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HOUSING AND LIVING CONDITIONS IN JORDAN—2010-2016

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Abstract

This paper uses a new and original dataset, the Jordan Labor Market Panel Survey (JLMPS) of 2010 and 2016 to study living and housing conditions in Jordan. In 2016 the JLMPS oversampled regions with high concentration of refugees which enables us to investigate the living and housing conditions of refugees who live out-of- and in-refugee camps. The paper documents changes in housing characteristics for Jordanian households over the time period 2010-2016. It then compares the living and housing conditions in 2016 for out-of- and in-camp refugees to that of locals. The paper shows an improvement in the living and housing conditions for local households (both established and newly-formed) with the share of home ownership and the share of households living in private houses, relative to flats, increased between 2010 and 2016. The paper further shows that while the majority of refugees live out-of-refugee camps, those who live in-camps are doing much worse in terms of living conditions manifested mainly in smaller living areas, worse access to public facilities, and less ownership of durable assets.

JEL Classifications: O18, R21, R23

Keywords: Housing, Refugees, Refugee Camps, Public Facilities, Ownership of Assets, Jordan.

ملخص

تستخدم هذه الورقة مجموعة بيانات جديدة ومبتكرة وهي مسح الفريق لسوق العمل الأردني لعامي 2010 و2016 لدراسة ظروف السكن والمعيشة في الأردن. في عام 2016، قام المسح بأخذ عينات كبيرة من المناطق ذات الكثافة العالية من اللاجئين والتي تسمح لنا بتقصي ظروف المعيشة والسكن للاجئين الذين يعيشون في داخل نطاق مخيمات اللاجئين وخارجها. وتوثق الورقة التغييرات في خصائص الإسكان للأسر الأردنية خلال الفترة 2010-2016. ثم تقارن ظروف المعيشة والإسكان في عام 2016 بالنسبة للاجئين خارج المخيمات وداخل المخيمات بالسكان المحليين. تُظهر الورقة تحسناً في ظروف المعيشة والسكن للأسر المعيشية المحلية (سواء كانت أسر تكونت من فترات طويلة أو أسر حديثة) قياسا بحصة ملكية المنازل ونصيب الأسر المعيشية التي تعيش في مساكن خاصة، والشقق، فقد زادت حصتها بين عامي 2010 و2016. ويظهر كذلك أنه في حين يعيش غالبية اللاجئين خارج نطاق مخيمات اللاجئين فإن الذين يعيشون في المخيمات يعانون أكثر من حيث ظروف المعيشة التي تتجلى بشكل رئيسي في مناطق صغيرة للمعيشة، وقدر أقل من الوصول إلى المرافق العامة، وملكية أقل للأصول الدائمة.

1. Introduction

Jordan's housing market is generally characterized by being flexible compared to other markets in the MENA region with relatively high proportion of rentals (Assaad et al. 2017). One reason for this is the existence of effective mortgage markets, which are mainly regulated by the government. These markets left the financial sector exclusively as a lender, and generated more rental housing available than homeownership (Beidas-Strom et al. 2009; Erbaş and Nothaf 2005). However, there has been a recent tendency of public policies towards upgrading informal settlements, and gradually changing from public housing to market-oriented strategies. These policies had implications for the share of newly married couples forming households, which increased from 40% between 1965-1969 to 80% between 2005-2010 (Assaad et al. 2017). This was also accompanied by severe supply shortages in housing (Francis 2015).

The Syrian conflict that started in 2011 between the government and several other groups and forces has caused a massive domestic as well as regional displacement of Syrian refugees. According to Ostrand (2015), by 2014 the amount of displaced Syrians within Syria was 7.6 million people, and another 3.7 million Syrians had fled the country. Most of those who have left the country have looked for shelter in neighboring countries like Turkey, Lebanon and Jordan. Despite the long history of Jordan as destination for refugees, the severity of the influx could have implications for the housing market in Jordan.

This paper aims to document changes in housing and living conditions for Jordanian households (both established and new) over the period 2010-2016 using data from the JLMPS 2010 and 2016 waves. Using data from the 2016 wave, which oversamples areas with high concentration of refugees, the paper compares housing and living conditions of refugees and locals differentiating between in-camp and out-of-camp refugees.

The paper finds evidence that housing conditions for Jordanians have improved over the time period 2010-2016. The share of homeownership increased from about 74% in 2010 to 81% in 2016, and the share of Jordanians who live in private houses relative to flats increased from 35% to 48%. However, this did not reflect a substantial increase in house areas and areas per household member which remained more or less constant over this time period. Similar patterns are there for the newly formed households.

The paper shows that 91% of refugees live outside of camps, and only 9% live in refugee camps. Housing conditions for out-of-camp refugees are quite similar to that of locals and other foreigners, whereas, in-camp refugees suffer from much worse conditions. The paper further shows that refugees' heads of household, on average, have low levels of education, with more that 50% reporting less than basic education level.

The structure of the paper is as follows. The next section will discuss the data and its unique features. Section 3 will focus on the housing conditions for locals in 2010 and 2016. Section 4 will look at the housing conditions for refugees using the 2016 JLMPS wave. The main findings are summarized in Section 5.

2. Dataset

This paper uses data from the Jordan Labor Market Panel Survey (JLMPS) first wave in 2010 and the new wave in 2016. The survey was designed and administered by the Economic Research Forum (ERF) in cooperation with the Department of Statistics in Jordan (DoS).[2] The JLMPS involves

[2] The JLMPS 2016 data are publicly available as of May 2018 from the Economic Research Forum Open Access Microdata Initiative at: http://www.erfdataportal.com/index.php/catalog. To learn more about the JLMPS 2016 data, see Krafft & Assaad (2018).

gathering detailed information on demographic characteristics (e.g. employment status, household composition and income, parental education, education history, etc.). More importantly, for the purpose of the current study, it contains detailed information on household housing and living conditions including information on the type of occupancy (i.e., ownership vs. rent), type of housing (i.e., private houses vs. flats), areas of the dwelling, access to infrastructure (e.g., public water, public sewage, etc.) and quality of the dwelling (type of building materials, etc.) The survey covers 4,778 Jordanian households in 2010 and 6,080 in 2016.

The 2016 wave of the survey oversampled respondents in areas with a high concentration of refugees. This provides detailed housing information for 1,047 refugee households.[3] All over the data analyses, we apply the sample weights to make sure that gathered data are representative of the general population.

3. Jordanian households living conditions

In this section we investigate the housing and living conditions for Jordanian households in 2010 and 2016, and document the changes that happened over these two points of time. Figure 1 shows the type of occupancy for Jordanian households in 2010 and 2016. The share of Jordanian households who own their housing unit increased from 73.6% in 2010 to 80.9% in 2016 while the share of those who rent their housing unit decreased from 22.1% in 2010 to 14.3% in 2016.

Figure 2 shows the change in the type of occupancy for Jordanian households by location (i.e., urban vs. rural areas). The figure clearly shows that house ownership is higher in rural regions compared to urban regions. The increase in the share of households who own their housing units is clear for both urban and rural areas. The share of households who own their unit in urban regions increased from 69.3% in 2010 to 79% in 2016. The share of households who own their unit in rural areas increased from 85.4% in 2010 to 88.5% in 2016. The share of households who rent their housing unit decreased over the time period 2010-2016 from 26.3% to 16.5% in urban areas and from 10.6% to 5.8% in rural areas.

Figure 3 shows the average type of occupancy of Jordanian households by the distribution of wealth in quintiles for 2010 and 2016. According to this figure, across all wealth quintiles the predominant type of occupancy is ownership, and the share of owners increases with the wealth of the household. More than 80% of households in the wealthiest quintile own their house unit, and this proportion has increased from 83% in 2010 to 87% in 2016. For households holding low levels of wealth the scenario is not different: ownership is the main type of occupancy, the percentage of owners in the first quintile has increased 4 percentage points, going from 73% in 2010 to 77% in 2016.

Figure 4 shows the type of housing for Jordanian households in 2010 and 2016.[4] In 2010 the majority of Jordanian households lived in flats (64.6%) and only 34.8% lived in private houses. The situation changed in 2016 with a decrease in the share of Jordanian households living in flats to 50.8% and an increase in the share of Jordanian households living in private houses to 47.6%.

Figure 5 shows the change across the two waves in the type of housing by location. The share of households living in flats is higher in urban areas compared to rural areas while the share of households living in private houses is higher in rural areas. Across the two locations, there is an increase in the share of households living in private houses compared to flats between 2010 and 2016. The share of households living in flats in urban areas decreased from 75.2% in 2010 to 57.7% in 2016, while the share of households living in houses increased from 24.1% to 40.8%. In rural areas the share of

[3] Refugee households are households where at least one member is registered as a refugee or moved due to violence/security.
[4] Type of housing refers to the type of the housing unit (i.e., flats vs. private houses).

households living in flats decreased from 35.3% to 23.2% and the share of those living in houses increased from 64.3% to 73.4%.

Figure 6 shows the type of housing by wealth quintiles for Jordanian households in 2010 and 2016. According to the figure, in 2010 up to 78% of households in the highest wealth quintile lived in flats. Although by 2016 this share decreased to 52%, it is still the most common type of housing. In the case of low wealth households the distinction is not as clear, since the share of households living in houses was the highest, with 56% among the first quintile by 2010. The figure also shows the clear increasing tendency of houses as type of housing for most of the wealth quintiles.

Figure 7 shows the total area of dwellings and the area per household member across the two waves for Jordanian households. Despite the increase in the share of private houses, the total area of housing decreased slightly from an average of 132 square meters to 128 square meters. The average area per household member increased slightly from 35 to 37 square meters. Figure 8 shows the area of housing units across urban and rural regions. The graph shows that total housing unit areas are on average higher in rural areas compared to urban areas, and there has been a slight decrease in overall housing area and a slight increase in the per-household member area across the two waves.

Figure 9 shows the average dwelling area by wealth quintiles for 2010 and 2016. The figure shows, as expected, that the total housing area in squared meters is higher for households in the top wealth quintile. Nonetheless, the gap between the households at the top and those at the bottom of the wealth distribution is a matter of concern, since the total housing area for the fifth quintile almost double the area for the lowest wealth quintile households, reflecting the current inequalities of Jordan society, even though it is also clear that the gap in terms of dwelling area has been narrowed from 2010 to 2016. On the other hand, housing unit area per person do not present such disparity between quintiles, although people in the highest quintile households in 2010 enjoyed almost 20 square meters more than those living in low-wealth households, by 2016 the difference was about 5 square meters.

Figure 10 shows the housing conditions for Jordanian households between 2010 and 2016. We limit the housing characteristics in the analysis to those that are available across the two waves for purposes of comparison. We created dummy variables that take the value one for the high quality condition, and zero for the low quality for each of the aspects. For example, the flooring takes the value one if it is ceramic flooring, and zero if it is cement or other low-quality type. Each column represents the percentage of the high-quality condition. The figure shows slight variation in the quality of Jordanian houses across the two waves. There is not much change over the two periods in the share of houses with ceramic flooring (relative to those with cement or other low-quality flooring), the share of houses of public water access (which is already high with 98% coverage), and the share of houses with access to public sewage system (relative to those with no access). However, there seems to be improvement in the quality of housings in other dimensions: the share of houses with central, gas or electric heating (relative to houses without or with other lower-quality sources of heating) increased from 56.9% in 2010 to 70.4% in 2016. The share of houses with access to garbage dumpsters increased from 81.9% to 93.5% across the two waves.

The pattern shown in Figure 10 which shows the changes in the housing conditions could mask variations across different locations. Figure 11 shows the housing conditions across urban and rural regions. The figure shows that - as expected- urban regions do better in terms of housing conditions especially in terms of access to public water, quality of heating, and more clearly the access to public sewage system. Rural areas have better access to garbage dumpsters. The time period 2010-2016 witnessed some changes in the housing conditions. For urban regions, while there is no major changes in the quality of flooring or the public water access, there is an increase in the central, gas, or electric

heating, and the access to garbage dumpsters. However, access to public sewage system decreased from 74.3% to 70.1% across the two waves. For rural areas there is a noticeable increase in the share of the houses with high quality heating from 46% in 2010 to 60.6% in 2016 and an increase in the houses with access to public sewage system from 6.3% in 2010 to 20.8% in 2016. Access to garbage dumpsters in rural areas increased from 87.7% to 96% across the two waves.

Figure 12 shows the housing conditions of Jordanian households classified by wealth quintiles. The figure shows that households at the bottom of the distribution of wealth do not have access to public sewage system nor heating system in comparison to households with higher levels of wealth. Even though most of the conditions have improved, the inequalities persist; in 2016 only 57% of low-wealth households have heating system in their house while the top of the distribution report 75%. On the other hand, for wealthy households the conditions of the sewage system have deteriorated from 2010 to 2016 going from 82% to 71%.

4. Newly-formed Jordanian households

In this section we document changes in the housing and living conditions for the newly-formed households using a time period of five years for the definition of newly formed household (i.e., families which were formed by marriage during the time period 2005-2010 for the 2010 wave and during 2011-2016 for the 2016 wave). This leaves us with 792 new households in the 2010 wave and 1,200 new households in the 2016 wave. Figure 13 shows the type of occupancy for the newly-formed Jordanian households in 2010 and 2016. The share of newly-formed Jordanian households who own their housing unit increased from 57.2% in 2010 to 69.3% in 2016 while the share of those who rent their housing unit decreased from 35.2% in 2010 to 23.5% in 2016.

Figure 14 shows the change in the type of occupancy for newly-formed Jordanian households by location (i.e., urban vs. rural areas). The same pattern of the increase in the share of new households who own their housing unit increased across both urban and rural areas. The share of new households who own their unit in urban regions increased from 52.7% in 2010 to 66.7% in 2016. The share of households who own their unit in rural areas increased from 69.9% in 2010 to 79.1% in 2016. The share of households who rent their housing unit decreased over the time period 2010-2016 from 39.5% to 26.4% in urban areas and from 23.4% to 12.7% in rural areas.

Figure 15 shows the type of housing for the newly-formed Jordanian households in 2010 and 2016. In 2010 the majority of newly-formed Jordanian households lived in flats (76.3%) and only 23.5% lived in houses. The situation changed in 2016 with a decrease in the share of new Jordanian households living in flats to 57.5% and an increase in the share of new Jordanian households living in private houses to 41.5%.

Figure 16 shows the change in the type of housing for the newly-formed Jordanian households across the two waves by location. The share of new households living in flats is much higher in urban areas compared to rural areas while the share of new households living in private houses is higher in rural areas. Across the two locations, there is an increase in the share of households living in houses compared to flats between 2010 and 2016. The share of new households living in flats in urban areas decreased from 85.6% in 2010 to 64.3% in 2016 while the share of new households living in houses increased from 14.2% to 35%. In rural areas the share of households living in flats decreased from 50.2% to 32.5% and the share of those living in private houses increased from 49.3% to 65.4%.

Figure 17 shows the total area of dwellings and the area per household member across the two waves for new Jordanian households. The figure shows that the total area decreased slightly from an average of 117 to 115 square meters. The average area per household member decreased as well across the two waves from 39 square meters in 2010 to 38 square meters in 2016. Figure 18 shows the area of housing

units across urban and rural regions. The graph shows there has been a slight decrease in the dwelling areas per household member in urban regions from 39 to 38 square meters across the two waves. The total dwelling area is kept constant at 114 square meters. For the rural regions, the overall area decreased from 129 square meters to 123 square meters across the two waves and the area per household member also decreased from 42 to 39 square meters.

Figure 19 shows the housing conditions for newly-formed Jordanian households between 2010 and 2016. The figure shows some improvement in the quality of housing for the new Jordanian households between the two waves especially access to central, gas, or electric heating which increased from 64.4% in 2010 to 75.8% in 2016 and access to garbage dumpsters which increased from 81.7% to 93.8% across the two waves. Figure 20 shows the housing conditions over time classified by location (i.e., urban vs. rural). The figure shows the time period 2010-2016 witnessed different changes in the housing conditions across locations. For urban regions, there has been a clear increase in the central, gas, or electric heating, and the access to garbage dumpsters. However, characteristics like ceramic flooring and public water access have decreased slightly in comparison to access to public sewage system which decreased from 72.1% to 66.5%. For rural regions, there has been a slight decrease in the share of houses with ceramic flooring while there has been an increase in the share of the houses with high quality heating from 57.2% to 61.6% and a massive increase in the houses with access to public sewage system from 5.6% to 22.1%.

5. Refugees' living and housing conditions

In this section we use data from the JLMPS 2016 dataset which oversamples geographic areas with high share of foreigners so that we could get a better idea on living conditions of refugees compared to locals and other foreigners. Figure 21 shows the distribution of heads of households by age groups in 2016. The figure shows that in the majority of refugee households the head's age is higher than 30 years, 26.1% of refugee households' head are between 30 and 39 years old, followed by 20.9% of households which head's age is higher than or equal to 65, and 19.5% which age is between 40 and 49 years old. On the other hand, young households' heads are rather unusual, with less than 1% of the total refugees.

Figure 22 shows the education level of the refugee households' head. The figure shows that for the majority of heads the highest level of education achieved is below basic education, with 37.9% of heads of household being able to read and write without completing basic education, and even 17.4% of heads that report to be illiterate, which, combined with the information gathered in Figure 21, present a scenario of old and illiterate heads of household among the refugees in 2016.

Figure 23 shows the average refugees' household size in 2016. The figure shows that refugee households are mainly conformed by 5 people or more, with more than 50% of the total refugees. Overall, the majority of refugee households are conformed by 5 people, with a share of 20.9%. Figure 24 shows that only 8.8% of refugee households in Jordan live in refugee camps.

Figure 25 shows the average number of household members for refugees in 2016. According to this figure, the average number of household members lays around 5 and the number of children around 3, either inside or outside the refugee camps. However, refugee households living in camps are, in average, larger and have less children.

Figure 26 shows the housing units areas for non-refugees (both locals and foreigners), out-of-camp refugees, and in-camp refugees. The average total housing unit area for non-refugee households is 123 square meters and the area per household member is 38 square meters. The area is slightly lower for out-of-camp refugees with an average total housing unit of 122 square meters and per household

member area of 36 square meters. The situation is much worse for in-camp refugees with an average total area of 45 square meters and per-person area of 11 square meters.

Figure 27 shows the housing conditions for non-refugees, out-of-camp refugees, and in-camp refugees. The figure shows only slight differences between non-refugees and out-of-camp refugees in all aspects. However, the figure clearly shows that for most of housing conditions aspects, in-camp refugees score much less compared to the other two groups.

Table 1 shows descriptive statistics on the ownership of a list of selected durable assets for non-refugees (Column 1), out-of-camp refugees (Column 2), and in-camp refugees (Column 3). The table shows that for almost all the items out-of-camp refugees are quite similar to non-refugees. However, both groups score much higher than the in-camp refugees.

6. Conclusion

This paper documents changes in housing and living conditions for Jordanians using data from the JLMPS 2010 and 2016 waves. The paper also compares the housing and living conditions for refugees both out-of-camp and in-camp to that of non-refugees.

The paper shows an improvement in the living and housing conditions of locals over the time period 2010-2016 with the share of dwelling ownership and the share of households living in private houses relative to flats increased across the two waves. Similar patterns appear when we study the changes for new Jordanian households. The increase of the share of Jordanians who live in private houses, however, does not reflect an increase in the average dwelling areas which remained relatively constant over time.

The paper further shows that while the majority of refugees live out of camps (91%), those who live in camps are doing much worse in terms of living conditions manifested mainly in smaller living areas, worse access to public facilities, and less ownership of durable assets.

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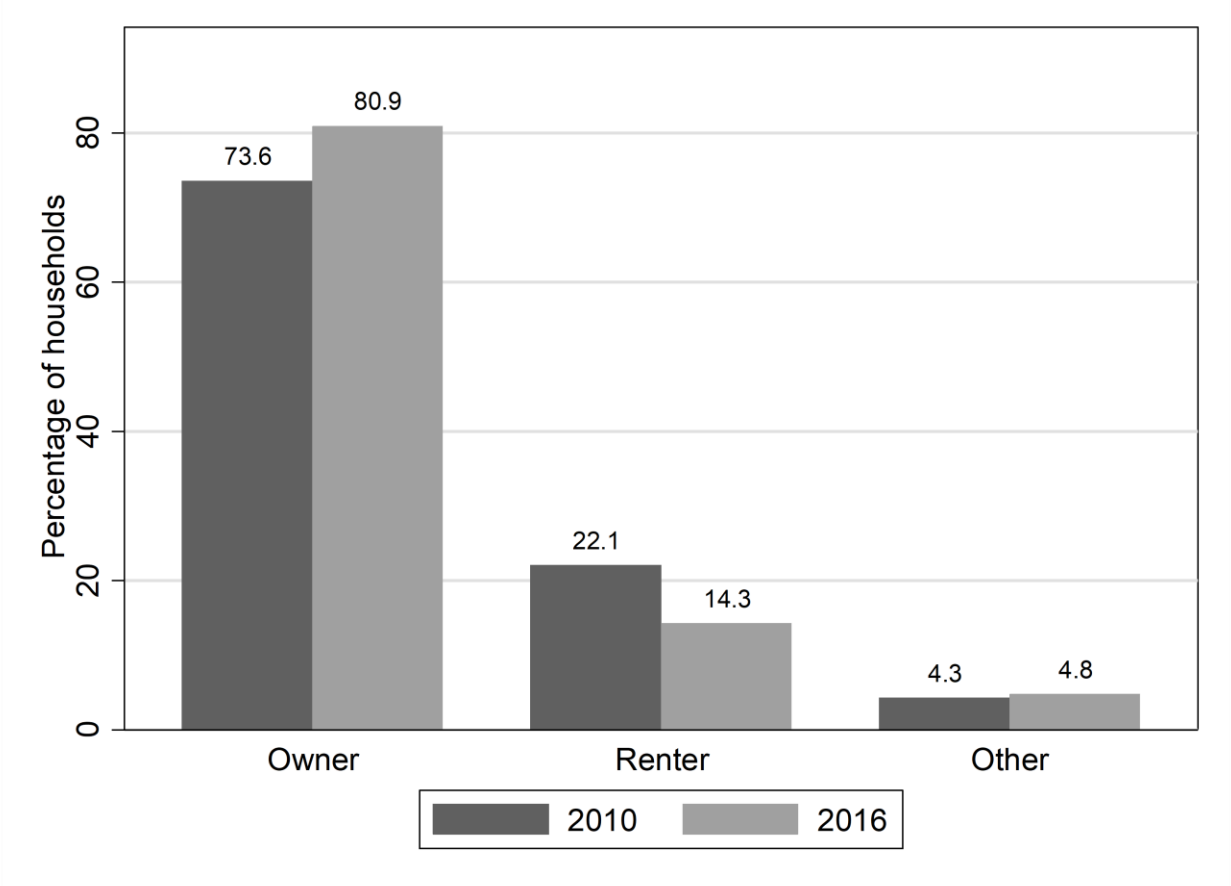
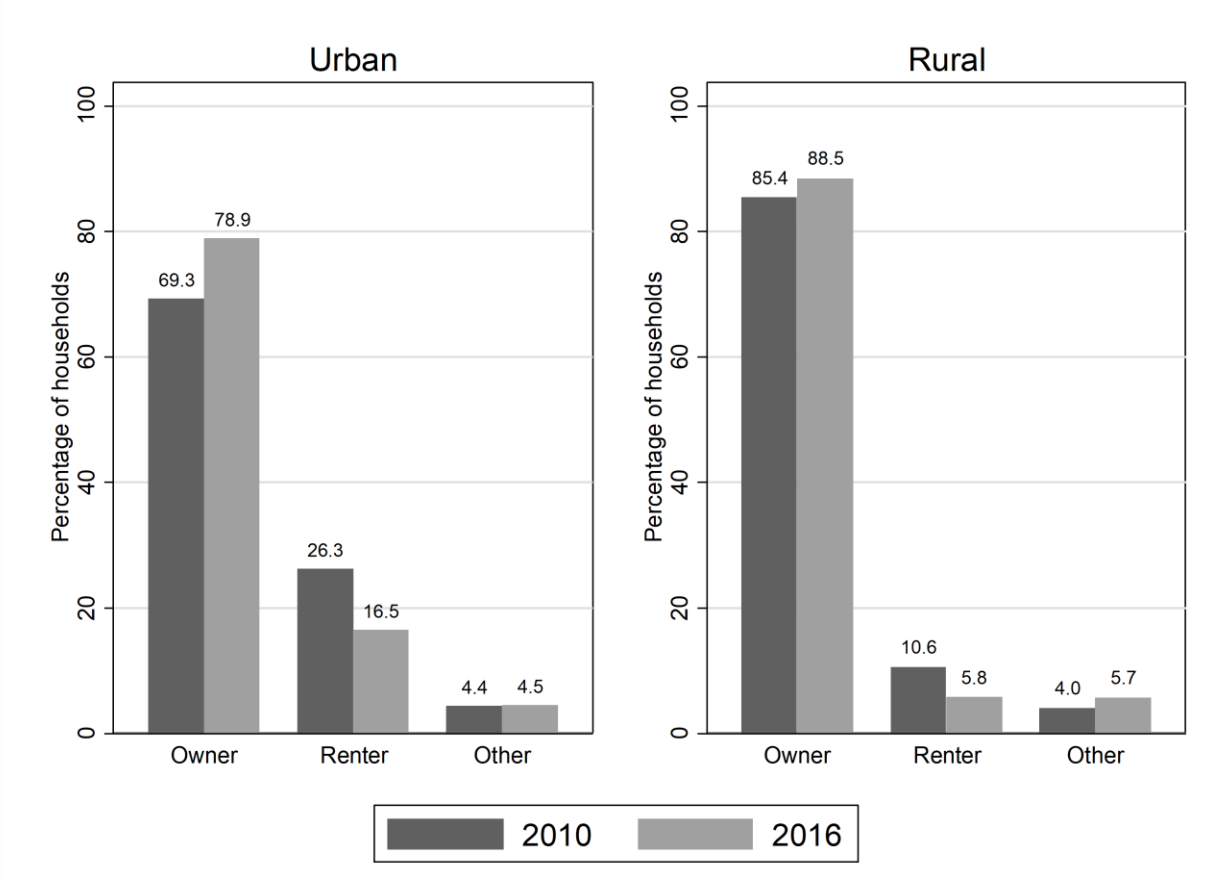
Figure 1: Type of occupancy for Jordanian households (percentage of households)



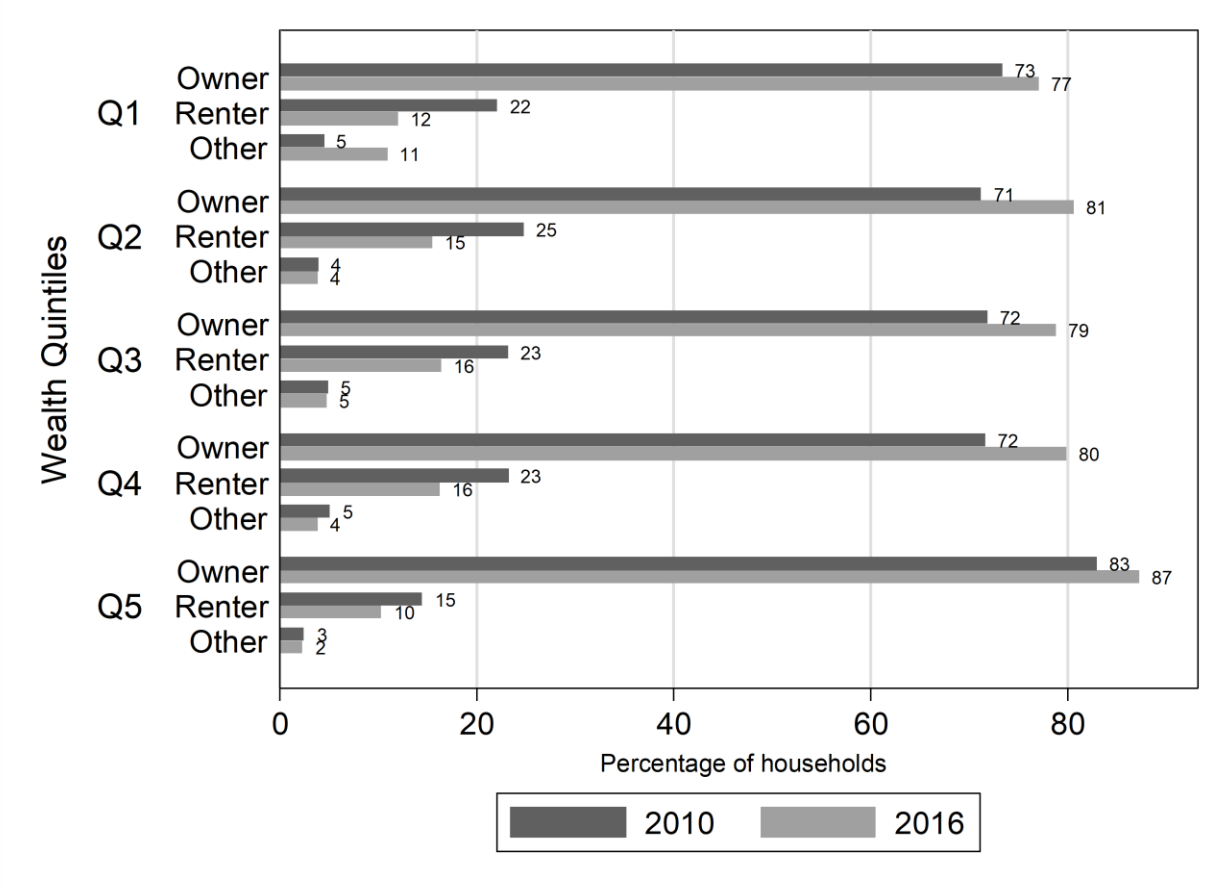
Source: Author's calculations based on JLMPS 2010, 2016

Figure 2: Type of occupancy for Jordanian households classified by location (percentage of households)



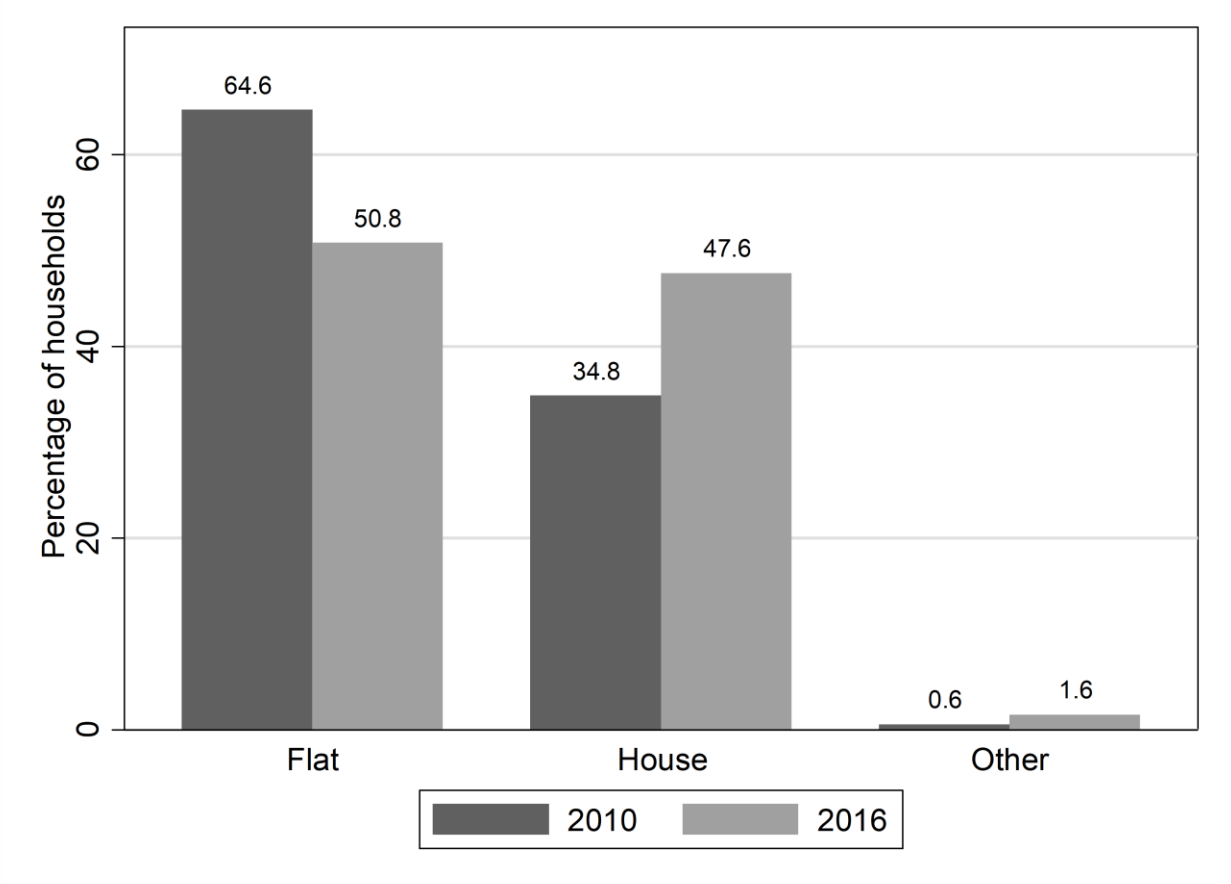
Source: Author's calculations based on JLMPS 2010, 2016

Figure 3: Type of occupancy for Jordanian households classified by wealth quintile (percentage of households)



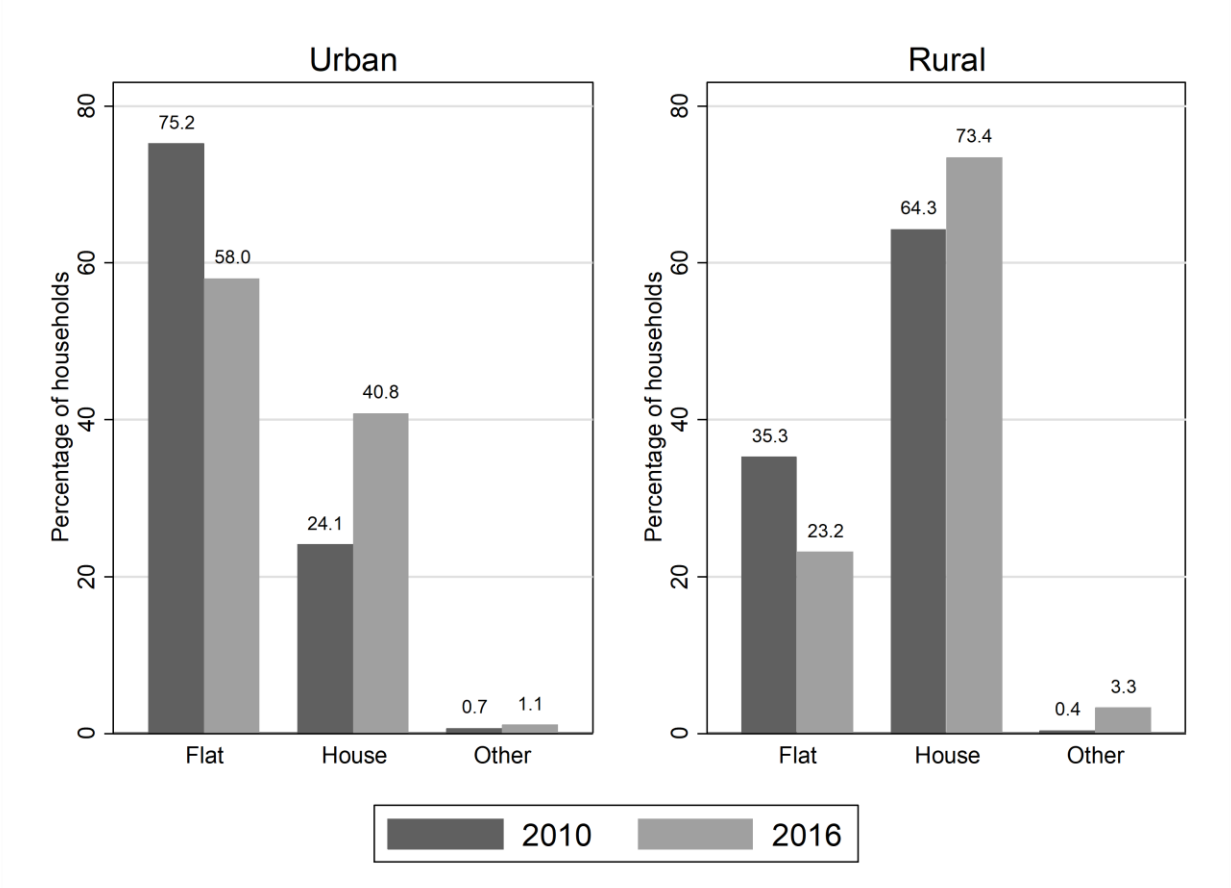
Source: Author's calculations based on JLMPS 2010, 2016

Figure 4: Type of housing for Jordanian households (percentage of households)



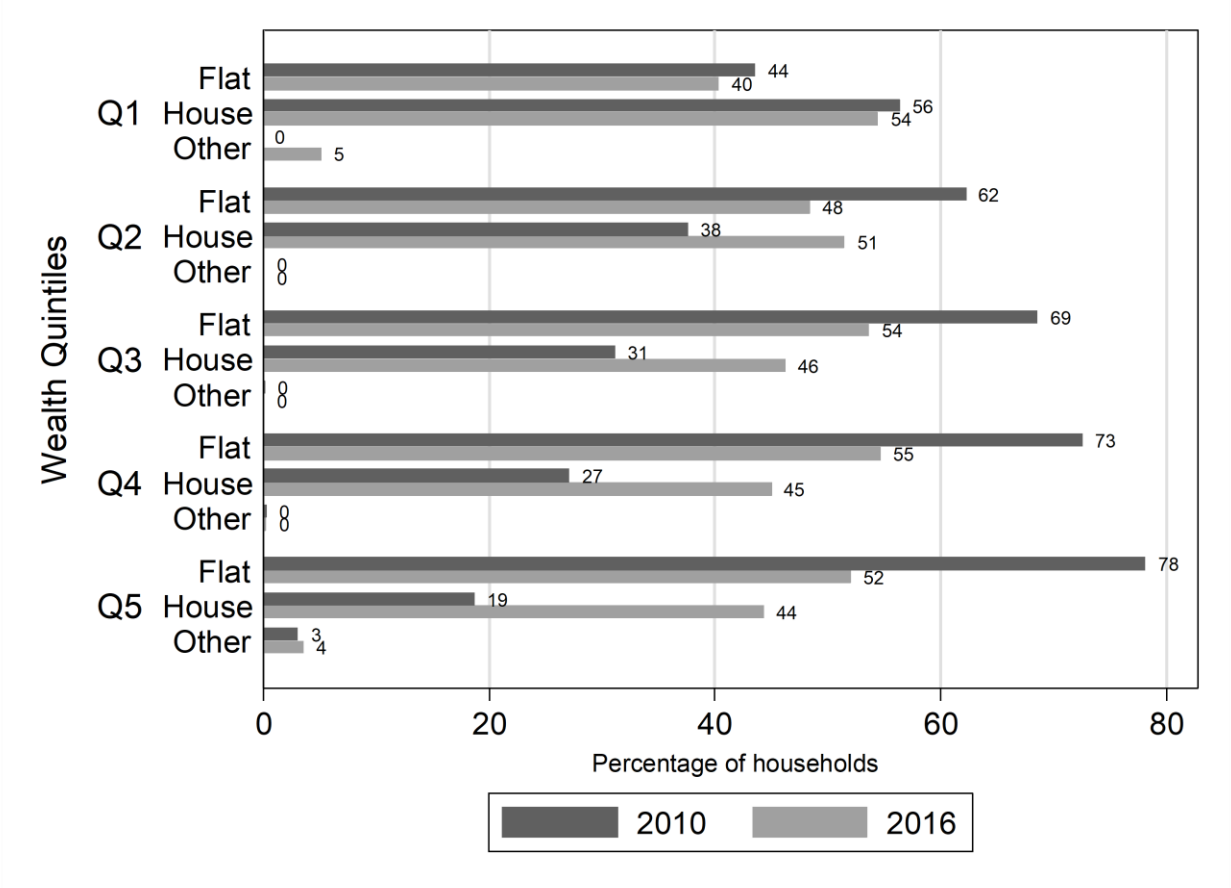
Source: Author's calculations based on JLMPS 2010, 2016

Figure 5: Type of housing for Jordanian households classified by location (percentage of households)



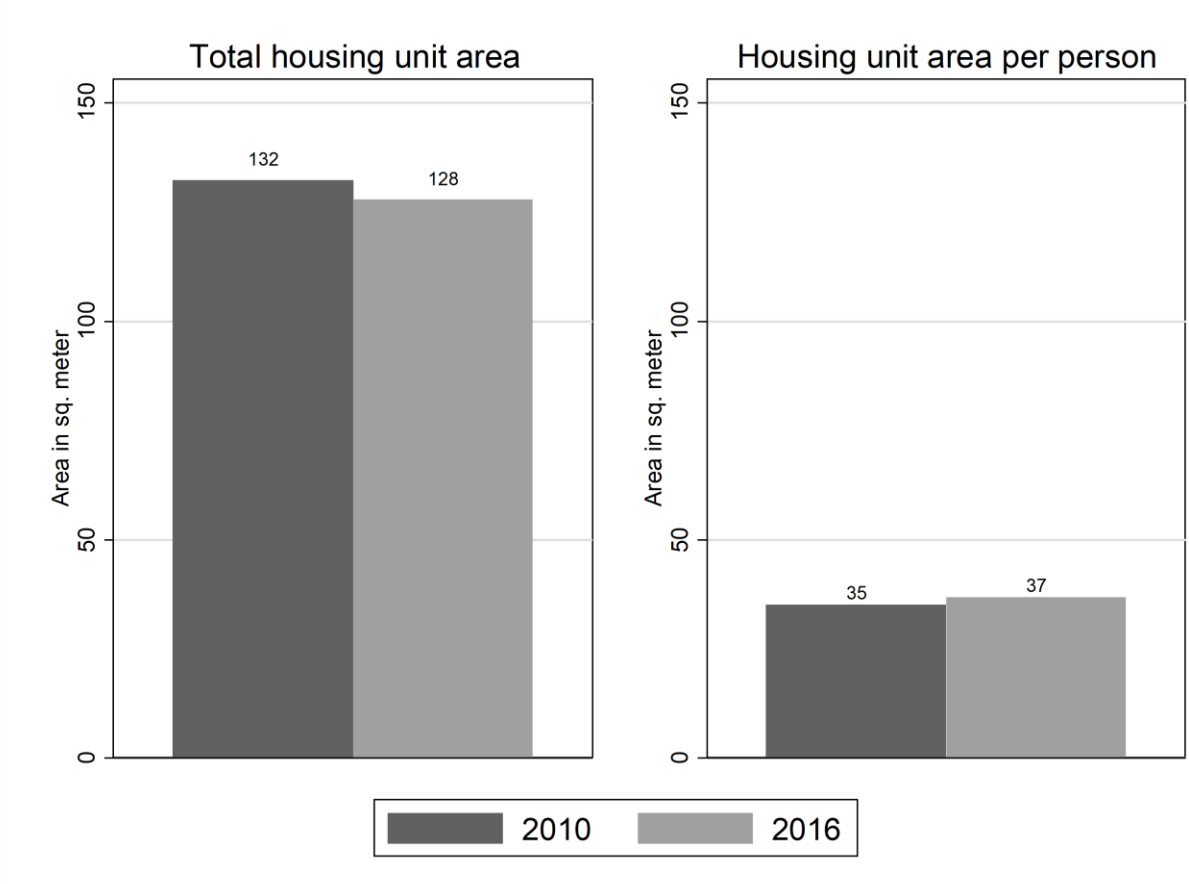
Source: Author's calculations based on JLMPS 2010, 2016

Figure 6: Type of housing for Jordanian households classified by wealth quintiles (percentage of households)



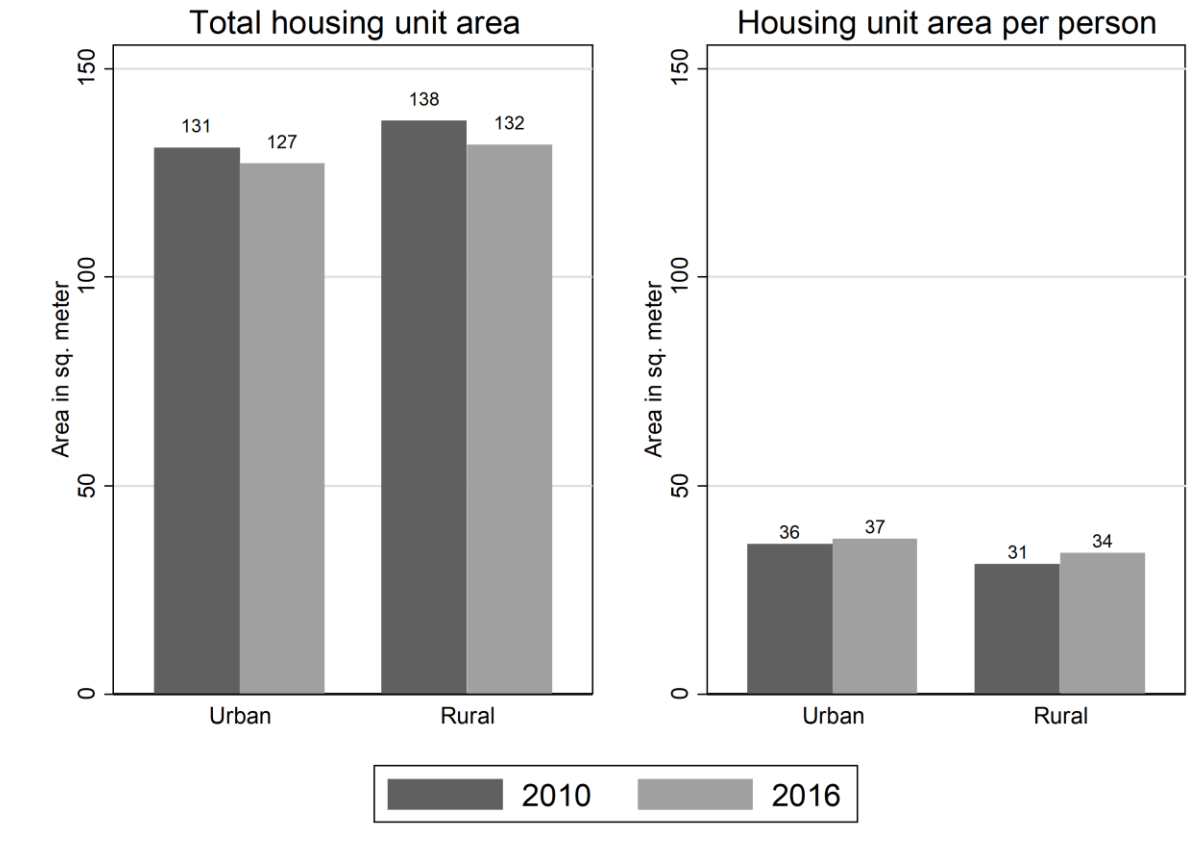
Source: Author's calculations based on JLMPS 2010, 2016

Figure 7: Dwelling area for Jordanian households in square meters



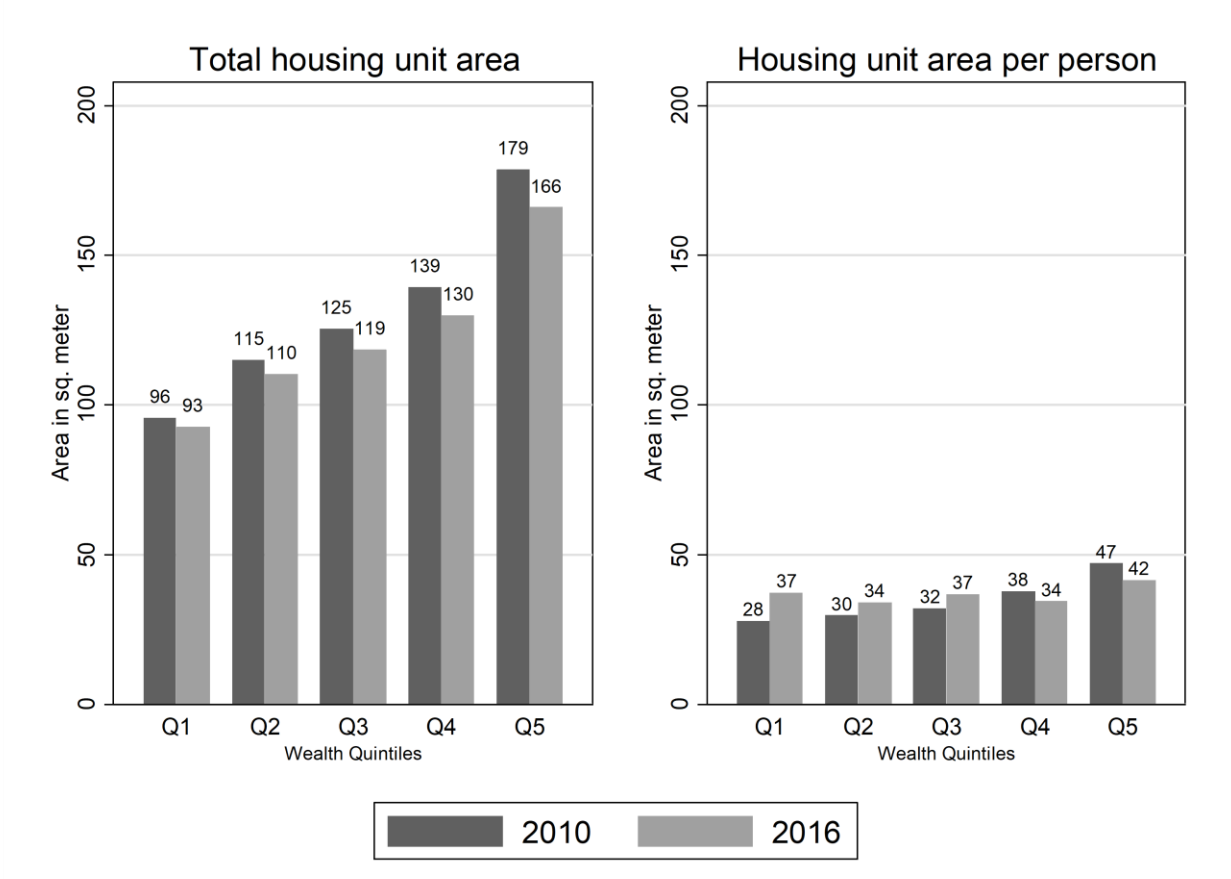
Source: Author's calculations based on JLMPS 2010, 2016

Figure 8: Dwelling area for Jordanian households in square meters classified by location



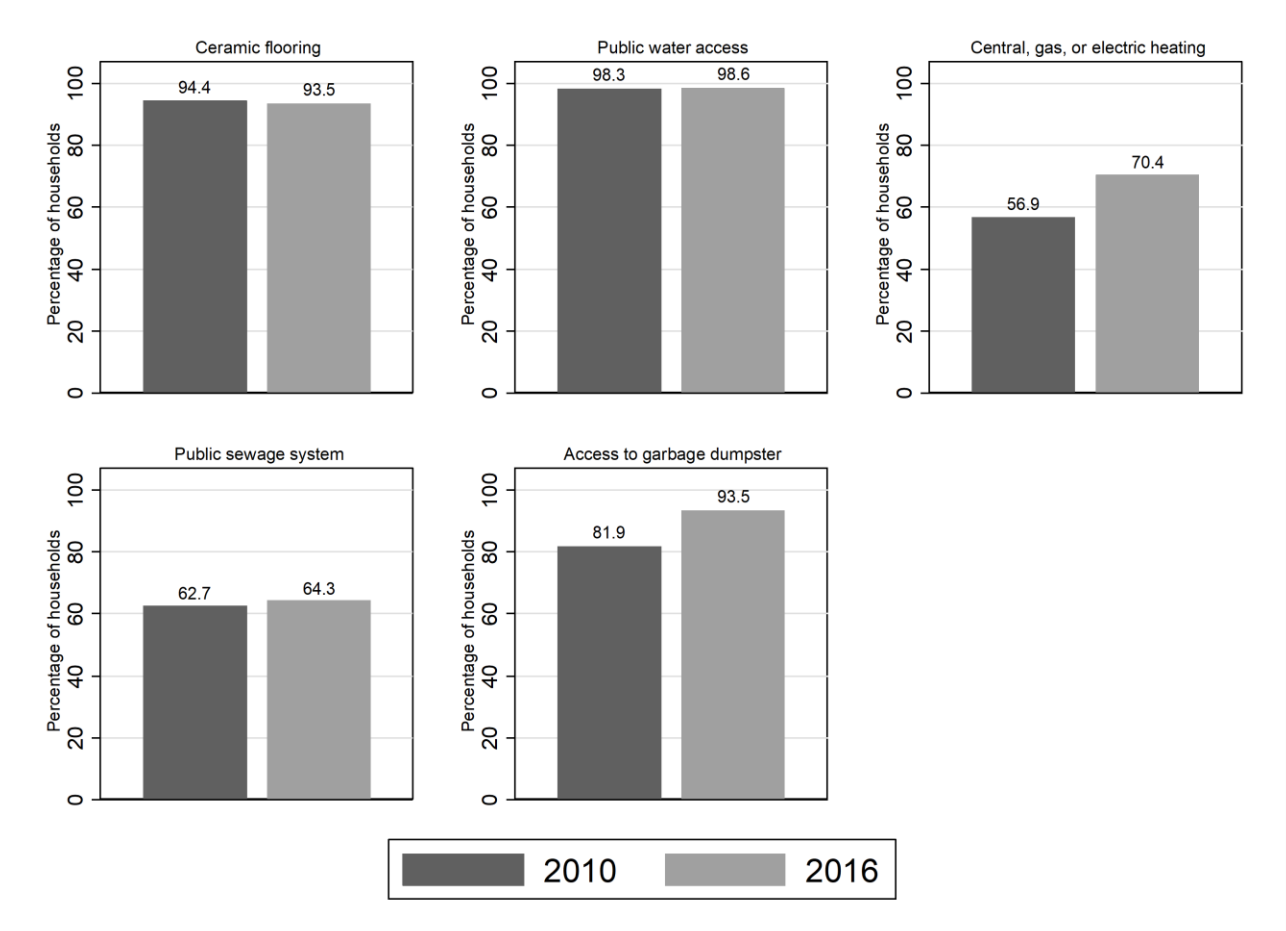
Source: Author's calculations based on JLMPS 2010, 2016

Figure 9: Dwelling area for Jordanian households in square meters classified by wealth quintiles



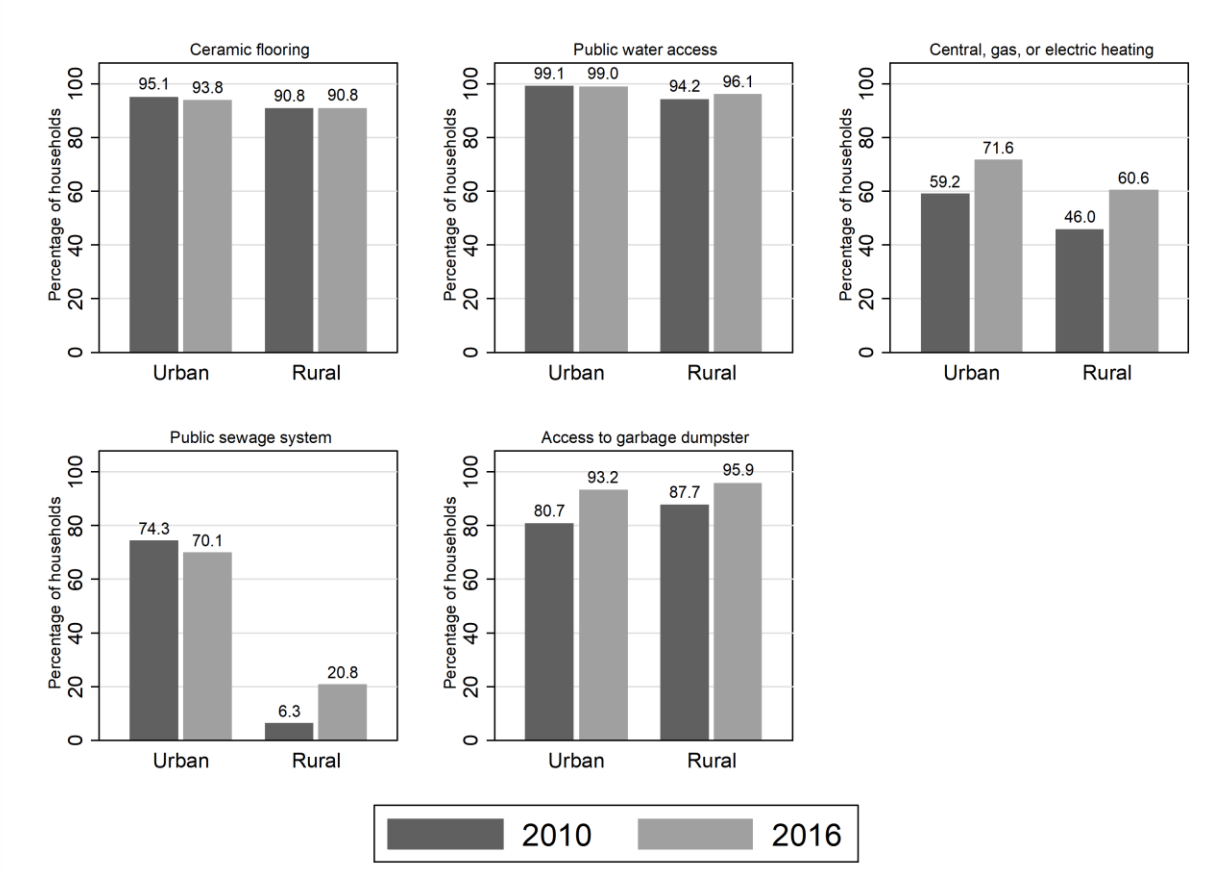
Source: Author's calculations based on JLMPS 2010, 2016

Figure 10: Housing conditions for Jordanian households (percentage of households with condition)



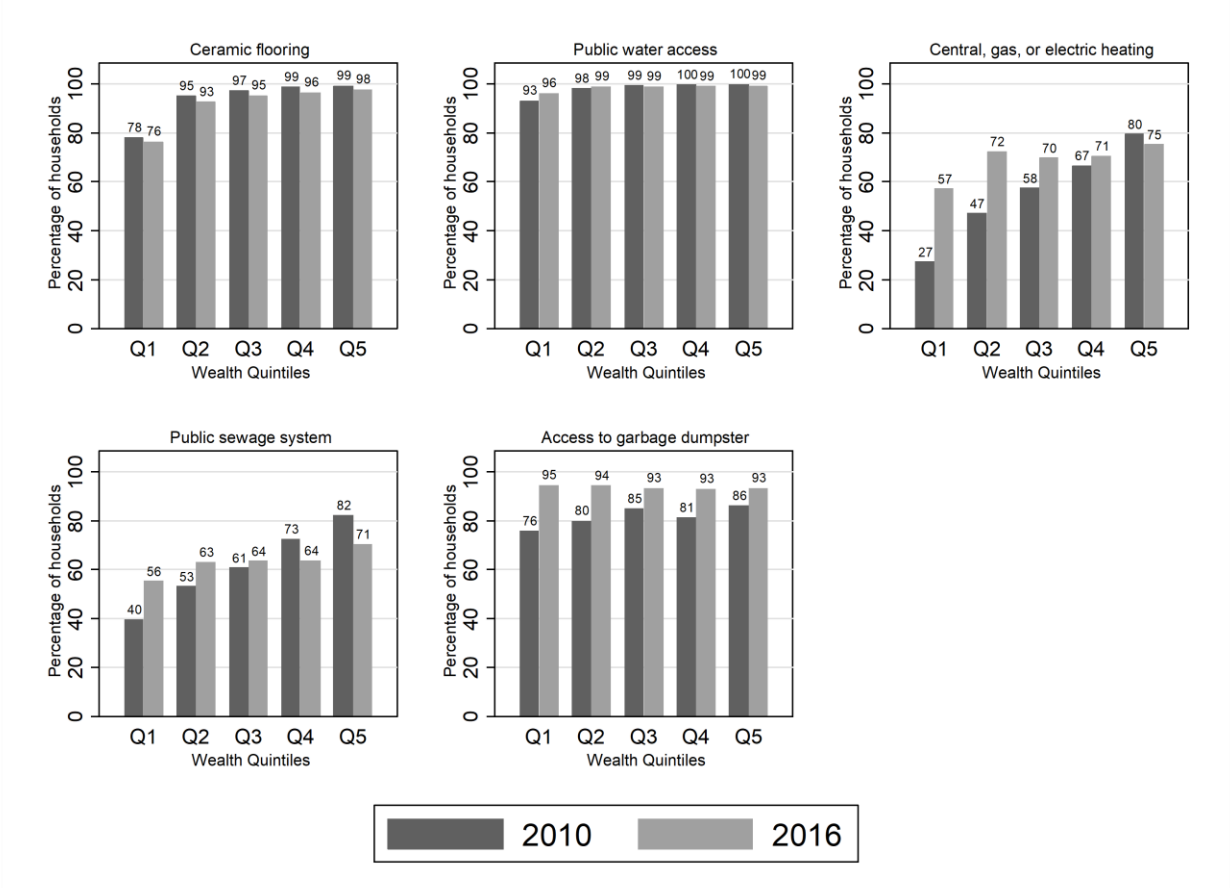
Source: Author's calculations based on JLMPS 2010, 2016

Figure 11: Housing conditions for Jordanian households classified by location (percentage of households with condition)



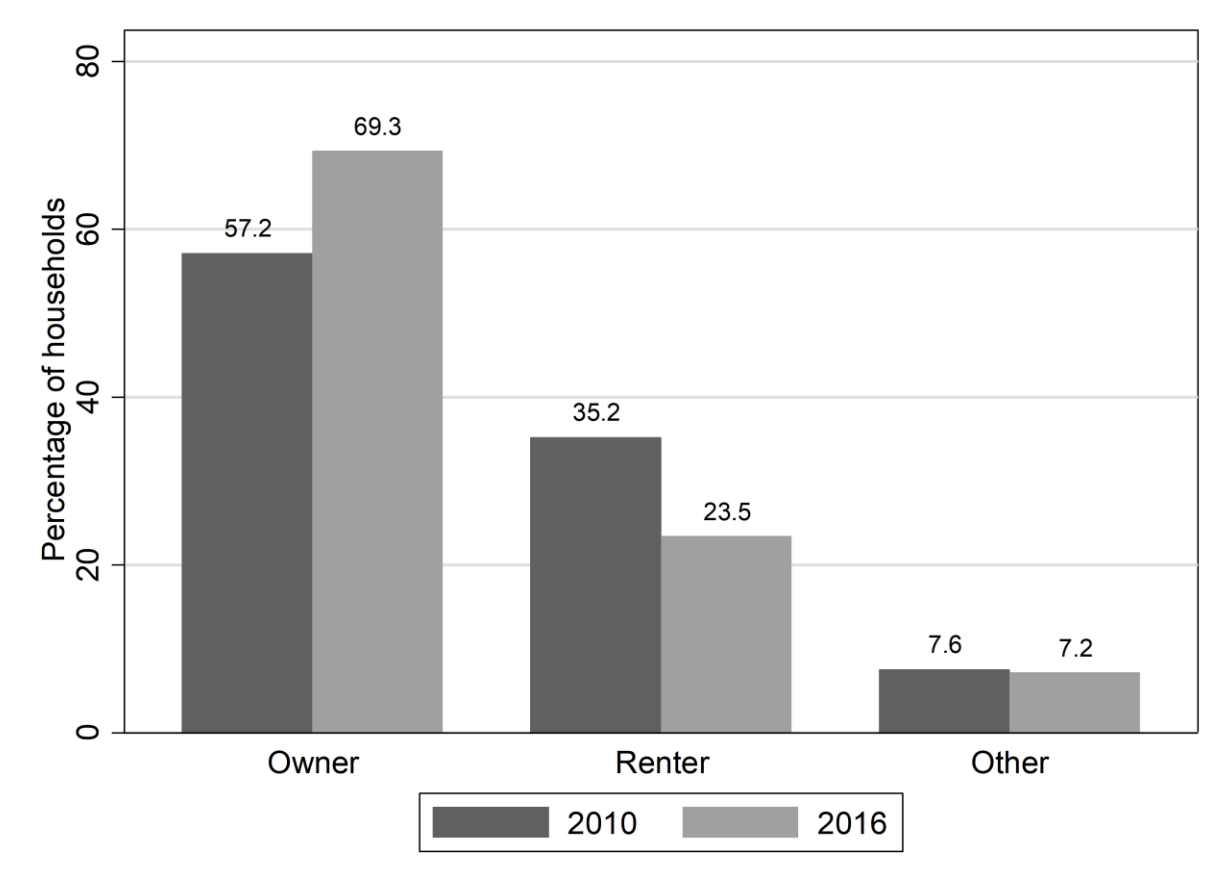
Source: Author's calculations based on JLMPS 2010, 2016

Figure 12: Housing conditions for Jordanian households classified by wealth quintiles (percentage of households with condition)



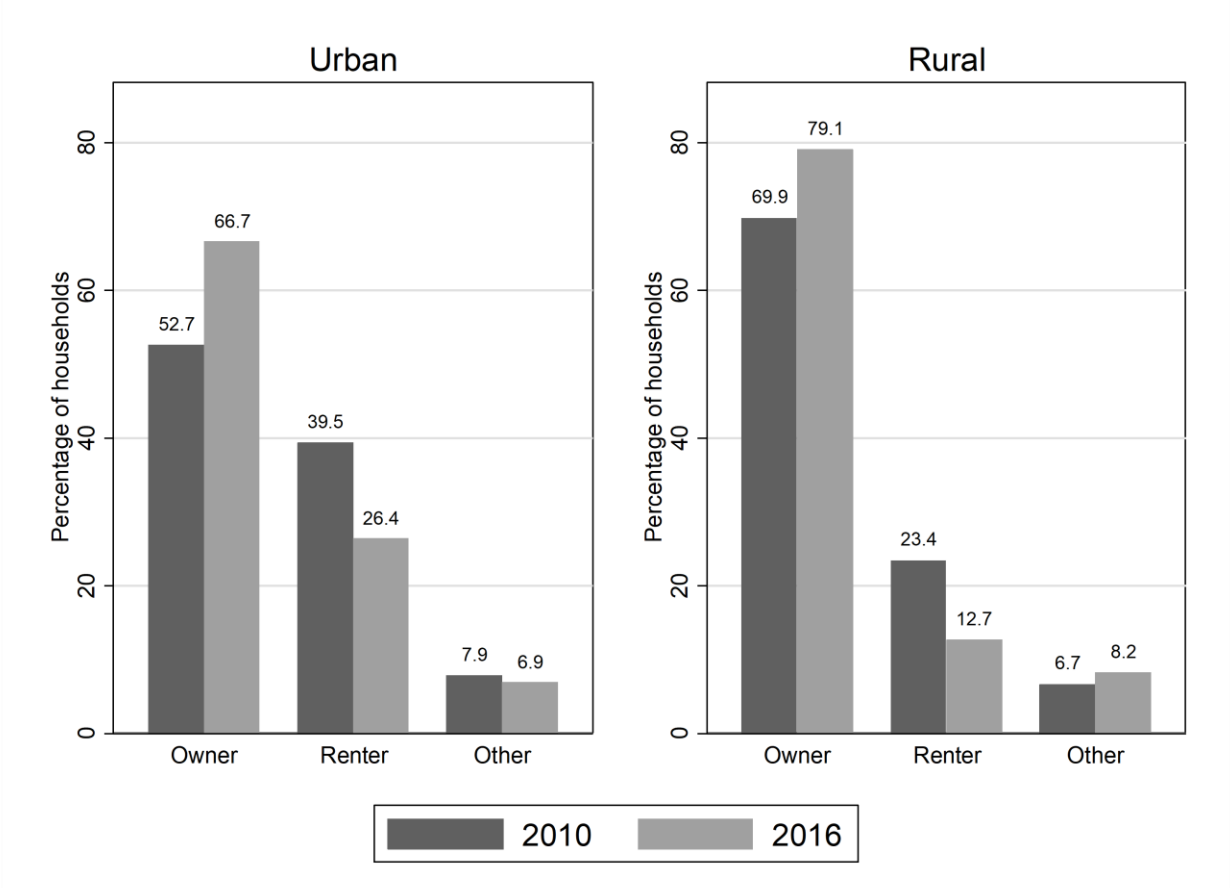
Source: Author's calculations based on JLMPS 2010, 2016

Figure 13: Type of occupancy for newly formed Jordanian households (percentage of households)



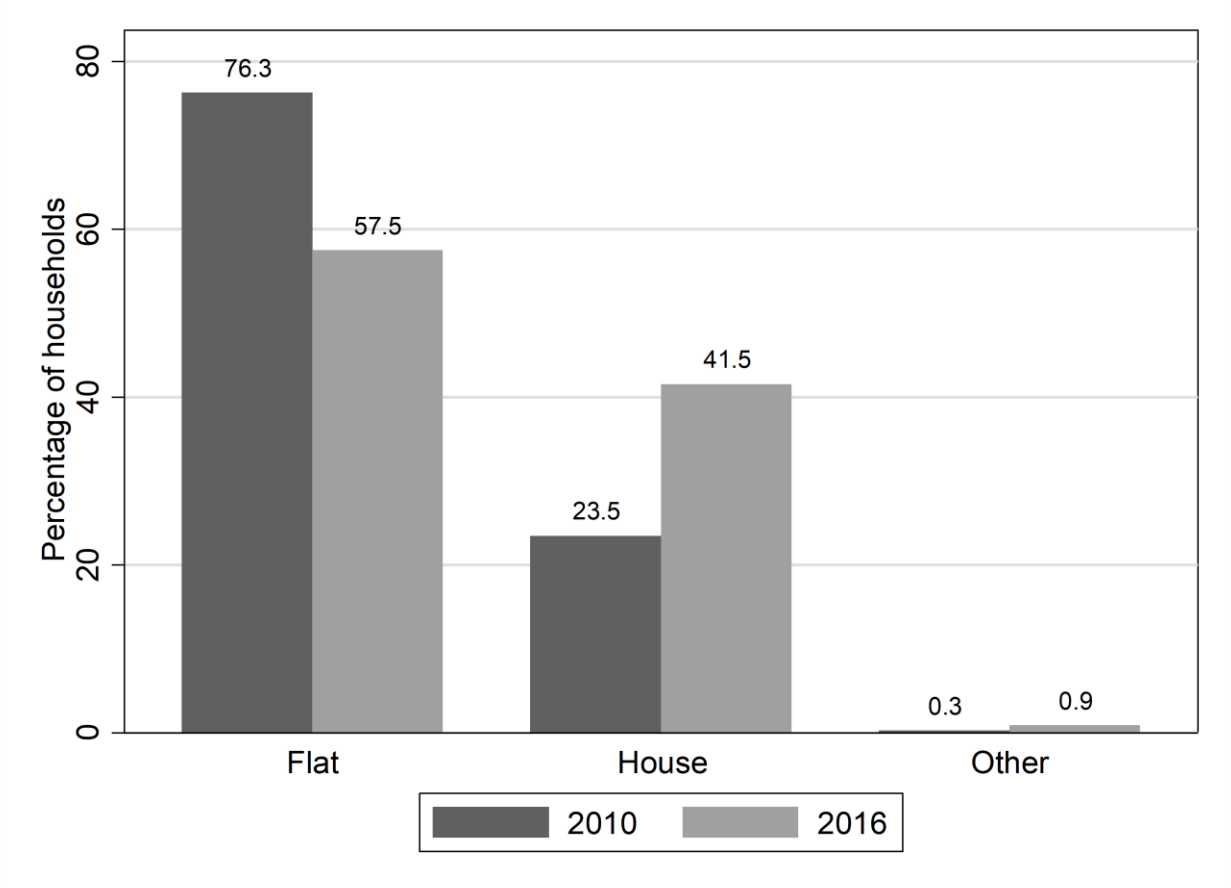
Source: Author's calculations based on JLMPS 2010, 2016

Figure 14: Type of occupancy for newly formed Jordanian households classified by location (percentage of households)



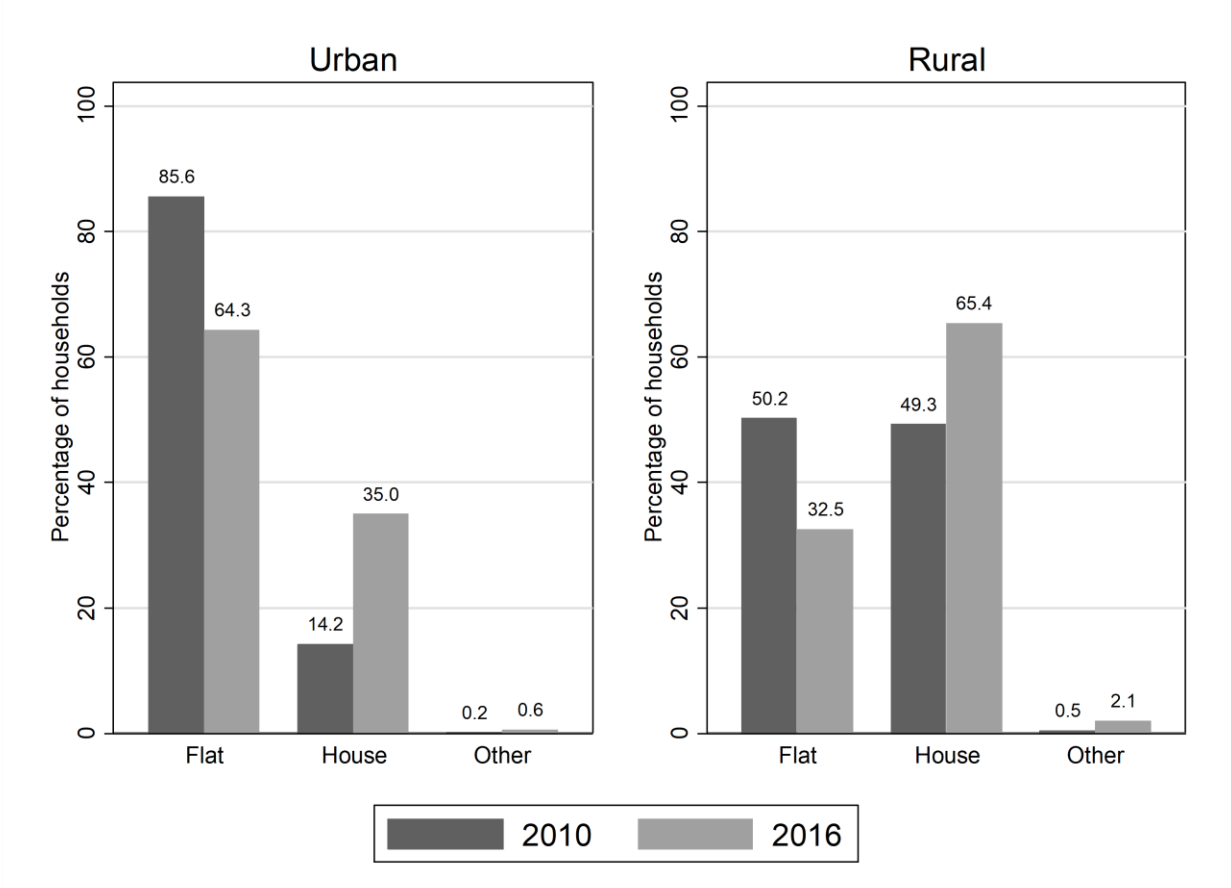
Source: Author's calculations based on JLMPS 2010, 2016

Figure 15: Type of housing for newly-formed Jordanian households (percentage of households)



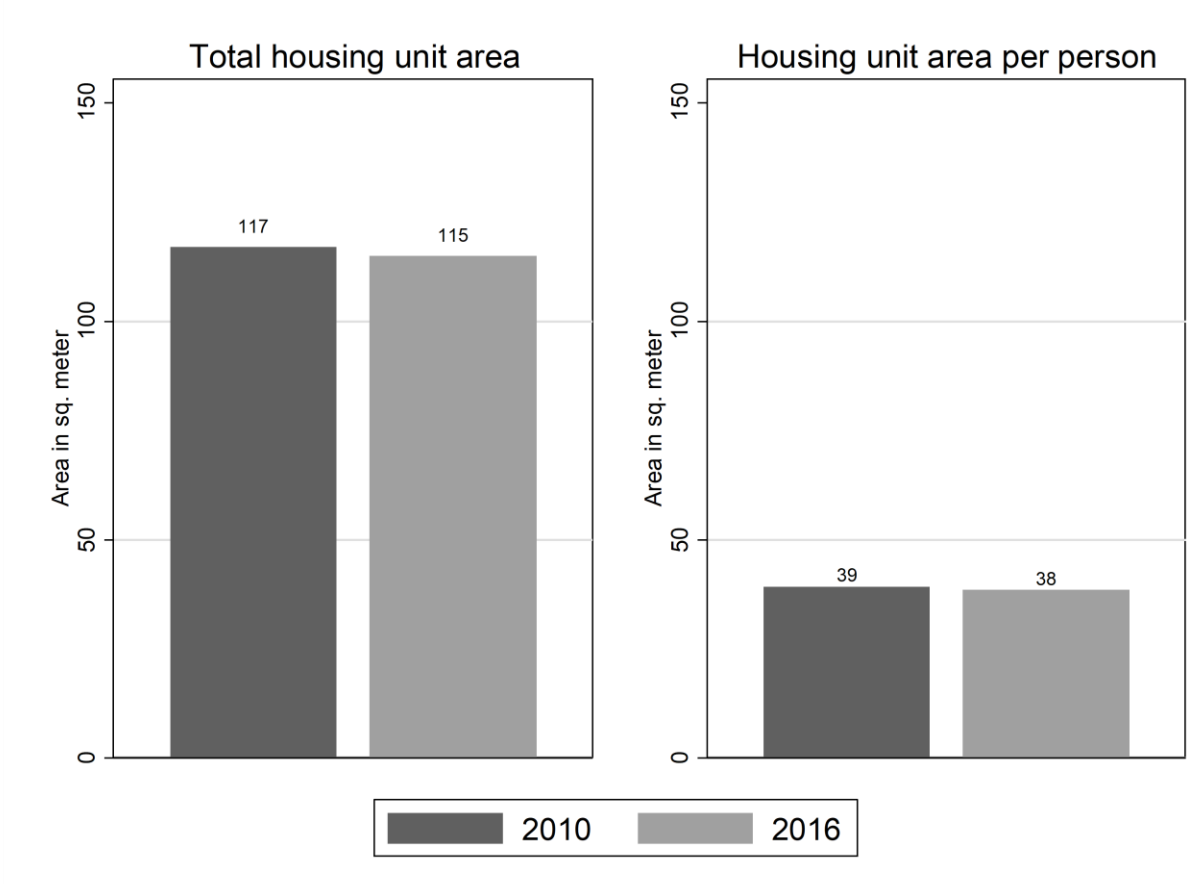
Source: Author's calculations based on JLMPS 2010, 2016

Figure 16: Type of housing for newly formed Jordanian households classified by location (percentage of households)



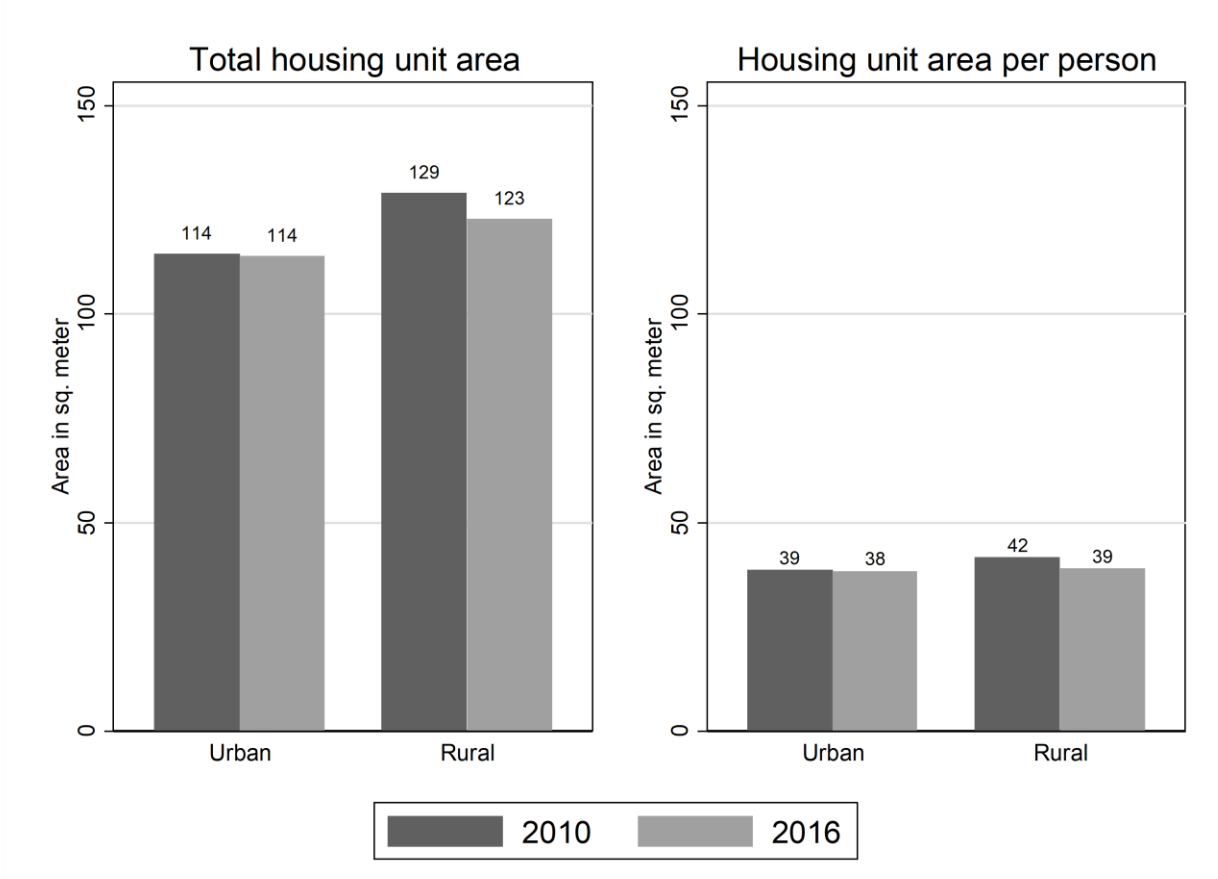
Source: Author's calculations based on JLMPS 2010, 2016

Figure 17: Dwelling area for newly formed Jordanian households in square meters



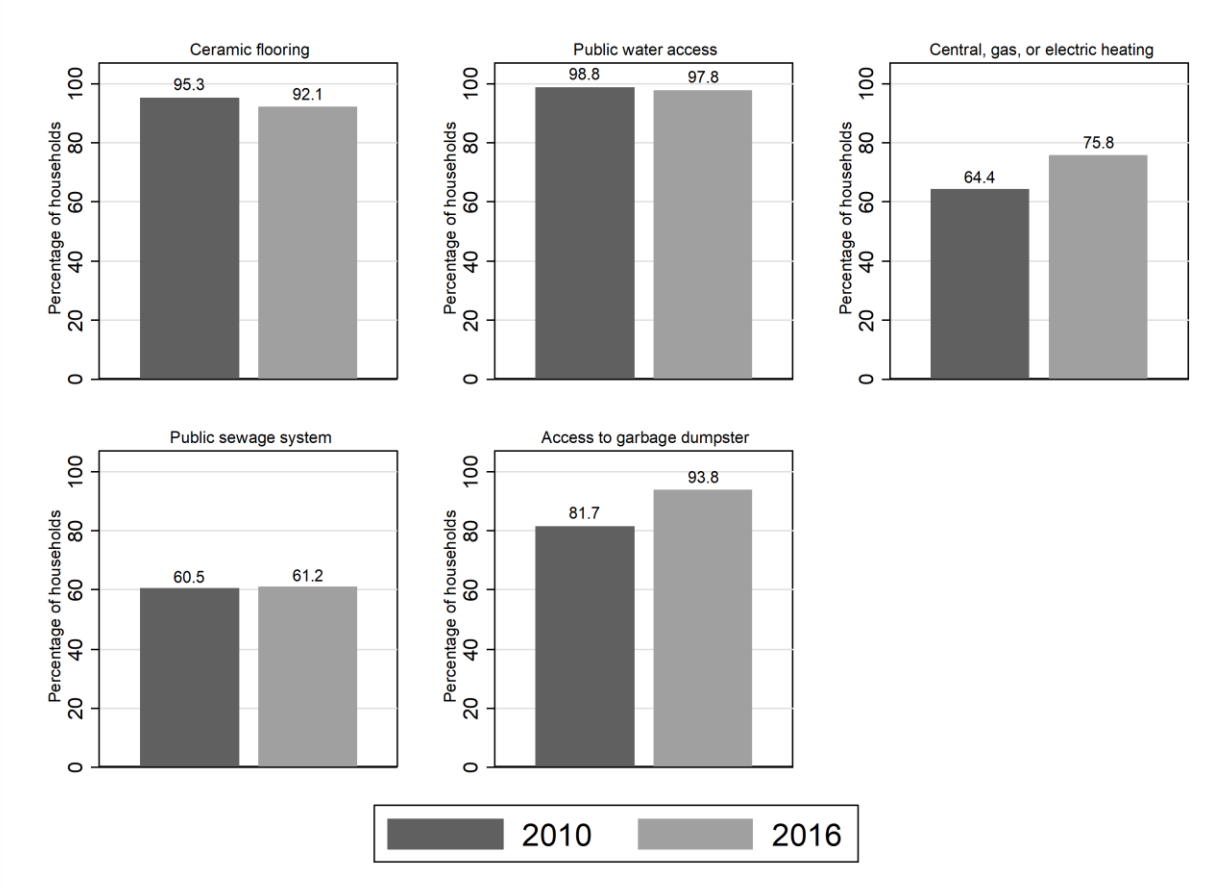
Source: Author's calculations based on JLMPS 2010, 2016

Figure 18: Dwelling area for newly formed Jordanian households in square meters classified by location



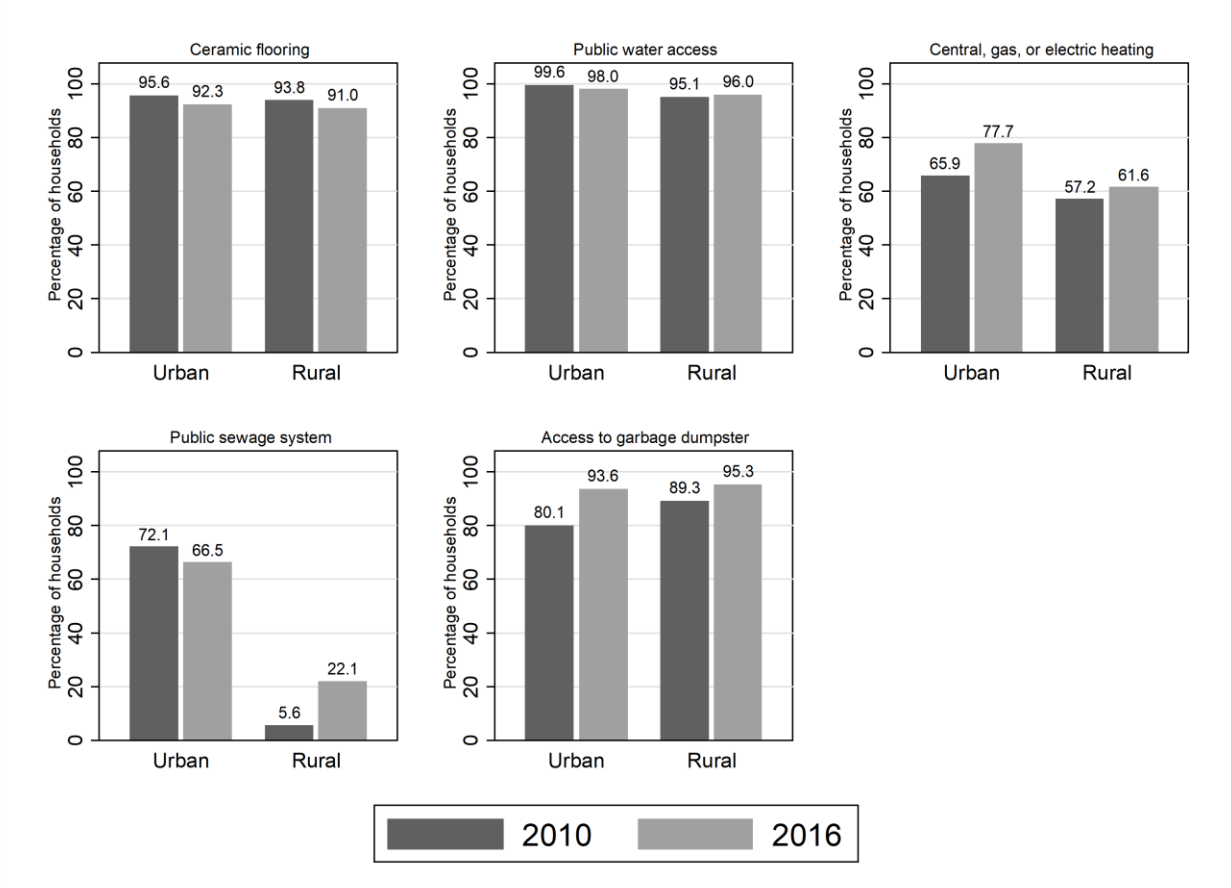
Source: Author's calculations based on JLMPS 2010, 2016

Figure 19: Housing conditions for the newly-formed Jordanian households (percentage of households with condition)



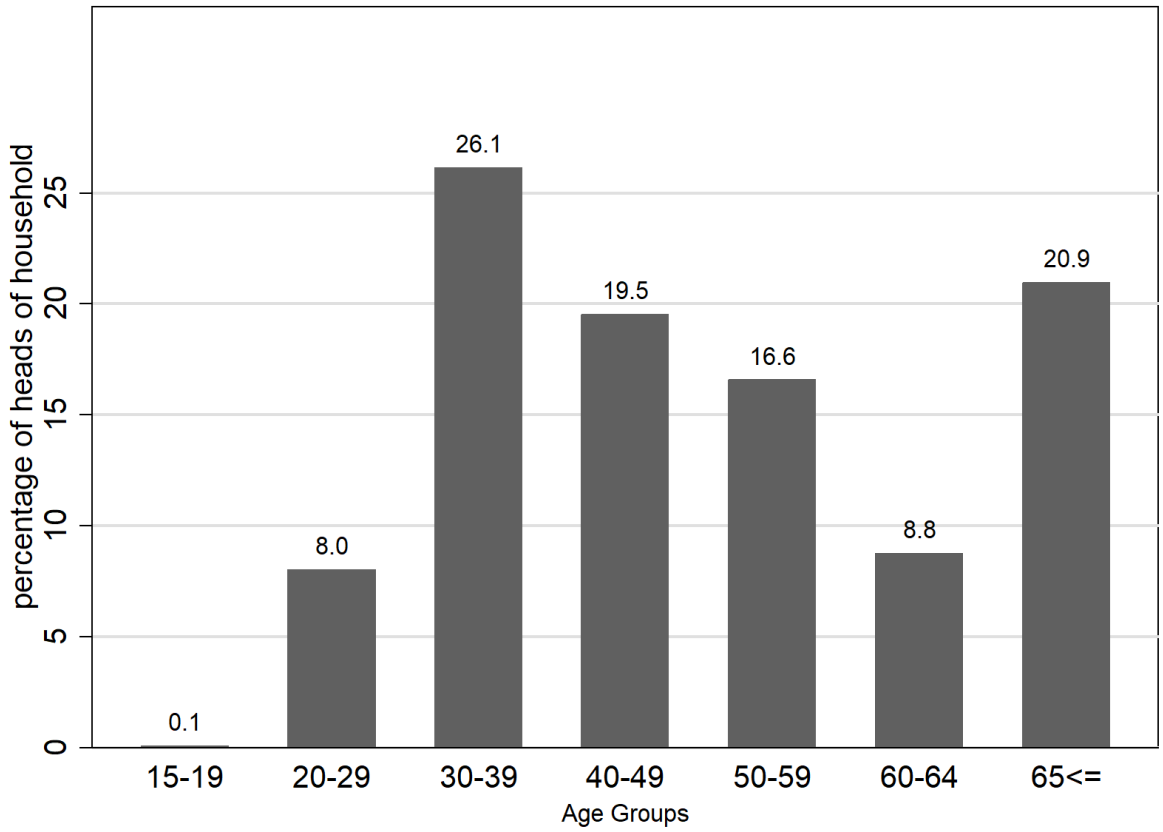
Source: Author's calculations based on JLMPS 2010, 2016

Figure 20: Housing conditions for the newly-formed Jordanian households classified by location (percentage of households with condition)



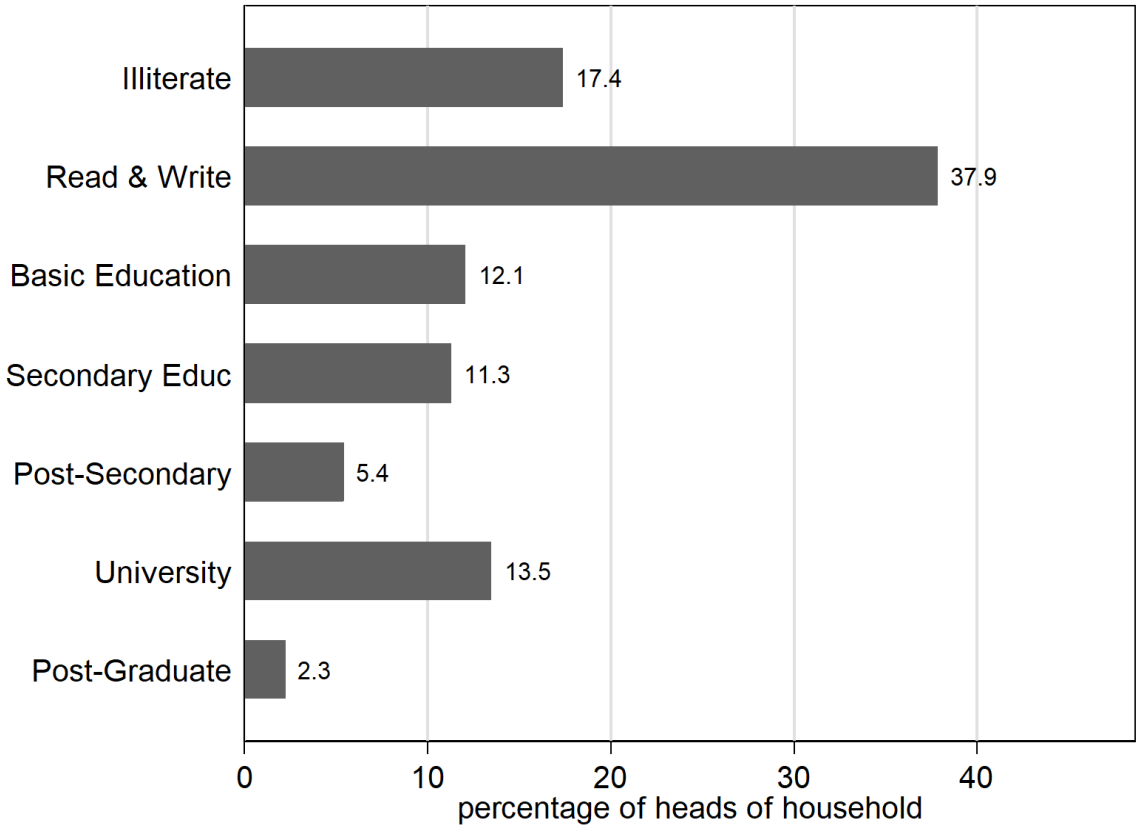
Source: Author's calculations based on JLMPS 2010, 2016

Figure 21: Age groups of refugee heads of household (percentage of heads of household)



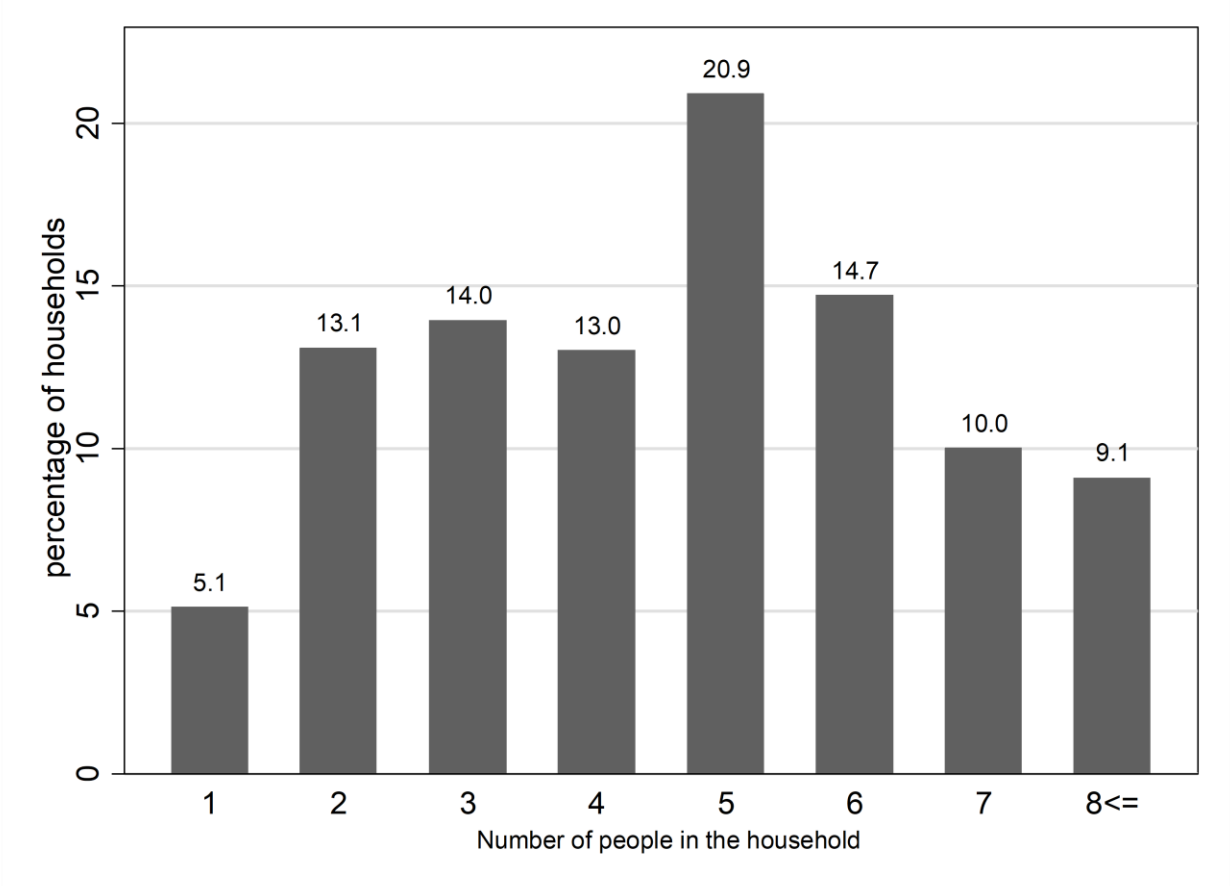
Source: Author's calculations based on JLMPS 2016

Figure 22: Education level of refugee head of household (percentage of heads of household)



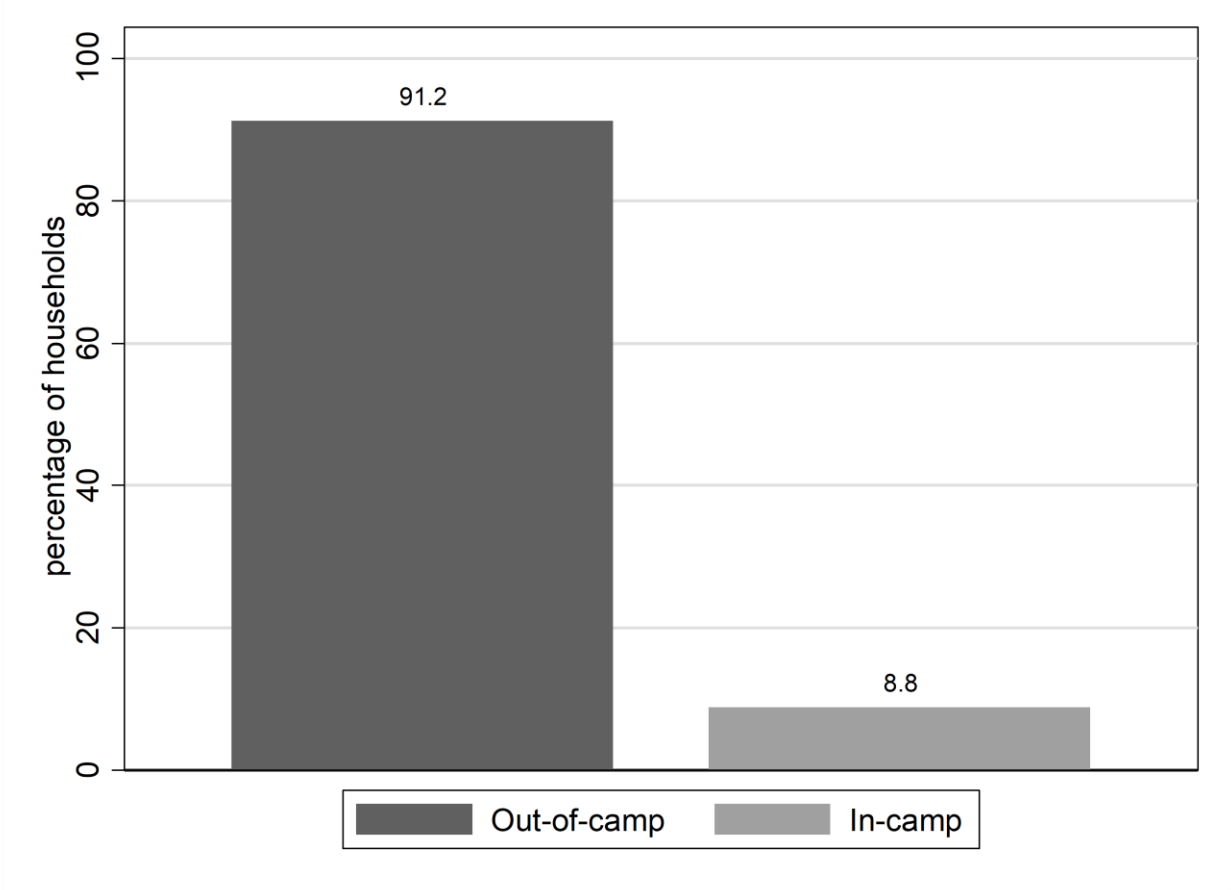
Source: Author's calculations based on JLMPS 2016

Figure 23: Refugees' household size (percentage of households by household size)



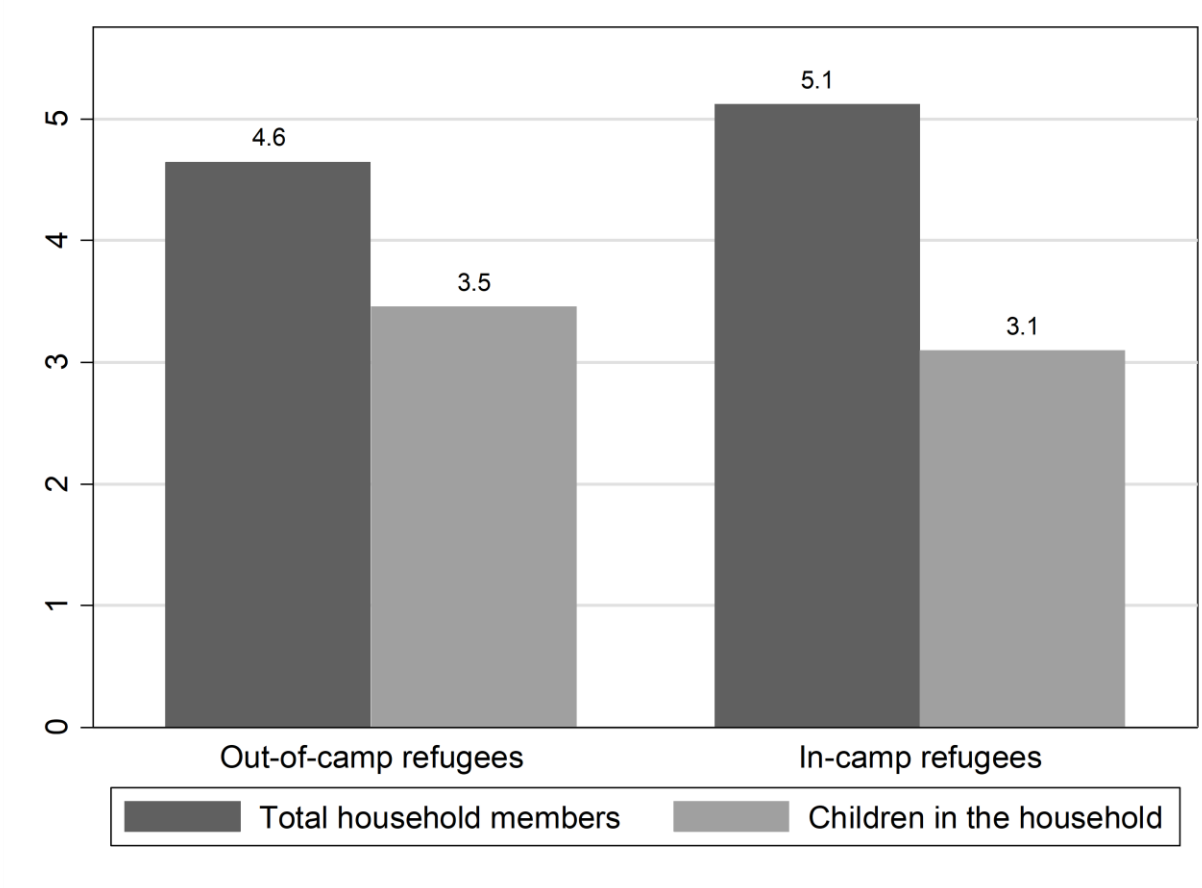
Source: Author's calculations based on JLMPS 2016

Figure 24: Type of refugees' accommodation (percentage of households)



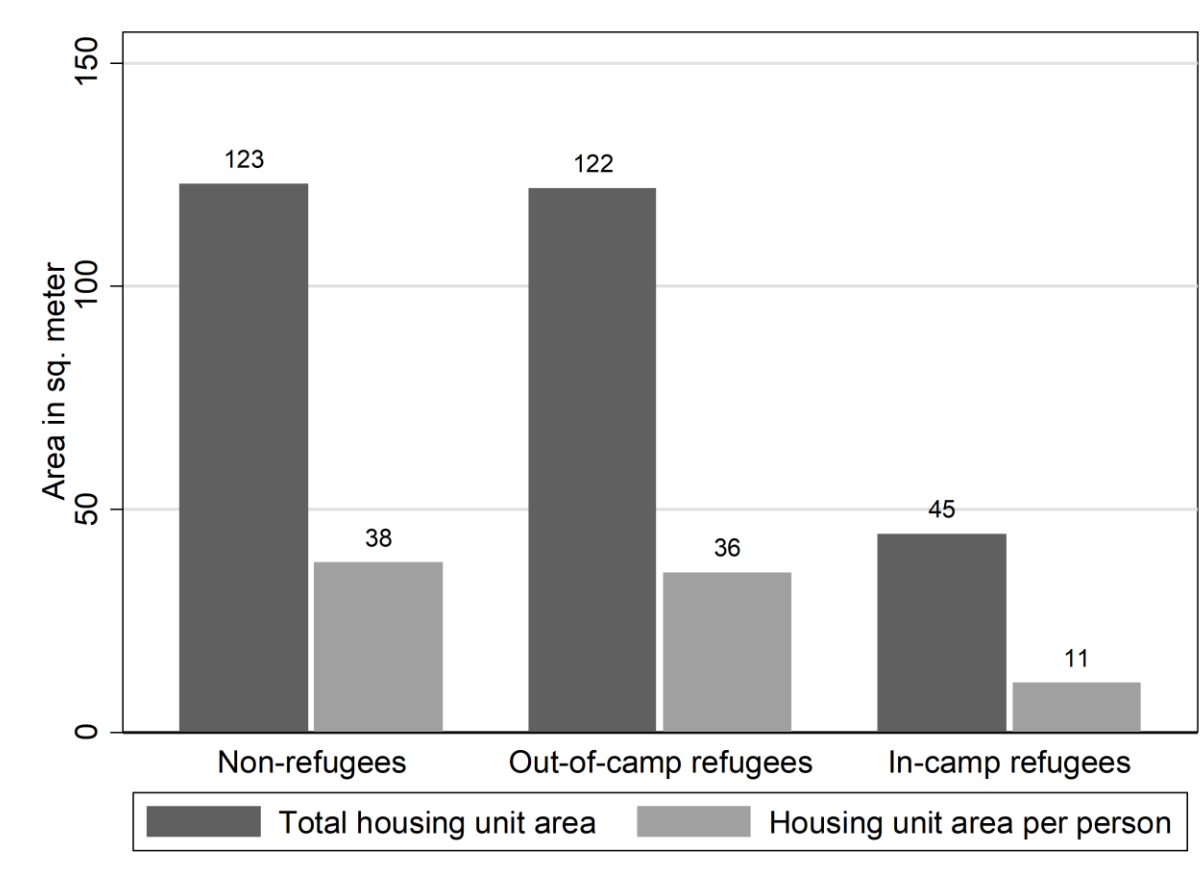
Source: Author's calculations based on JLMPS 2016

Figure 25: Average number of members per household



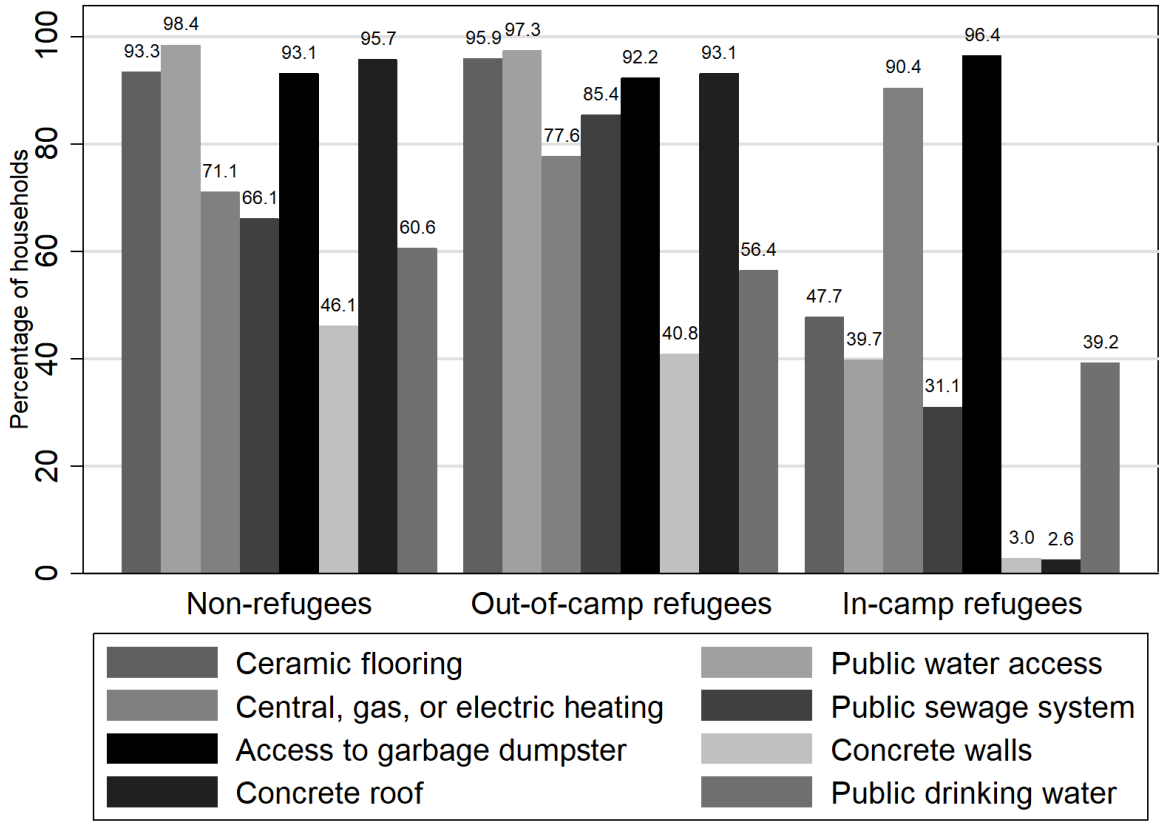
Source: Author's calculations based on JLMPS 2016

Figure 26: Dwelling area in square meters for non-refugees, out-of-camp and in-camp refugees



Source: Author's calculations based on JLMPS 2016

Figure 27: Housing conditions for non-refugees, out-of-camp and in-camp refugees (percentage of households with condition)



Source: Author's calculations based on JLMPS 2016

Table 1: Ownership of durable assets for non-refugees', off-camp refugees', and on-camp refugees' households

VARIABLES	Non-refugees (1)	Out-of-camp refugees (2)	In-camp refugees (3)
Fridge	0.97	0.97	0.51
Freezer	0.11	0.10	0.02
Oven stove	0.83	0.73	0.09
Washer	0.95	0.95	0.56
Color TV	0.96	0.96	0.86
Satellite	0.96	0.95	0.76
Mobile	0.96	0.95	0.79
Microwave	0.43	0.31	0.00
Air Condition	0.19	0.14	0.00
Vacuum cleaner	0.61	0.42	0.00
Space heater	0.54	0.44	0.37
Water filter	0.14	0.22	0.01
Car	0.45	0.30	0.00
Iron	0.71	0.56	0.02
Fan	0.75	0.68	0.35
Laptop	0.18	0.15	0.00
Water heater	0.53	0.51	0.00
Number of observations	6,182	673	374

Note: Author's calculations based on JLMPS 2016.