

The Effect of Squatter Housing on Income Distribution in Urban Turkey

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Summary. The purpose of this study is to examine the effect of home-ownership on income distribution in Turkey. Making use of raw data from an official income distribution survey which provides information on cash and in-kind incomes of household members and imputed rents for home-owners, it is found that home-ownership has an equalising effect on income distribution in the urban areas of Turkey. This result is attributed to the fact that many low-income families reside in squatter housing built at the outskirts of large cities.

1. Introduction

Turkey is among the many developing countries known for their highly unequal income distribution. In 1994, the top 20 per cent of households received 55 per cent of the total income while the bottom 20 per cent had less than 5 per cent (SIS, 1997). Following the economic crisis of 2001 and the 2002 general elections that resulted in a landslide victory for a non-centrist party which received a substantial amount of support from the economically disgruntled masses, income distribution in Turkey has become an even more relevant topic.

One of the main challenges in the study of income distribution is to account properly for the well-being of households in the presence of transfers and non-cash benefits. Home-ownership in particular is an important factor that has to be accounted for, although data limitations do not always allow for such analysis. In this study, we make use of data from an official income distribution survey to examine the effect of home-ownership on

income inequality in Turkey. We do this by defining imputed rents for home-owners and adding this amount to the household income. The effect of this control on income distribution is ambiguous. Under the assumption that home-ownership is concentrated in upper-income groups, the inclusion of imputed rent in household income is expected to add to the degree of income inequality.

However, to the extent that home-ownership increases with age and that older individuals, who live on retirement income, have relatively lower earnings, the correlation between household income and imputed rent is weakened so that an improvement in income inequality might also be expected. In a number of developed countries, the inclusion of imputed rent in household income has been found to produce a favourable effect on income distribution. For instance, Smeeding *et al.* (1993) find that imputed rent has an equalising effect for Canada, the Netherlands, Sweden and the US, but not for West Germany. For Australia, Yates (1994) finds that imputed rent has a minor impact

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on income inequality. It reduces the Gini coefficient by a single point.

For Turkey, we conjecture that imputed rent is more likely to have a non-negligible positive impact on income distribution for the reason that, in addition to the usual explanations offered above, there is another factor at play that might work to improve the distribution. Our conjecture rests on the *gecekondu* (squatter housing) phenomenon observed in Turkey particularly since urbanisation began in the 1950s. *Gecekondu* literally means 'landed overnight' in Turkish. Legally, what is understood from the term is

a dwelling erected on land and lots which do not belong to the builder, without the consent of the owner, and without observing the laws and regulations concerning construction and building (Law no. 775, dated 1966; trans. by Karpat, 1976, p. 16).

Gecekondus are very much part of the urban scene in Turkey. They are usually found at the outskirts of the major cities, built on state property or on land belonging to the municipalities. The fact that they are rarely built on private property has afforded them certain protection from legal machinery. In fact, in earlier decades, the sympathy the *gecekondu* settlers had won from the public as poor individuals making an attempt to escape from rural poverty has discouraged the politicians from making a serious attempt to curtail the invasion of public land. Over time, the *gecekondu* settlers gained an important leverage as informal pressure-groups during elections. Recognising the voting potential of such groups, the political parties from various wings either ended up granting amnesties to *gecekondus* or made promises for their legalisation should they assume power. Such open encouragement and the actual legalisation of *gecekondus* fuelled the further invasion of public property and paved the way to widespread land speculation.

Their existence for over five decades has triggered a large number of studies on *gecekondus*. Among the state agencies, the Ministry of Reconstruction and Settlement and the State Planning Organisation have conducted

studies to measure the extent of the problem at various points in time and to assess the needs and problems of the settlers. Academic interest in the problem has been rather fertile as well. Academicians from various disciplines ranging from urban and regional planning to sociology and anthropology have taken an interest in the *gecekondu* phenomenon as a by-product of the modernisation and urbanisation project of the state. However, *gecekondus* have been less of an interest for the economists in Turkey. Even in income distribution studies, they are rarely mentioned. Hence, this study attempts to complement previous studies on *gecekondus* and income distribution by analysing *gecekondus* from an income distribution perspective.

The rest of the paper is organised as follows. Section 2 gives a brief overview of the *gecekondu* phenomenon in Turkey in an attempt to illustrate the magnitude of the problem and its evolution. Section 3 lays out the data and the methodology used. Section 4 presents the empirical work on the impact of home-ownership on income distribution and investigates whether the observed patterns could be related to the presence of *gecekondus*. Section 5 questions the extent to which the *gecekondu* phenomenon can be considered as a redistribution project and addresses some practical issues that complicate the measurement of redistributive effects. Section 6 concludes the paper.

2. The *Gecekondu* Phenomenon in Turkey

During the past half-century, the population of Turkey has tripled to reach about 70 million while the urban population has increased nearly eight-fold. The massive urbanisation that mainly took the form of internal migration from rural to metropolitan areas brought with it many problems including excessive demand for affordable housing. According to 2000 figures released by the Undersecretariat of Housing, there are around 10 million households in the urban areas of Turkey. In this sub-population, the rate of home-ownership is 59.8 per cent and the tenancy rate is 31.6 per cent. The share

of those residing in lodgings is 2.2 per cent and the remaining 5.5 per cent are those living in others' homes without paying rent.¹

The growing unmet need for housing led to the adoption of illegal solutions, not unlike those observed in other developing countries around the world (see, for example, Berner, 2000; Garr, 1996; Gilbert, 1981; Nathan and Spindler, 1993, 2001). Taking advantage of the lack of strict law enforcement and—at times—deliberate negligence by local authorities for political concerns, most immigrants invaded public land and became owners of *gecekondu*s, located generally at the outskirts of large cities. None of these developments is unique to Turkey. De Soto (2000) points out that obstacles to legality in developing countries coupled with the need for affordable housing have led the newcomers to the urban areas to become 'extralegal'—i.e. to move out of the legal system. However, it is also true that rural–urban migration and thus the current rate of urbanisation in Turkey have been realised partly because of the availability of squatting opportunities. As argued by Buğra and Keyder (2003), the social integration of rural migrants in urban society has been made possible by the very existence of squatting possibilities that met the housing needs of the migrant rural poor.²

Keleş (2002) recounts the history of the *gecekondu* phenomenon in Turkey in three stages. In the early stages of *gecekondu* development prior to the 1960s, the *gecekondu*s were self-built by their occupants with the help of relatives or neighbours. During this period, the *gecekondu*s were overwhelmingly owner-occupied so that there was very little renting out. Şenyapılı (1978) further notes that the dwellers primarily used their past savings to finance their *gecekondu*s. In the second stage that covered the 1960–70 period, the *gecekondu*s were again constructed mainly to meet the housing needs of their occupants, but the excess supply over and above the basic needs were either rented out or sold off. So, besides providing shelter to the relatively poorer sections of society, *gecekondu*s in this period also constituted a source of unearned income for households.

In the final stage covering the post-1970 period, the construction of *gecekondu*s increasingly became commercialised and, parallel to these developments, the share of tenants among the squatter settlers increased dramatically.

Commercialisation is claimed to have especially accelerated in the post-1980 period which marks the transition to neo-liberal policies (FEF, 1996), although Şenyapılı (1978) notes that land speculation and the commercialisation of *gecekondu* construction were observed as early as the 1950s. Increased impoverishment of the urban poor in the post-1980 era has led many to seek alternative ways of making ends meet by joining the plundering of public land. This is also the period in which the *gecekondu* districts increasingly lost their single-storey, detached-house look and turned into apartment buildings. One of the major factors enabling this dramatic transformation was the amnesty granted to the *gecekondu*s in 1984 (Tekeli, 1993). The law which was enacted by the civilian Motherland Party government that came to power following the military rule of the 1980–83 period, not only legalised the illegally built squatter houses, but also allowed the 'owners' to add a maximum of four storeys to their buildings. These developments also help to explain the increasing proportion of tenants among the *gecekondu* populations. In a 1985 study, the proportion of tenants among the *gecekondu* population in Istanbul, Ankara and Izmir—the three cities that house the largest number of *gecekondu*s—is found to be 32.7 per cent, 28.5 per cent and 27.7 per cent respectively (Alpar and Yener, 1991). In a recent field survey, Işık and Pınarcıoğlu (2001) find that, in the Sultanbeyli *gecekondu* district of Istanbul, over 50 per cent of the newcomers are tenants.

Other important contributing factors to the commercialisation of the older *gecekondu* districts in particular are their increasing proximity to the city centre as cities grow outwards over time and the provisioning of public utilities to these districts. The rehabilitation of the *gecekondu*s has been an important objective of the governments from very early on,

and these concerns have been reflected in the Five Year Development Plans since the 1960s. Although the living conditions in many squatter districts are considerably worse than the city average, they are provided with basic utilities such as electricity and tap water. Over time, the infrastructure in many squatter settlements has improved immensely as they gained legal recognition and some have even become indistinguishable from middle-income neighbourhoods complete with their schools and children's parks.

According to 2002 estimates, 27 per cent of Turkey's urban population resides in *gecekondu*. This figure is estimated at 62.5 per cent in metropolitan areas such as Ankara and at over 50 per cent in Istanbul and Izmir (Keleş, 2002). Keleş employs a population cut-off point of 10 000 to identify urban settlements. If we were to employ a 20 000 cut-off point, which is the currently employed definition of the State Institute of Statistics (SIS), the above-listed proportions are likely to become higher since *gecekondu*s are concentrated in metropolitan areas. To provide a sense of how fast the *gecekondu*s have occupied the urban scene, consider the change in the proportion of the urban population living in squatter settlements over time. While 22 per cent of the urban population of Ankara were living in squatter settlements in 1955, this figure became 65 per cent in 1995 and, as mentioned above, 62.5 per cent in 2002 (Keleş, 2002). For the country at large, these figures increased from 5 per cent in 1955 to 27 per cent in 2002.

3. Data and Methodology

In the empirical work, we make use of the raw data from the 1994 Household Income Distribution Survey (HIDS) conducted by the State Institute of Statistics of Turkey. In terms of scope and coverage, the 1994 survey is the most extensive income distribution study conducted to date. It covers 80 380 individuals from 18 262 urban households which, in terms of nationwide figures, translate into nearly 32 million individuals from 7.5 million households in the 7 regions of the

country. The survey provides data on various sources of income including cash and in-kind earnings (including self-employment income), unearned income (such as interest and dividends) and transfers from private and public sources, net of tax. In addition, the survey provides information on imputed rent for owner-occupied dwellings. The imputed rent information is obtained by asking the dweller to identify what she would have paid for a similar service in the same neighbourhood. The reported imputed rent information is net of operating expenses. However, it does not take into account real estate taxes or interest due on a mortgage.³ In the presence of a large number of *gecekondu*s, the omission of the former will actually understate the equalising effect of imputed rent since the *gecekondu* dwellers do not have tax liabilities. However, the effect of the omission of the latter is not clear. As discussed earlier, early squatting took the form of self-help projects, so an interest liability did not arise. In recent years, the commercialisation of *gecekondu*s implies some interest liability unless transactions are made in cash which seems quite unlikely. The lack of studies to investigate the mechanisms through which *gecekondu* dwellers have acquired their homes in recent years prevents us from making an *a priori* judgement about the relative magnitude of the omission and its relevance for our study.

The reference period of the survey is the year 1994. The data were collected retrospectively in January 1995. The survey identifies the households who reside in their own homes, but does not provide information on whether they hold a legal title to their property.⁴ For households that reside in their own homes, imputed rent information is provided so that we can define household income inclusive or exclusive of imputed rent. In the data, imputed rent information is also provided for families who reside in lodgings owned by the government or by their employers without paying rent. The number of such households is rather small (1.6 per cent), but we have nevertheless constructed the imputed rent income to exclude such households. Instead,

the imputed rents received by such households are categorised under earnings since such income technically constitutes part of the compensation package for the worker. Taking into account the rather high level of inflation in Turkey (of the order of 75 per cent per year during the 1990s), we also needed to correct our figures for the cost-of-living differences across the various regions. We have done this using province-level CPI figures reported by SIS (1995).⁵

In order to account for the effect of homeownership on income distribution, we carry out the inequality analysis by defining household income to include and exclude imputed rent. We measure income inequality using the Gini coefficient, the squared coefficient of variation (SCV) and the Atkinson index (with the inequality aversion parameter equal to 1), which are among the most commonly used measures of income inequality.⁶ The Gini coefficient is known for its sensitivity to income differences around the mode while the SCV is equally sensitive to transfers that take place at either end of the income distribution (Sen, 1997). The Atkinson index, on the other hand, is more sensitive to income differences at lower end of the income distribution, especially for high values of the inequality aversion parameter for which it is defined (Cowell, 1995).

The empirical work is based on disposable household income figures corrected by an adult equivalence scale. Adult equivalence scales are devices used to adjust household incomes for differences in needs related to household size and composition. Their main purpose is to account for the presence of economies of scale within the household to obtain a more realistic measure of the household's well-being. Among the various choices, the scale used here is a two-parameter scale that takes into account both household size and composition via the ages of household members.⁷ To adjust the household income, first the number of adult equivalents in the household is calculated by counting the first adult in the household as 1 person and each of the other adults as 0.5 adults. The children—i.e. household members aged less

than 14—are counted as the equivalent of 0.3 adults. Finally, adjusted household income is obtained by dividing household income by the number of adult equivalents. This parameterisation is usually referred to as the Eurostat scale.⁸

4. Empirical Work

In the empirical work, we first look at the degree of income inequality in urban Turkey with an emphasis on the impact of homeownership. Our preliminary finding that income distribution actually improves with the inclusion of imputed rents has prompted us to inquire into the underlying reasons. As possible reasons, we consider squatting, life-cycle effects and the housing policies of the state.

4.1 *Income Distribution and Squatting*

Income distribution in urban Turkey is highly unequal, as the figures in Table 1 illustrate. The income quintiles shown in the table are constructed by ordering the households with respect to their income (excluding imputed rent) and then dividing them into five equal groups. The mean income of the bottom 20 per cent is only about one-fifth of the national average. Consequently, households in this group receive less than 5 per cent of the national income. In contrast, the top 20 per cent gets over three times the mean income and their share of national income is about 60 per cent. The Gini coefficient for the country at large is found to be 0.556 (see Panel A in Table 1). This is an extremely high figure when compared with other OECD countries, the highest and lowest figures for which are estimated at 0.343 for the US and 0.223 for Finland (Smeeding and Gottschalk, 1995). As would be expected, the degree of income inequality is particularly high in the top 20 per cent of households. However, what is interesting to note is that the degree of inequality in the bottom 20 per cent is also quite high. In other words, this income-group seems to include households with very diverse income profiles.

Table 1. Descriptive statistics on household income and its distribution

Quintile	Mean income	Relative to mean	Income share (percentage)	SCV	Gini	A(1)
Panel A: Household income excluding imputed rent						
Bottom	409.8	0.216	4.3	0.072	0.150	0.056
2nd	703.5	0.371	7.4	0.013	0.067	0.021
3rd	1027.3	0.541	10.8	0.011	0.060	0.020
4th	1564.1	0.824	16.5	0.021	0.083	0.027
Top	5781.2	3.047	60.9	10.912	0.498	0.370
All	1897.3			21.358	0.556	0.420
Panel B: Household income including imputed rent						
Bottom	486.1	0.227	4.5	0.063	0.141	0.053
2nd	830.7	0.388	7.8	0.013	0.066	0.023
3rd	1201.0	0.562	11.2	0.011	0.062	0.023
4th	1810.8	0.847	16.9	0.019	0.078	0.031
Top	6362.8	2.975	59.5	9.264	0.478	0.352
All	2138.5			17.429	0.540	0.399

Note: Income figures are in 1987 thousand TLs and are corrected using the Eurostat scale.

Panel B in Table 1 shows that income distribution in Turkey improves upon the inclusion of imputed rent. This is evident both from the increase in the mean income of the bottom 20 per cent as a percentage of the overall mean income and the decrease in inequality measures computed for the country at large. For instance, when imputed rent is included in household income, the Gini coefficients for the country in general and for the bottom 20 per cent in particular go down from 0.556 to 0.540 and from 0.150 to 0.141 respectively. Despite the lack of improvement in certain income-groups, the improvements in others seem to result in a general improvement in the overall income distribution. This result is confirmed using the other inequality measures. The SCV declines from 21.36 to 17.43 with the inclusion of imputed rent. Likewise, the Atkinson index ($e = 1$) goes down from 0.420 to 0.399. In sum, we conclude that home-ownership improves the income distribution in Turkey.⁹

To analyse further the change in the composition of income quintiles with the inclusion of imputed rent, it might also be instructive to look at the proportion of households changing positions as a result of the redefinition of income to include and exclude

imputed rent. As households move between quintiles, the shifts may help to generate more homogeneous groups, thereby pulling the within-group inequality down. We have already seen that this is true for certain groups, but not for others. In addition, as the distribution becomes more compact, the between-groups inequality is also expected to go down, leading to an overall decline in income inequality. To analyse the extent of this movement within quintiles, we have constructed Table 2. The off-diagonal observations indicate the cases where the households switch from one quintile to another after the inclusion of imputed rents in household income such that the entries below the main diagonal are upward moves. We observe that roughly 15 per cent of the households in the bottom quintile move up, in most cases to the 2nd quintile. The proportion making it all the way up to the 4th quintile after the inclusion of imputed rents in household income is rather minimal (0.5 per cent). At the other end of the distribution, around 10 per cent of the households in the top quintile move down to the 4th quintile after the inclusion of imputed rents. Overall, 21 per cent of the households move up or down the distribution and switch to a different

Table 2. Quintile assignments based on the two measures of household income

Quintile assignments based on income including imputed rent	Quintile assignments based on income excluding imputed rent				
	Bottom	2nd	3rd	4th	Top
Bottom	1,278,689 (85.09)	224,449 (14.93)	0 —	0 —	0 —
2nd	196,566 (13.08)	1,023,823 (68.10)	281,627 (18.74)	0 —	0 —
3rd	19,636 (1.31)	217,911 (14.50)	994,819 (66.20)	271,881 (18.08)	0 —
4th	7,892 (0.53)	37,142 (2.47)	202,934 (13.50)	1,102,287 (73.31)	152,775 (10.16)
Top	0 —	0 —	23,361 (1.55)	129,516 (8.61)	1,350,454 (89.84)

Note: Table entries in each cell are frequencies with column percentages in parentheses.

quintile as a result of the redefinition of household income. The overall impact of these movements is to reduce both the within- and between-groups inequalities. However, moving from a definition of income that excludes imputed rent to a definition that includes imputed rent has a relatively bigger impact on reducing the within-group inequality.

As an alternative tool for examining the impact of the inclusion of imputed rent on income distribution, we look at the relationship between household income and the proportion of households who have reported themselves as residing in their own homes. To ease discussion, we shall call such households 'home-owners' although, as mentioned earlier, they might not hold a legal title to their homes. In Table 3, we report the shares of home-owner households and average imputed rent by quintile. Overall, we observe that 68.8 per cent of the urban households in Turkey are home-owners and imputed rents correspond to 11.8 per cent of total household disposable income.¹⁰

When household incomes are defined to include imputed rents, we observe that the share of home-owners goes up with income and so does the average imputed rent of home-owners. Both of these patterns are reasonable since home-ownership is expected to be concentrated in high-income groups and

these groups are likely to live in higher-valued houses. However, once imputed rents are excluded from household incomes, the positive association between home-ownership and income weakens in the sense that home-ownership increases monotonically only beyond the bottom quintile. In fact, the second-largest share of home-owners turns out to be in the lowest income quintile with over 71 per cent. These results can again be reconciled with the claim that some households with low household income become home-owners, and thus better-off, through extralegal means.

4.2 *The Role of Housing Policies and Life-cycle Effects*

One may assert that the results produced here may be explained by a completely different phenomenon than squatter housing. If home-ownership is widely spread out across urban households because of the availability of government-supported, low-cost, housing projects, we would see a fairly uniform distribution of home-ownership across quintiles which would in turn have a favourable impact on income distribution. However, such projects that aim to provide affordable housing to the urban poor are non-existent in

Table 3. Share of home-owners and average imputed rent by income quintile

Quintile	Income orderings excluding imputed rent				Income orderings including imputed rent			
	Share of home-owners (percentage)	Imputed rent of home-owners	Imputed rent as a share of household income (percentage)	Average age of the household head	Share of home-owners (percentage)	Imputed rent of home-owners	Imputed rent as a share of household income (percentage)	Average age of the household head
Bottom	70.7	353.2	23.4	44.5	59.6	246.0	12.9	43.1
2nd	69.1	472.0	19.0	44.3	66.0	401.7	15.0	43.7
3rd	66.9	605.6	16.7	44.0	67.6	509.5	13.9	43.9
4th	66.1	752.0	13.7	43.6	73.0	733.4	14.7	44.4
Top	71.2	1380.1	8.1	45.2	77.8	1503.5	9.8	46.5
All	68.8	715.4	11.8	44.3	68.8	715.4	11.8	44.3

Note: Imputed rent figures are uncorrected quintile averages in 1987 thousand TLs.

Turkey. The single most important initiative the state took to increase the housing supply in urban areas occurred in 1984 with the passage of the Mass Housing Act and the establishment of the Mass Housing Fund. However, this initiative mainly served the needs of the middle- and upper-income groups (Buğra, 1998; Keleş, 1990). Likewise, the State Housing Bank (Emlak Bankası) that was established to provide housing credit and the Workers Social Security Fund (SSK) that provided housing credit but only to its members (composed of formal-sector wage-earners) have hardly served the poor (Öncü, 1988).

Another explanation, which has been proposed for Western countries as the main reason for the improvement in household income with imputed rent, has to do with life-cycle effects—namely, that home-ownership is concentrated among older groups. It might very well be that home-ownership in Turkey is also concentrated among older groups who typically have lower incomes in the form of retirement benefits. Treating the household as the unit of analysis and employing the age of the household head to identify the household's position in the life cycle, we indeed find home-ownership to increase with age except for the oldest group (see Table 4). Stated more formally, the point-biserial correlation

coefficient—used to estimate the degree of relationship between a binary and a continuous variable—between home-ownership and age is positive with a value of 0.29.

Household income, on the other hand, increases with age, reaches a peak during the prime-age years of the household head and decreases beyond that point (see Table 4). The only exception to this general pattern is observed for the eldest group for whom household income is the highest of all households. It might be conjectured that higher household income results because older individuals live with their children who tend to have higher household income. However, a closer examination shows that the proportion of elderly household heads living in an extended family setting is not different from the population average (see Table 4). In fact, younger households have a higher likelihood of being part of an extended family. Another explanation for higher household income among the elderly might be simply that it reflects accumulated wealth. In fact, this seems to be a more plausible conjecture since the State Institute of Statistics defines household headship on the basis of contribution to household income. Hence, it would seem that elderly households are made up of a select group of elderly who have a high enough income to

Table 4. Home-ownership and imputed rent by age categories

	Age category (years)							All
	<26	26–35	36–45	46–55	56–65	66–75	76+	
Share of home-owners (percentage)	49.8	52.1	65.7	79.0	88.0	91.1	88.9	68.8
Share of extended households (percentage)	40.5	17.5	11.7	20.3	24.7	19.8	19.5	18.2
Household income excluding imputed rent	1231	1509	1749	2407	2305	1944	3298	1897
Household income including imputed rent	1342	1661	1947	2660	2639	2472	4170	2139
Imputed rent	220	311	455	587	640	864	1121	492
Imputed rent of home owners	442	597	693	743	727	949	1261	715
Population share (percentage)	3.5	26.8	30.5	18.2	13.4	6.0	1.6	100.0

Notes: The categorisation is based on the age of the household head. Household income figures are category averages in 1987 thousand TLs and are corrected using the Eurostat scale. Imputed rents (uncorrected) are also in 1987 thousand TLs.

afford to live alone or invite their children to live with them.

In an attempt to establish whether or not life-cycle effects are the driving-force behind the results in the previous sub-section, we first examine the age characteristics of the households with respect to the income quintiles employed earlier. When household income is defined to include imputed rent, we found that the average household head age steadily increases from 43.1 to 46.5 years as we move towards the top quintile (see Table 3). As would be expected, the differences in the averages become less pronounced when imputed rents are ignored. In that case, the average age ranges from 43.6 years in the fourth quintile to 45.2 years in the top quintile. The average in the bottom quintile is 44.5 years. We contend that these differences are not significant enough to invalidate our earlier claims regarding to reasons behind the patterns observed in our distribution analysis.

As a second check of the robustness of our results, we generate a data-set that excludes older households who happen to have significantly higher rates of home-ownership and repeat our income distribution analysis on a sample that excludes households with a household head older than 55 years of age. The excluded age-groups that make up around 20 per cent of the urban population have home-ownership rates of around 90 per cent, but not necessarily the highest income averages. In the new sample where household income excluding imputed rent is monotonically increasing with age and the life-cycle effects are expected to be minimal, our finding is that the key patterns presented in the previous sub-section remain unchanged such that the inclusion of imputed rents improves the income distribution. In fact, the extent of the improvement is rather similar in the full sample and the sub-samples. For instance, the improvement in the Gini coefficient is of the order of 0.016 for the full sample and, in the case of the sub-sample consisting mostly of younger households, the improvement is of the order of 0.015 (see Appendix, Table A1).

Employing the other two inequality measures, the SCV and Atkinson, does not change the result though a slightly lower improvement is observed as compared to the change in the Gini coefficient.

In light of these findings, it seems that the age factor indeed works to reduce the income inequality, but that the *gecekondu*s are primarily responsible for the apparently equalising effect of home-ownership reported in this section. To speculate further on the divisions within Turkish society, we could also argue that middle-income families, who embody within them the lowest share of home-owners, are more likely to save money for years before they are able to buy a house (most likely to be just an apartment) of their own with a legal title. Buğra (1998) reports that the proportion of new dwellings established by housing co-operatives managed by the Mass Housing Fund amounts to a meagre 25 per cent of the total housing stock in Turkey. Housing co-operatives are the major means through which middle-income families acquire their homes. The rather low percentage of the total housing stock accounted for by such co-operatives is indicative of the inaccessibility of even middle-income households to the housing market. Keleş (1990, p. 156) comments on the price of so-called social housing which under the law qualify for state credit to be “beyond the reach of low and even middle income households”.

5. *Gecekondu* as a Redistribution Project

The *gecekondu* phenomenon can be viewed as an informal redistribution process. Where the state fails to provide social assistance to the poorer sections of society, the poorer households effectively force the state into an income transfer which takes the form of imputed rents by occupying state land. To the extent that such households make up a significant portion of urban dwellers, we expect the income distribution in urban areas to improve.¹¹

There are two possible objections to viewing squatting as a redistribution process. A sympathetic critic would claim that squatter

housing is hardly a transfer since it does not really give the dweller command over resources. For instance, De Soto (2000) argues that extralegal property such as squatter housing is 'dead capital'. In other words, it cannot be used as collateral in any formal transaction. This extralegality forces these communities to operate in a different social set-up and to respect the informal social contracts they draw up rather than the legal system of the country. De Soto further argues that this extralegal set-up causes the poorer sections of society to remain undercapitalised. In this sense, although the *gecekondu* phenomenon can be viewed as a redistribution process, it does not help the poorer sections to rise beyond a certain level as their property is not recognised outside the system they have created.¹² This point draws attention to the dynamic nature of the process through which income distribution is affected by squatting, even though the analysis presented here is a static one where we consider the structure of the income distribution at a point in time. As new data-sets become available, it will be possible to evaluate the changing impact of imputed rents on income distribution. If squatter housing is 'dead capital' and the occupants of *gecekondu* fail to maintain the gains from squatting over time as they miss out on the wealth accumulation enjoyed by non-squatters, the equalising effect of *gecekondu* will diminish.

As mentioned earlier, from time to time, governments in Turkey have granted amnesties to squatter settlements which effectively turned the informal redistribution process into a formal one. Obviously, this gives the settlers greater command over their resources. In analysing the effect of *gecekondu* on income distribution, we have ignored this potential impact of legalisation. At the time of the writing of this paper, the ruling AK party was getting ready to issue yet another amnesty to squatter settlements. This is not a surprising development since the AK party has received substantial support during elections from the urban poor living in *gecekondu*.

This is exactly where the opposition to using squatting as a means of redistribution

comes in. It creates a client–patron relationship between the political parties and the voters, and legalising *gecekondu* essentially turns into the appropriation of rents. Legalising squatter houses brings no additional cost to the government since it does not require any outlays but simply the transfer of ownership rights from the state to the individuals. Öncü (1988) notes that the local governments in Turkey have indeed effectively used their regulatory and bureaucratic powers in the housing market to generate political gains. And in fact, the appropriation of rents in the housing market has constituted one of the key political strategies of the multiparty system in the post-1950 era. The amnesties granted to the *gecekondu* in the past never received much opposition from the public as *gecekondu* were viewed as self-help projects so that legalisation meant helping out the poor. However, over the years, land speculation and the commercialisation of *gecekondu* have turned public opinion against the *gecekondu* or, at best, have caused the public to view with caution any legislation directed towards *gecekondu*.

Regardless of whether one treats the *gecekondu* as a redistributive scheme or not, it might be interesting to look at the amount of 'transfers' involved. In other words, what is the magnitude of imputed rents that originate from *gecekondu* as a proportion of total household income generated in the country? As mentioned earlier, we have no reliable way of identifying the *gecekondu* dwellers in our sample. To get an approximate figure for the amount of the transfer, we make the assumption that all poor households that report imputed rents live in *gecekondu*. We identify the poor households in two different ways. One, we treat all the households who fall in the bottom 20 per cent of income distribution (exclusive of imputed rent) as 'poor'. Alternatively, we employ a more commonly used definition and classify a household as 'poor' if its income is less than half the median income. In determining the income rankings of the households, we again correct for household size and composition using the Eurostat scale. According to the first

measure, imputed rents are about 1.2 per cent of total household income generated (from sources other than imputed rent) in urban Turkey. According to the second measure, it is about 0.9 per cent of household income. These figures are rather high if one considers that the sum of imputed rents for poor and non-poor households as a proportion of total household income is about 11.8 per cent. We can also compare these figures with other transfer schemes in Turkey. The Social Solidarity Fund established in 1986 to provide assistance to the needy who lack social security coverage, for instance, has a 0.2 per cent share in GNP (World Bank, 2000, p. 63). Likewise, the Green Card scheme that provides free health care services to the poor has a 0.06 per cent share in GNP. Total public expenditures on social assistance sum to 0.4 per cent of GNP. Although it may not be quite appropriate to compare the 0.9–1.2 per cent figure based on disposable income with such assistance project shares given in national income, this rough comparison nevertheless reveals that imputed rents originating possibly from squatting are quite substantial.

Admittedly, the transfer issue is more complicated than what is presented here. As discussed earlier, an increasing proportion of *gecekondu*s are turned into apartment buildings and are rented out. Rental incomes reduce the income gap between non-squatters and the particular group of *gecekondu* dwellers who are the recipients of this income, while at the same time increasing the income inequality among the squatters themselves. In our study, rent incomes from *gecekondu*s are already considered within household income so that it is not clear how the income distribution would have changed without them. Işık and Pınarcıoğlu (2001) make the point that ‘landlords’ of the *gecekondu*s in the Sultanbeyli district of Istanbul are often previous occupants of *gecekondu*s. In other words, they have improved their position over time and possibly managed to move out of the squatter district while being replaced by newcomers. To the extent that the ‘movers’ have become part of the middle-income group, and that the newcomers have improved their position

vis-à-vis what they have left behind, one can argue that the overall income distribution may have improved in a manner that does not get picked out by our analysis.

The legalisation of *gecekondu*s also poses complications in the analysis of income distribution not only because it is difficult to guess the gains involved, but also because at the same time, it is no longer clear who the beneficiaries are. Legalisation produces surpluses whose redistribution among land speculators, commercialised construction companies and other agents impacts the income distribution. The revaluation of the *gecekondu*s is also important and needs to be considered in evaluating the change in the economic position of the household as its command over resources clearly goes up. Looking solely from the perspective of the poor squatter dwellers and adopting a Rawlsian view, we might conclude that legalisation helps the poor and therefore increases the welfare of society. However, there are clearly gains at the upper tail of the distribution as well. Judging from the public reaction to the new amnesty proposal, it seems that the society is no longer willing to accept squatting as a redistributive mechanism.¹³

A number of researchers writing on squatting and the ‘new poor’ are already arguing that squatting in the traditional sense has come to an end as the urban poor lost the battle against commercial companies and other interest-groups in gaining access to urban land (see for instance Buğra and Keyder, 2003; Buğra, 1998, 2003; Öncü, 1988). If these claims are indeed valid, we could soon witness the disappearance of the corrective effect of squatting on income distribution or, at least, see it losing its importance over the long term.

6. Conclusion

Making use of raw data from an official income distribution survey, we examined the effect of home-ownership on income distribution in the urban areas of Turkey. We found that home-ownership has a positive, i.e. equalising, effect on income distribution and we attributed this result mainly

to the fact that a substantial number of low-income families reside in squatter settlements called *gecekondu*.

What makes the squatting 'transfers' in Turkey an intricate issue is the fact that squatting has become rather commercialised. Although the magnitude of transfers is rather high, it is not clear whether the genuinely poor families benefit from them to an extent that might justify the public authorities turning a blind eye to the invasion of public land. Even if squatting does benefit the poor, local authorities and the government face a dilemma as it seems as if the improvement in income distribution comes at the expense of undermining the rule of law.

To sum up, this study may primarily be viewed as an attempt to draw attention to the redistributive effects of the *gecekondu* phenomenon from an economic perspective as well as the theoretical and practical issues that complicate the measurement of these effects. With the help of more specific datasets, future research should provide more definite answers to the questions raised by this interesting subject.

Notes

1. Figures are based on the 2000 Population Census and are taken from the 'Research on Home Ownership in Turkey' document on the Undersecretariat of Housing website (<http://www.konut.gov.tr>).
2. Speculating on how different the urban (and nationwide) income distribution would have been in the absence of squatting opportunities, and hence lower rates of urbanisation and rural–urban migration, is beyond the scope of this study.
3. For a discussion on the definition of imputed rent, see Smeeding and Weinberg (2001) and Yates (1994).
4. The survey, however, asks the respondents to identify their dwelling type. Here, squatter housing is an option, although the respondents might not consider (or might refuse to consider) their dwelling as a *gecekondu* especially if they live in an apartment building. Indeed, in comparison to squatting prevalence reported by external sources, the number of respondents who have chosen the *gecekondu* option is very few. To give an

example, while external sources report that over 50 per cent of the dwellings in Istanbul are made up of *gecekondu*, the employed questionnaire estimates this proportion at 3 per cent.

5. It turns out that correcting for cost-of-living differences does not alter the main results.
6. There are several mathematical expressions for the Gini coefficient, but it is most easily remembered as the ratio of the area between the Lorenz curve and the line of perfect equality to the area between the line of perfect equality and the horizontal axis. The squared coefficient of variation (SCV) is defined as σ^2/μ^2 where σ^2 and μ are respectively the variance and the mean of the income variable. SCV is also equivalent to two times the Generalised Entropy measure of inequality with the inequality aversion parameter equal to 2. The Atkinson index is a social welfare function based measure. For a given inequality aversion parameter e , $A(e)$ shows how far the equally distributed equivalent income falls short of the observed mean income.
7. For the various definitions of adult equivalence scales and their impact on measured inequality, see Buhmann *et al.* (1988), Coulter *et al.* (1992) and Atkinson and Bourguignon (2000).
8. The literature on income distribution does not provide clear guidance as to the extent of economies of scale enjoyed in housing expenditures. Here, by using the Eurostat equivalence scale to adjust both imputed rents and other sources of income, we have implicitly assumed that the same economies of scale apply to housing as to the other expenditures. Whether this is an appropriate assumption merits further investigation beyond the scope of our analysis.
9. This finding is in line with that in the TÜSIAD (2000) study. Although the authors have chosen not to focus on the redistributive effects of housing, they have made a note of the fact that, unlike in 1994, house ownership had no effect on the income distribution in 1987—the year in which the previous survey was conducted. We believe the major factor behind this change to be the numerous amnesty laws enacted since the early 1980s. In fact, in a period of a decade from 1980 to 1990, three amnesty laws were enacted: in 1983, 1984 and 1990. The most notable of the three is the one passed in 1984 which, as discussed earlier, allowed the owners of squatter housing to add extra storeys to their buildings. Apparently, by the mid

1990s, this trend had reached the point of having a sizeable redistributive effect.

10. The rate of home-ownership reported in section 2 somewhat differs from the rate in our sample, probably due to the facts that: the data sources are different; the definition of 'urban' places is different; and, there might have been a decrease in home-ownership from 1994 to 2000 due to a lessening of squatting opportunities. The last point will be taken up later in the paper.
11. As mentioned earlier, the extent of squatting differs spatially. In a follow-up paper, we investigate whether our results hold for the seven regions and the selected provinces of Turkey (Dayioğlu and Başlevent, 2004). Our results indeed show that the favourable impact of imputed rent on income inequality is not unique to a given province, but is observed in all localities under investigation. However, the magnitude of the improvement does change from region to region.
12. For an earlier, extensive review of the policy debate on squatter housing, see Peattie and Aldrete-Haas (1981).
13. Reactions to the new amnesty act appeared in various newspapers during much of 2003; see, for instance, *Cumhuriyet*, 8 July 2003; *Hürriyet*, 5 June 2003, 25 May 2003.

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Appendix. Sensitivity Analysis

Table A1. Descriptive statistics on household income and its distribution for the subset of ‘younger’ households

Quintile	Mean income	Relative to mean	Income share (percentage)	SCV	Gini	A(1)
Panel A: Household income excluding imputed rent						
Bottom	418.1	0.233	4.7	0.068	0.146	0.044
2nd	712.3	0.397	7.9	0.013	0.067	0.007
3rd	1041.4	0.580	11.6	0.011	0.059	0.005
4th	1572.1	0.875	17.5	0.020	0.081	0.010
Top	5229.7	2.912	58.3	10.085	0.451	0.304
All	1796.1			18.094	0.527	0.383
Panel B: Household income including imputed rent						
Bottom	483.7	0.243	4.9	0.062	0.140	0.039
2nd	822.0	0.414	8.3	0.013	0.065	0.006
3rd	1183.5	0.596	11.9	0.011	0.061	0.006
4th	1773.6	0.893	17.8	0.018	0.077	0.009
Top	5664.1	2.851	57.1	8.713	0.436	0.287
All	1986.8			15.098	0.512	0.365

Note: Income figures are in 1987 thousand TLs and are corrected using the Eurostat scale.

