



Land Governance in an Interconnected World

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INFORMALITY IN THE BRAZILIAN HOUSING MARKET: THE CASE OF THE METROPOLITAN REGION OF CAMPINAS - SP (RMC)

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Abstract

This article is a result of a research project, from a cooperation between the IDB and UNICAMP and its object is the housing and the families with less than seven minimum salaries of the metropolitan region of Campinas.

The main question of this article is: does the level of formality or informality in the housing of families have clear relation with: family's wealth, family's housing expenses, distance from center, plot size, plot prices and zoning?

The field survey has a sample of 643 families, statistically significant to 93% from nine municipalities, based on their population with less than seven minimal wages.

The article will be subdivided in 4 parts: a small literature review on types of housing illegality; the field work methodology; main data presentation; analyses and policy propositions.

Key Words:

Urban Land Markets; Land Governance; Formality and Informality; Brazil; São Paulo;



Introduction

Brazil is known internationally for having a very unequal income distribution and many conflicts around land issues. One of its expressions is in the housing development dynamics in all parts of the country that generates several orders of problems. The amount of irregular housing, in the most different forms, in Brazilian cities, despite being noticeable through favelas and land conflicts, is not only countless, but also has received little attention from public policies in the recent years.

In July 2017 the new regularization law no. 13.465 was approved, having as main proposition the regularization of rural and urban possessions on consolidated areas. For the rural areas, the law obligates the national government – especially INCRA - to expand the successful Amazonian Terra Legal program to the whole of the country. In urban areas, it consolidated sparse legislations from *Minha Casa minha vida*, justice decisions (*provimentos*) to make it possible to give out titles in municipalities that are interested in that. But still the amount of people that are going to be beneficiated by that is unknown as the amount of informal/irregular/illegal urban housing and of rural plots is unknown. Therefore, the first aim of this article is to better define who will be the beneficiaries of this legislation as literature makes a large confusion about what is each of the previews. After that it will quantify the amount of each of them based on estimations from the Região Metropolitana de Campinas and some of its municipalities.

This article is a result of a research project, from a cooperation between the Inter-American Development Bank (IDB), the University of Campinas (UNICAMP), through the Land Governance Group (GGT), with the support of the team of research from Toledo and Associates (T & A) for field surveys and aims to shed light on the subject. Its object is the housing and the families with less than 7 minimum salaries of the metropolitan region of Campinas. The main objective is to assess whether urban zoning has any impact on the definition of the type of property to be acquired (whether regular or not) according to available income.

The field survey has a sample of 643 families, statistically significant to 93% from nine municipalities from the Metropolitan region of Campinas, based on their population with less than seven minimal wages. Besides the more direct questions a great amount of information was obtained that can be very useful for many issues related to housing.

The main question of this article is: does the level of formality or informality in the housing of families from the Metropolitan region of Campinas have clear relation with: family's wealth, family's housing expenses, distance from center, plot size, plot prices and zoning?



General Characteristics of the Campinas Metropolitan Region (RMC)

The Campinas Metropolitan Region has 20 municipalities and was created by the São Paulo state complementary law 870 of June 19, 2000. The region presents a strong economic dynamic and represents 1.8% of the Brazilian GDP or 7.81% of the São Paulo state GDP – accounting for R\$ 105 billion. According to the official census (from IBGE), in 2016 the RMC has 3.1 million inhabitants, distributed in a total surface area of 3,791 km². It is the second largest metropolitan region of São Paulo state, the tenth largest metropolitan region of Brazil, is part of the Expanded Metropolitan Complex – a megalopolis that in 2008 represented 12% of the Brazilian population or 30 million people.

The RMC is composed of the following municipalities: Americana, Arthur Nogueira, Campinas, Cosmópolis, Engenheiro Coelho, Holambra, Hortolândia, Indaiatuba, Itatiba, Jaguariúna, Monte Mor, Morungaba, Nova Odessa, Paulínia, Pedreira, Santa Bárbara d'Oeste, Santo Antônio de Posse, Sumaré, Valinhos e Vinhedo. The map 1, below, shows the RMC and its 20 municipalities:

Figure 1 - Municipalities from Metropolitan Region of Campinas



Source: EMPLASA, 2016



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Figure 2 - Metropolitan Region of Campinas in perspective



Source: Wikipedia, 2017

The table below represents the collection of secondary data from official sources for the 20 municipalities that are grouped in the Metropolitan Region of Campinas (RMC), also including data for the state of São Paulo for comparison



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Table 1- Secondary data panel for the Campinas Metropolitan Region

| Municipality | HDI (for 2010) | GDP (R\$, thousands) | GDP per capita (R\$) | Population density (pop./km2) | Population | Area (km2) | Permanent Private Households |
|---------------------------|----------------|----------------------|----------------------|-------------------------------|------------|------------|------------------------------|
| Year | 2010 | 2013 | 2013 | 2013 | 2013 | 2014 | 2010 |
| Americana | 0.811 | 9,890,709 | 45,379 | 1,627.4 | 217,960 | 133.91 | 75,212 |
| Artur Nogueira | 0.749 | 798,659 | 17,026 | 263.5 | 46,907 | 178.02 | 15,900 |
| Campinas | 0.805 | 51,347,711 | 46,174 | 1,399.8 | 1,112,050 | 794.57 | 383,656 |
| Cosmópolis | 0.769 | 1,229,257 | 19,641 | 404.7 | 62,587 | 154.66 | 20,966 |
| Engenheiro Coelho | 0.732 | 351,645 | 20,421 | 156.6 | 17,220 | 109.94 | 5,895 |
| Holambra | 0.793 | 603,033 | 48,999 | 187.7 | 12,307 | 65.57 | 4,036 |
| Hortolândia | 0.756 | 9,202,710 | 45,174 | 3,271.0 | 203,717 | 62.41 | 65,132 |
| Indaiatuba | 0.788 | 10,303,802 | 47,776 | 691.1 | 215,670 | 311.54 | 72,822 |
| Itatiba | 0.778 | 4,483,242 | 42,042 | 330.9 | 106,638 | 322.27 | 35,784 |
| Jaguariúna | 0.784 | 6,163,748 | 128,954 | 338.0 | 47,798 | 141.39 | 16,230 |
| Monte Mor | 0.733 | 2,777,872 | 53,381 | 216.5 | 52,039 | 240.56 | 16,953 |
| Morungaba | 0.715 | 405,855 | 33,223 | 83.2 | 12,216 | 146.75 | 3,942 |
| Nova Odessa | 0.791 | 2,404,550 | 45,048 | 718.2 | 53,378 | 73.78 | 17,930 |
| Paulínia | 0.795 | 12,153,539 | 135,777 | 645.3 | 89,511 | 138.77 | 29,649 |
| Pedreira | 0.769 | 941,568 | 21,828 | 397.2 | 43,135 | 108.81 | 14,279 |
| Santa Bárbara d'Oeste | 0.781 | 5,129,706 | 28,067 | 674.7 | 182,764 | 271.03 | 60,307 |
| Santo Antônio de Posse | 0.702 | 687,017 | 32,220 | 138.5 | 21,323 | 154.13 | 7,044 |
| Sumaré | 0.762 | 11,327,493 | 44,560 | 1,656.1 | 254,205 | 153.46 | 85,602 |
| Valinhos | 0.819 | 4,970,627 | 43,979 | 760.6 | 113,022 | 148.53 | 38,903 |
| Vinhedo | 0.817 | 7,137,263 | 105,116 | 832.1 | 67,899 | 81.60 | 22,730 |
| Metropolitan Region (RMC) | - | 141,904,150 | 48,595 | 801.1 | 2,920,130 | 3,791.70 | 992,972 |
| São Paulo state | 0.783 | 1,708,221,390 | 40,379 | 170.4 | 42,304,694 | 248,222.00 | - |

Source: SEADE, 2016. IBGE, 2010.

When analyzing the secondary data for all the 20 municipalities that are part of the Campinas Metropolitan Region (RMC), it can be noted that Vinhedo and Valinhos have the highest HDI (0.817 and 0.819) while Santo Antônio de Posse and Morungaba have the lowest (0.702 and 0.715).

In terms of per capita GDP (R\$, current), Paulínia and Jaguariúna are the best placed municipalities (R\$ 135,777 and R\$ 128,954) and Arthur Nogueira the worst placed (R\$ 17,026) – while the average for São Paulo state is R\$ 40,379 and the average for the RMC is R\$ 48,595.



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In terms of total population, the RMC represents 6.9% of the São Paulo state total population, with 2,920,130 inhabitants. The city of Campinas per se represents 38% of the RMC's population, with 1,112,050 inhabitants. Besides Campinas, the other two largest municipalities in terms of population are Sumaré (254 thousands) and Americana (217 thousands). The smaller cities in terms of population are Morungaba (12.2 thousands) and Holambra (12.3 thousands).

In terms of population density, the average for São Paulo state is 170.4 people per km² while the average for RMC is 801 people per km². Hortolândia stands out with a very high population density (3,271 people per km²), followed by Sumaré (1,656 people per km²) and Americana (1,627 people per km²). The lowest densities go for Morungaba (83 people per km²) and Santo Antônio de Posse (138 people per km²).

Types of informality

For that, first, there was a need to define clearly all types of illegality and irregularity as the literature on the issue is not accurate. For the purpose of this study in the table 1 is showed that the formal properties are defined as those that are duly registered at the properties registry notary. To obtain register at the properties registry notary the plot and the house has to accomplish all the rulings from municipality and, have a clear owners chain at the notaries itself. Both processes quite burocratic and costly, so not always very easy to achieve.

Table 2 - Classification to define legality

| Degree of Formality | Existing Types of Documents |
|---------------------|--|
| Formal | Deed registered in the registry office |
| Semi-formal | Preliminary purchase contract registered in the notaries office Definitive purchase contract registered in the notaries office |
| Informal | Provisional purchase contract not registered in the notaries office Public concession permit Adverse possession (receipts and/or legal fragile vouchers) None of the above – normally squatters of public or private land; sometimes occupation of protected areas |



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The semiformal properties are those that present some registered documentation (purchase and sale contract or deed) recorded at the notes notaries offices. The Brazilian reality of difficulties to register, makes some wealthier people are also at the semi-formal condition. The owner of the house has not register it at the registration office for the next main reasons:

- a) Lack of money or interest in registering¹
- b) Lack of a clear owners chain of the plot or of the neighborhood;
- c) House does not accomplish to the rules of the neighborhood
- d) Neighborhood does not accomplish with city zoning;

The houses in other cases were classified as irregular for several reasons: from not registered contracts, irregularities to the ruling from the municipality and/or absence of clear documentation from the plot of land.

Regarding the degree of formality of real estate, the result as showed in table 2, although not surprising, is quite significant: only 27.1% of the properties are formal in the metropolitan region. That is, more than 72% of the properties in the MRC have some type of irregularity. From those, 35.7% are semiformal, that is, they did not register their property in the property register office (notaries), despite having a purchase and sale agreement or deed registered in the notes notary's offices. Moreover, from the total 37.24% are completely irregular, as they have no legal ownership documentation.

Table 3 - Household classification by legality of plots – RMCampinas - 2017

| Level of Formality | Number of Households | Total (%) | Plot size m2 | Distance from Campinas center (Average) Km |
|--------------------|----------------------|-----------|--------------|--|
| Formal | 209 | 32,5 | 269,56 | 14,59 |
| Semi-formal | 286 | 44,5 | 238,33 | 20,21 |
| Irregular | 148 | 23,0 | 170,61 | 12,29 |
| | 643 | | | |

Source: Primary data obtained by UNICAMP/TOLEDO/IDB

¹ The World Bank Doing Business 2018 estimates that in Brazil 14 steps, taking 25 days and 3.6 % of the value of the property are needed to register it.



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From table 2 can also be seen that at the RMCampinas the formal land market has the biggest plots of land, with an average of near to 270 m², while the semi-formal has around 238 m² and the irregular have 170 m². As expected, the more formal the larger the plots.

Another information that can be noticed from the same table is that semi-formal are in average the farthest, more than 20 km, away from the center of Campinas, while the irregular ones are the nearest. The formal ones are in average 14,6 km away from the center. Therefore, we obtain two preliminary inferences: the city is quite spread out and irregularity or informality occurs all around the city of Campinas.

To understand a bit better the kinds of semi-formality and informality (or irregularity), table 3 opened up and shows the documents the householders of the Metropolitan region said that they had to support their ownership. First important information is that rather larger amount 26,7 % have a purchase contract (contrato de compra e venda) registered only at the notes notary and not the official contract (escritura) as it should be².

The completely illegal households are 23 % of the sample, but the larger part of it 14,2% are the ones that may have the possibility to get in to formality with the new law.

Table 4 - Kinds of documentation related to ownership in the RMC in 2017

| Degree of formality | Kind of documentation | n | % |
|---------------------|---|-----|------|
| Formal | deed registered in the registry office | 209 | 32,5 |
| Semiformal | Definitive purchase contract registered in the notaries office (escritura de compra e venda) | 115 | 17,9 |
| Semiformal | Preliminary purchase contract can be registered in the notaries office (Contrato de compra e venda) | 172 | 26,7 |
| Informal | Adverse possession (receipts and/or legal fragile vouchers of purchase) (contrato de gaveta) | 91 | 14,2 |
| Informal | Collective housing | 2 | 0,3 |

² The main reason for not definitive purchase contract (escritura) is because at this moment the transference tax is charged. This tax aliquot of this tax is defined by each municipality and vary from 1 to 8% of the total value of the property.



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| | | | |
|----------|--|-----|-------|
| Informal | Squatters of public or private land, does not attend zoning or construction is not wayved or occupation of protected areas | 54 | 8,4 |
| Total | | 643 | 100,0 |

Source: Primary data obtained by UNICAMP/TOLEDO/IDB

Economic conditions of owners and informality

Based on the same classification several analyses were made to relate the degree of legality to the income and life standard of the inhabitants of the MRC with up to seven minimum income wages. With regard to income, it can be seen that the formal ones have higher income, reaching in average 44% higher than the inhabitants of the irregular properties. The income of the inhabitants of semiformal real estate is on average 23% above the residents of irregular real estate.

Regarding housing expenses, the sample results confirm the theory, insofar as those with higher income have lower housing costs. Household expenses associated with housing in the MRC represents 26% of total family income in irregular households, 24% for semiformal and 14% in formal housing, this pattern is observed in almost all municipalities analyzed, but was detailed in the full study.

The literature on the occupation dynamics of the Sao Paulo metropolitan area, especially Maricato, Goldstain and Rolnik indicates that the lower income populations are "pushed" to the peripheries, which would be reflected in a significant difference between formal and informal real estate and between the more central and the farthest from the center of Campinas. The result of the formalization is that the differences between the values of formal and the semi-formal is 14,5 %. The difference between the irregular and the semi-formal is higher as it reaches 27,8 %. But the difference between the irregular and the formal plots is still much higher reaching 46,2 %.

Should be noted that the housing expenditure has percentage of the total income is quite low in the formal and irregular housing (17,2% and 18,1% respectively) and higher in the semi-formal housing, with 25,2%.



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Table 5 - Economic characteristics of households by type of legal situation RMCampinas - 2017

| Formality | Number of Households | Family Expenditure (R\$/ family) | Housing Expenditures (R\$ /family) | Housing exp./Family Income | Neighbourhood Real Estate Offer (R\$/m ²) |
|-------------|----------------------|----------------------------------|------------------------------------|----------------------------|---|
| Formal | 209 | 3.606,52 | 619,41 | 17,2% | 750,01 |
| Semi-formal | 286 | 2.961,48 | 746,60 | 25,2% | 655,82 |
| Irregular | 148 | 1.930,57 | 349,14 | 18,1% | 513,07 |
| Average | | 2.832,86 | 571,72 | | |

Source: Primary data obtained by UNICAMP/TOLEDO/IDB

The municipalities such as Indaiatuba and Vinhedo will be analyzed separately as they have semi-formal settlements with higher prices, as they are areas for high-level condominiums for people from Sao Paulo.

The results showed that there is only a slight relation between zoning and formality/informality. In all zones, the different kinds of formality were present. Another kind of information obtained that could give power to this argument: the vast majority of the respondents do not know how to identify the zones and rules that apply to their respective area. Nevertheless, these are all questions to be better analyzed with the information obtained and will be present at the article.

A View on the municipalities of the Metropolitan region of Campinas



But when looking at the same information for all the municipalities³ from table 3 of the region metropolitan de Campinas, the one that jumps up is that Campinas is the city with most formalized properties, more than 40 %, while the other municipalities have around 30 %. And the municipalities off Americana, Hortolandia, Paulinia, Valinhos e Sumaré have less than 25,4 % of formal properties. So if for the whole of the RMC the average of formalization is already quite low, when looking at these municipalities the situation is still quite worse.

On the other hand the amount of informality or irregularity is not that high in average, but Campinas and Sumaré have most incidence with respectively 38,1% and 26 % of its samples in that situation. The next highest municipality with irregular or informal housing is Hortolandia, joining Sumaré both typical dormitory cities from Campinas. So it seems that the expansion of the poor obtaining housing will occur in an irregular way, first as illegal than semi-formal. On the same table 3 can be seen that the semi-formality is the highest in the municipality of Americana with 72% of the sample in that condition, but Paulinia and Hortolandia comes next with 69,2% and 62%. Moreover, all other municipalities, with the exception of the municipality of Campinas have more than 54 % of semi-formal households.

To conclude the issue of registration it is necessary to highlight that the semi-formality and the informality sum up to 77% in the RMC and more than 90 % in the municipalities of Vinhedo, Paulinia, Indaiatuba and Americana. That shows that there is still a long way to have a systematic registration of properties in the country in order to build up for an integrated cadaster.

The table 3 also shows that the next municipalities accompanies the regional tendency of having the semi-formal properties the most distant from the center: Valinhos e Hortolandia. Most municipalities, Americana, Indaiatuba, Paulinia and Campinas have the formality in the expected ways, that is the formal the nearest, the semi-formal a bit farther away and the informal the most distant. On the other hand, the municipalities of Itatiba, Santa Barbara do Oeste, have a result the less expected, that is the most distant are the formal ones, then the semi-formal and the last are the irregular ones. Those results surely are influenced by the issue that not all municipalities are that linked to Campinas, so their formality or informalities are more or less distant from their centers and not from the center of Campinas.

Table 3 also has data on urban plots land prices per square meter, and the aim is to observe the relation between formality and those prices. The first important information from the table is that the prices do not differ much between municipalities and with the average RMC price as could be expected. The highest

³ These results by municipality are here more as an indication, analyzed very carefully, as the sample for each of them is quite small.



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prices are in Vinhedo, Indaiatuba and Paulinia all above R\$ 814/m². The lowest are in Paulinia and in Sumaré with respectively R\$ 356 and R\$ 357 per square meter.

Regarding the differences between the prices of the most central ones (Campinas) in relation to the most distant ones, the differences are not so great and the average price found in the region is R\$ 621.46 per m². The plots have small price differences between the municipalities, but the largest are between the non-formal subdivisions of Hortolândia and Sumaré, characteristically dormitories cities of Campinas, corroborating the view of the above-mentioned authors.

Table 6 - Formality Types and indicators - municipalities of the RMC

| Municipality | Type of Formality | n. observations | % do total | Distance Campinas center | Price R\$/m ² closest offer |
|--------------|-------------------|-----------------|------------|--------------------------|--|
| Americana | Formal | 10 | 20,0% | 32,51 | 726,18 |
| | Semi-formal | 36 | 72,0% | 32,92 | 677,13 |
| | Irregular | 4 | 8,0% | 34,15 | 546,75 |
| Indaiatuba | Formal | 22 | 36,1% | 26,92 | 859,43 |
| | Semi-formal | 35 | 57,4% | 28,42 | 836,14 |
| | Irregular | 4 | 6,6% | 29,67 | 647,25 |
| Sumaré | Formal | 16 | 25,4% | 20,21 | 472,23 |
| | Semi-formal | 34 | 54,0% | 17,92 | 483,91 |
| | Irregular | 13 | 20,6% | 19,08 | 357,85 |
| Campinas | Formal | 108 | 40,0% | 5,3 | 773,43 |
| | Semi-formal | 59 | 21,9% | 7,3 | 634,4 |
| | Irregular | 103 | 38,1% | 7,51 | 522,04 |



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| | | | | | |
|----------------------|-------------|-----|-------|-------|--------|
| Hortolândia | Formal | 11 | 22,0% | 14,66 | 598,93 |
| | Semi-formal | 31 | 62,0% | 14,9 | 594,94 |
| | Irregular | 8 | 16,0% | 13,35 | 626,29 |
| Paulínia | Formal | 6 | 23,1% | 18,15 | 819,76 |
| | Semi-formal | 18 | 69,2% | 19,11 | 680,28 |
| | Irregular | 2 | 7,7% | 20,7 | 356 |
| Sta Barabara D'oeste | Formal | 14 | 31,8% | 39,25 | 669,64 |
| | Semi-formal | 24 | 54,5% | 37,87 | 760,04 |
| | Irregular | 6 | 13,6% | 37,5 | 469,83 |
| Itatiba | Formal | 7 | 26,9% | 26,94 | 661,29 |
| | Semi-formal | 15 | 57,7% | 25,56 | 505,99 |
| | Irregular | 4 | 15,4% | 23,37 | 429,5 |
| Valinhos | Formal | 6 | 22,2% | 10 | 907,08 |
| | Semi-formal | 19 | 70,4% | 10,46 | 719,95 |
| | Irregular | 2 | 7,4% | 7,55 | 660 |
| Vinhedo | Formal | 9 | 34,6% | 16,45 | 951,91 |
| | Semi-formal | 15 | 57,7% | 15,85 | 675,07 |
| | Irregular | 2 | 7,7% | 16,1 | 450 |
| RMC | Formal | 209 | 32,5% | 14,59 | 750,01 |
| | Semi-formal | 286 | 44,5% | 20,21 | 655,82 |
| | Irregular | 148 | 23,0% | 12,29 | 513,07 |



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| | | | | | |
|--|---------|--|------|-------|--------|
| | Average | | 100% | 16,63 | 654,30 |
|--|---------|--|------|-------|--------|

Source: Primary data obtained by UNICAMP/TOLEDO/IDB

Looking at the relationship between level of formality and prices, most municipalities go along with the average RMC prices tending to decline from the formal to the irregular. This happens in: Americana, Indaiatuba, Campinas, Paulinia, Itatiba, Valinhos and Vinhedo. Only Sumaré and Horolandia do not accompany that tendency, the most characterized dormitory municipalities.

Only in the municipalities of Campinas and Sumaré this value was higher, the prices of lots in formal lots are respectively 48 and 93% higher than in the informal ones.

Finally, some other relationships between the data that have been identified are presented in the complete study, as well as proposals regarding possible public policies to mitigate the phenomenon of informality in the MRC.

References

CUNHA, João Marcos Pinto da (2016). Aglomerações urbanas e mobilidade populacional: o caso da Região Metropolitana de Campinas. *Revista Brasileira de Estudos Populacionais*, v. 33, n. 1, jan-abr 2016. Rio de Janeiro. DOI <http://dx.doi.org/10.20947/S0102-309820160006>.

CUNHA, T. A. da. Tijolo por Tijolo: Caracterização das condições de infraestrutura do entorno domiciliar dos municípios da RM de Campinas e suas possíveis correlações com a migração intrametropolitana. *Cadernos de Pós Graduação em Arquitetura e Urbanismo (Mackenzie. Online)*, v. 12, p. 21-48, 2013.

EMBRAPA Monitoramento por Satelite: “Atlas Escolar da Região Metropolitana de Campinas”. Campinas, SP - 2013. 1ª edição. Disponível em: <>. Acessado em:

FERREIRA, M. P. et al. Uma metodologia para a estimação de assentamentos precários em nível nacional. 2007. Disponível em:
<<http://www.centrodametropole.org.br/v1/pdf/2007/CEMassentMCidades.pdf>>



FUNDAÇÃO JOÃO PINHEIRO. Centro de Estatística e Informações. Déficit habitacional no Brasil / Fundação João Pinheiro, Centro de Estatística e Informações. 2. ed. - Belo Horizonte, 2005. 111p.

HEIKKILA, E. Lin, L (2014), “An integrated model of formal and informal housing sectors”, *Annals of Regional Science*, vol. 52(1), March. Published online in 2013.

HEIKKILA, E. 2016. Evaluating the Equity and Efficiency Impacts of Land Use Regulations: Theoretical Framework and Empirical Approach. Report prepared for Inter-American Development Bank. Washington. DC.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). Perfil dos municípios do Brasil, 2010.

INSTITUTO BRASILEIRO DE GEOGRAFIA E ESTATÍSTICA (IBGE). Pesquisa Nacional por Amostra de Domicílios - PNAD/IBGE. Rio de Janeiro, RJ: O instituto, 2009.

MASTRODI, Josué; ZACCARA, Suzana Maria Loureiro Silveira (2016). On the promotion of the right to housing: a study based upon urban policies. *Revista de Direito da Cidade*, vol. 8, n.1, DOI: 10.12957/rdc.2016.18518.

MINISTÉRIO DAS CIDADES. Guia para o Mapeamento e Caracterização de Assentamentos Precários. Brasília: Ministério das Cidades Primeira impressão: Maio de 2010. 82 p., ISBN: 978-85-7958-015-4

ROLNIK, Raquel; PEREIRA, Alvaro Luis dos Santos; MOREIRA, Fernanda Accioly; ROYER, Luciana de Oliveira; IACOVINI, Rodrigo Faria dos Santos; NISIDA, Vitor Coelho (2015). O Programa Minha Casa Minha Vida nas regiões metropolitanas de São Paulo e Campinas: aspectos sócio-espaciais e de segregação. *Cadernos Metropolitanos*, São Paulo, v. 17, n. 33. DOI <http://dx.doi.org/10.1590/2236-9996.2015-3306>.

SECRETARIA DE HABITAÇÃO DE CAMPINAS (2011). Plano Municipal de Habitação de Campinas. Prefeitura Municipal de Campinas, Campinas: 2011.



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SILVA, Jonathas Magalhães Pereira da (2011). Social housing and the municipal laws from Campinas Metropolitan Region. *Ambiente Construído*, Porto Alegre, v. 11, n. 3, jul-set 2011.

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