worldwide face similar challenges for transportation and land use “congestion, infrastructure costs, air pollution, greenhouse gas emissions, resource impacts, and personal costs resulting from sprawling development” (Trembley-Racicot, F.R.; Mercier, J., 2014). One opportunity to meet the challenges of informal housing and its consequences is developing metropolitan planning organizations (MPO) that would provide a macro level perspective of issues. Their purpose would be to foster focused discussions on problems and their possible solutions. They would be overseers and standard-setters of investment funds for loans.

Historically, MPOs are mandated to be formed at the national level of government, with a structure of the state/provincial governments and local/municipal governments implementing a transit plan. In Argentina, the Corporacion Buenos Aires Sur was established by municipal legislation for civil servants to address the economic disparities between the northern and southern zones of Buenos Aires, so political will exists to form collaborative organizations for the public’s benefit. Currently, there is a global “paradigm shift” from solely looking at transportation planning to integrating land use with transportation planning, as well as looking at the a “multilevel governance approach” at the regional level (Trambley-Racicot, 2014). Different case studies have shown that even with different fundamental national governmental structures, MPOs, generally, had the same goal of “efficiency and coherence” (Trembley-Racicot, 2014).

Case Studies

Yangtze River Delta
The Yangtze River Delta (YRD) lies in eastern China, covering Shanghai, Jiangsu, and Zhejiang Provinces. Even with China’s highly centralized governmental structure, China is experiencing very rapid economic development in Shanghai, one of the most urban cities in the world. This urban build-up has influenced and accelerated the growth of adjacent areas, forming a large metropolitan area, where the YRD was the sixth largest metropolis in the world by 1964 (Gottmann, 1964). The core areas of the YRD covers 16 cities at different administrative levels. The cooperation between different cities of various administrative levels not only generates economic development but also looks at social impacts, like “regional harmonious development” (Wang, 2015). To better promote regional cooperation, the government entities at different levels have initiated and implemented various metropolitan planning policies outlining the five types of “idealized city collaboration arrangements” (see Table 1 in Appendix) for the YRD: development, promotional, coordination, resource-based, and strategic (Luo et al. 2007). The MPOs in YRD, especially the partnership and examples, could function as a reference for the establishment of an MPO in Argentina. Consequently, the first expected outcome of empowering provincial and municipal level governments to jointly coordinate and share resources to implement programs and policies while working with the national government as a partner on initiative development can be achieved.

Greater Toronto and Hamilton Area

The Greater Toronto and Hamilton Area (GTHA) is comprised of “two single-tier municipalities (Toronto and Hamilton) and four regional municipalities and their 24 lower-tier municipalities. On the national level, Canada is a country within the United Kingdom’s commonwealth and, generally, has a top-down approach with less local control. For MPOs, provincial governments are financial partners with municipalities to implement growth plans by identifying regional growth centers that will allow for greater population and employment densities, managing the regional growth of an estimated 100,000 to 200,000 new residents per year. The MPO for GTHA is Metrolinx, which is a “crown agency,” and was created to complement Ontario’s growth management strategy. Metrolinx is metropolitan Toronto’s transportation agency, under the purview of Ontario’s Ministry of Transportation (Trembley-Racicot, 2014), and provides leadership in the coordination, planning, financing, and development of an integrated, multi-modal transportation network that conforms with transportation policies of growth plans, on behalf of Ontario municipalities. Metrolinx has shifted from being an organization of elected officials to non-elected officials appointed by the Minister of Transportation and contributes to transportation and land use planning with a goal of having 80% of the population within 2 kilometers of a rapid transit station by 2031 and reduce the average regional time from 80 minutes to 70 minutes. The integration of transportation and land use at the metropolitan level is pursued through official municipal plans that direct demographic and employment growth toward areas where transit is already provided, in conformity with provincial legislation, and Metrolinx’s mandate of providing better rapid transit options between growth areas.

Chicago Metropolitan Area

The Chicago metropolitan area, the third largest in the U.S., comprises of seven counties, totaling 284 municipalities. The MPO is the Chicago Metropolitan Agency for Planning (CMAP). The governmental structure in the United States has very strong philosophy of local control and federalism. The federal government is a “major financial partner” (Trembley-Racicot, 2014) and channels funds through the MPO, CMAP, which is a quasi-governmental state agency led by a 15-member board made up of county mayors, former elected officials, appointed officials by county
mayors, and stakeholders from the business and civic communities. Resolutions require 80% of votes (12 out of 15) to pass. Although CMAP does not have authority over land use and zoning, which remain under municipal jurisdiction, the implementation of Go to 2040 at the local level is facilitated by the technical assistance program funded through the U.S. Department of Housing and Urban Development’s (HUD) Sustainable Communities Regional Planning Grant Program. In Chicago, the integration primarily occurs through the implementation of CMAP’s Go to 2040, with the help of the local technical assistance program, funded by the federal government.

**Key Issues**

**Project Financing & Sustainability**

With no mortgage market in Argentina, traditional financing for housing and small businesses is extremely limited. Micro Financing may be the most effective financial instrument for residents who are considered high credit risks and, thus, would not be given a traditional loan for homes and/or businesses, except at very high and unaffordable interest rates. Initially, microfinancing was used to finance small businesses in impoverished areas as a way to bootstrap businesses so that business owners would become financially independent and break the cycle of poverty. Housing microfinance (HMF) is another vehicle for breaking the cycle of poverty and is growing as an effective tool for low-income housing financing.

The Pilar Model has used microloans to improve low-income homes for essential utilities infrastructure, without interest. These improvements are in line with HMF’s philosophy to incrementally improve homes; however, scalability of these microloans on a large scale will be challenging. To quantify scalability, academia and NGOs can assess the opportunities and the opportunity costs from public policy and public administration perspectives, respectively. Working tandemly with land-use-authority MPOs that have elected and/or appointed members, NGOs can work with public administrators and serve as watchdog groups when gauging capacity and understanding available resources based on community needs. Moreover, a broad range of stakeholders can also be advocates for housing and development policies. Therefore, a nascent “industry” for HMF can have a chance of being created, working for its interests, and balancing all the stakeholders’ needs through a watchdog mechanism.

**Planning & Measuring Effectiveness**

In the process of transforming communities and breaking the cycle of poverty in informal settlements, overall planning and progress measurements must be implemented, and opportunities for public benefits from developers must be negotiated with developers in areas such as Villa 31. Currently, implementation authority for informal housing in different districts lies with the local governments, so transformation plans and implementation standards should be standardized yet tailored to the specific communities when possible. In Villas 20 and 31, public housing is already under construction, but the overall estimate of who will be moving into the new government-provided housing and planning for the occupancy level after the completion of the construction is still absent. Insufficient data has been collected to understand whether all residents in informal housing are willing to move into new public housing. The same problem also occurs in San Martin, except with the added problem of not having a programmatic focus for their community center, for example. Before constructing the community center, there was no evaluation method to understand the effectiveness of programs, such as education for residents to learn new job skills for employment. By having an evaluation methodology, the government can receive information and understand deficiencies and determine whether there is a need to increase or decrease resources for specific programs. Having a better understanding of the budget for a community center and its uses, in a measurable way, will maximize the effectiveness of the
project. To effectively measure a project, residents must be inspired to participate in the project, whether it is moving into new government-funded homes or participating in a vocational education program. Therefore, planning and measuring program effectiveness are needed.

**Recommendations**

**Create an MPO that focuses on land use**

First, at the national governmental level, as a matter of public policy, legislators should enable metropolitan planning organizations by enacting legislation to provide planning benchmarks and deliverables and allow stakeholders to hold MPOs accountable for the funding and projects. MPO’s are given the authority to directly influence the distribution of funding to planning organizations, giving the MPO’s legitimized fiscal power. MPO’s are able to create a “happy medium” of top down and bottom up planning between federal and local governments. Second, one the MPO is created through federal problem, and that would enable stimulation in industries needed to support developing low-income housing.

**Financial sustainability**

Once an MPO is created, prioritize issues to ensure sustained financial viability of the project. There are three opportunities, namely create industry value chain, public benefits and local economic development.

*Create Industry Value Chain*

First, it is crucial to broaden the institutional platform for support of small credits, as a matter of federal public policy, to stimulate the value chain of HMF as an industry. Business sectors, such as the building and trades industries, may benefit from small credits through more services rendered and, thus, create more jobs. Second, engaging stakeholders to package HMF as a value proposition around the “industry” of HMF could leverage resources, range of products, and services and further support low-income housing policies, which is economically and financially beneficial for these businesses.

*Public Benefits*

For informal settlements, especially Villa 31, developers have an opportunity to provide public benefits, such as providing infrastructure like gas pipelines and sewage lines, through negotiations with the appropriate government agency as a condition of development, as a condition of approving building permits. By having these negotiated contracts between local government and developers, informal settlements will slowly become formalized with services provided by public agencies and paid for by residents. Therefore, developers have an important role in helping to provide essential services by working collaboratively with local and regional government.

*Local Economic Development*

Program and project sustainability can happen with a strong revenue base and cash flow. Along with a new model, such as the Pilar model, there are other opportunities for revenue sources through local economic development. With proper and thoughtful development, Villa 31 can potentially be a tourist destination highlighting art, culture, and food in Buenos Aires. With an increase in tourism in Villa 31, revenues could be used to build new infrastructure and maintain and fix existing infrastructure. One program that Professor Goytia mentioned was that the Museo
Nacional de Bella Artes is looking to Villa 31 as an official place to highlight community art (Professor Cynthia Goytia, Torcuato di Tella University, May 25, 2019). Collaborative partnerships between local government and nonprofits focusing on business, tourism, culture, and art should be encouraged to create economic development opportunities that can leverage the Pilar Model for financial sustainability and self-sufficiency.

**Conclusion**

A land-use MPO in Argentina could produce the following outcomes: 1) empowering provincial and municipal level governments to jointly coordinate and share resources to implement programs and policies while working with the national government as a partner on initiative development and 2) elevating the national government to focus mainly on constitutional implementation by ensuring that all Argentines have a home.

**Final Conclusion**

By providing information about polycentric urban models, transit oriented development, workforce development hubs, and metropolitan planning organizations adapted to what we have learned about AMBA, we have equipped the stakeholders that we met with over the course of this lab with potential solutions that address issue of informal housing in Buenos Aires. We have enjoyed our time learning about the multi-faceted layers of this thriving metropolis, and are looking for to applying the valuable hands-on knowledge that we have gained back to USC with us.
Works Cited


