URBAN INFORMALITY AND ECONOMIC VULNERABILITY

THE CASE OF TURKEY

SUMMARY
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Keywords—informality, Turkey, economic vulnerability

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ACKNOWLEDGEMENT

• Authors would like to thank Middle East Research Competition (MERC) of Ford Foundation for the initial grant, Bogazici University, Istanbul and Sabanci University, Istanbul for their matching research grants without which these surveys would not have been possible. We also would like to thank the Bellagio Residency Program of Rockefeller Foundation which made the joint writing of this paper possible.
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SUMMARY

Based on four different national surveys in Turkey (household, shopkeepers and bazaaris and street vendors), the paper proposes that informality can be better understood as an activity resembling a continuum rather than arbitrary formal/informal dichotomies. Measuring the prevalence of informal practices through six indicators suggests that shopkeepers tend to be more formal than household while bazaaris and street vendors appear more informal. Many factors determine the degree of informality, but degree of economic vulnerability is one of the most important in capturing why and how individuals adopt informal practices. As degree of economic vulnerability increases so does degree of informality.

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There are many faces of informal settings all around the world and Turkey is certainly no exception. A striking feature on the surface of such contexts is the pervasive service sector of newly urbanized workers, usually women, who work long hours in return for little cash payments. Men seem to dominate the trade sector of the urban settings where fresh fruits and vegetables as well as a wide variety of manufactured goods, from textiles to glassware, from stationary to kitchenware and electronic equipment of all sorts are being sold. If a neighborhood bazaar is not present, street-vendors seem to fill the gap and provide the sales to by-passers and neighborhood residents. Nearly all transactions seem to take place in cash and no record of these seem to remain even in shops which leave the impression of more established economic settlements.
We aim in this article first to depict different modalities of such transactions. What really are the major determinants of informality and informal practices in Turkey? We then underline a major hypothesis as to the root causes of this phenomenon and ask to what extent is economic vulnerability and informality intertwined? Are these informal practices a new genre of vibrant entrepreneurship providing goods and services that cannot be provided in the formal economy and are only distantly related to poverty and vulnerability? Or are these informal ties simply the new economics of urban poverty (poor surviving in the cities), a last resort survival strategy among marginalized actors in the formal economy? Which one of the pictures is more prevalent in terms of depicting informality in Turkey: a better-off shopkeeper who avoids paying taxes and state regulations to further consolidate the advantageous economic position he or she seems to command over the other informal players or a street vendor or bazaari (a stall-holder in a neighborhood bazaar) who sells underwear informally and still remains relatively worse off compared to other informal players in the market?

Answering these questions is crucial as governments struggle in developing effective strategies for dealing with informality. If indeed, these informal networks, as De Soto suggests, provide a new capitalist dynamic, to what extent should the governments be concerned with the increasing scope and scale of the informal economy despite the obvious loss in terms of tax revenues? If informal activities appear to work as a survival strategy for the poor, should the government overlook this informality as a latent policy tool for poverty alleviation and reducing economic vulnerability?

We accordingly are mapping out the dynamics of informality through the lenses of four surveys conducted on a nationwide basis with the households, shopkeepers, bazaaris and the street vendors in urban Turkey and develop two main arguments. One is that informality can be better understood as an inherently latent or hidden activity that leave traces of degradation resembling a continuum rather than often arbitrary formal/informal distinctions or occupational variations.
Measuring the prevalence of informal practices through six simple measures obtained across four samples in Turkey suggests, for instance, that shopkeepers tend to be relatively more formal than household representatives. Bazaaris and particularly the street vendors, however, appear more at the informal end of the spectrum. From entrepreneurial shopkeepers to poverty-stricken street vendors, from cleaning ladies to informal waged workers, there are different degrees of informality that are at work in Turkey’s economy. Neither the depiction of informality as an opportunistic activity with vibrant entrepreneurship, nor an analysis based on treating informality as a residual category of poor disadvantaged workers, who sometimes are self-employed, can reflect the full range and depth of informal practices. Instead, one can get a better understanding of informality through a comparative assessment across various relevant groups such as the household members, shopkeepers, bazaaris and street vendors. Second, we follow a long line of argument in the literature and suggest that although many factors determine and influence the degree of informality in any setting, the degree of economic vulnerability is one of the most important factors in capturing why and how individuals opt for informal practices. We argue that economic vulnerability is only one of the factors in the creation and maintenance of informality. More importantly, we argue that economic vulnerability leads to serious levels of informality only after surpassing a certain threshold and try to diagnose that threshold across four different samples.

Our arguments have a number of policy implications for not only the regulation of informality but also for tackling the consequences of poverty. Coping with informal networks seem to require a much more subtle and multi-faceted approach rather than simple formalization tactics such as better control of the markets and taxation or more efficient public administration. If informality is intrinsically intertwined with economic vulnerability in Turkey as we suggest they are, then it will not be possible to address one without the other.
**Thinking about informality in Turkey**

Early approaches have emphasized the marginality of informal activities. Informality was primarily underlined as a reflection of poor migrant masses, occurring largely as a result of rapid urban growth and creation of excessive urban labor supply, a consequence, in other words of “hyper-urbanization.” Informal economic activity was seen as having little consequence in overall capital accumulation. As Portes and Schauffler explain however, “The generally ominous tone of these early theories failed to acknowledge the apparent ability of millions of rural migrants to adapt to rural environment and survive in it. Shantytowns were growing, to be sure, but seldom were they a site of mass starvation or mass rebellion, outcomes that can be anticipated given the assumed idleness and desperation of “marginal” mass.”

An alternative conception of informality emerged from the anthropologist Keith Hart who, based on his fieldwork in Ghana, began to draw attention to the self-employed entrepreneurs and their dynamism. International Labor Organization (ILO)’s work on Kenya, though seriously underestimating the dynamic effects of the informal sector, saw these informal activities as crucial for the survival of the migrant poor. De Soto, on the other hand, followed on Hart’s footsteps and argued that small informal entrepreneurs in Peru were actually engaged in more efficient production and trade. For De Soto, however, informality was a response to over-regulatory, over-bureaucratized and legalized mercantilist state Disagreeing with the depiction of informal actors as marginal and disadvantaged, Maloney took the argument even further claiming that the deregulated, self-employed entrepreneurs “should be viewed as a part of the voluntary small firm sector” which can choose its level of informality. Finally, Portes and Schauffler developed an alternative conceptualization of the informal economy in which the informal activities are neither glorified nor underestimated as marginal. Instead, the authors claimed that informal activities are particularly entangled with economic activities of the formal sector and that the informal sector is internally heterogeneous.
Another useful definition for our purposes is the one provided by the ILO, which developed the concept of the *Urban Informal Sector* (UIS) in the 1970s.\textsuperscript{11} A working definition of UIS is identified as “self-employed agents (other than professionals like doctors and lawyers) and those (including employers) working in small enterprises, many of which are unregistered with the authorities.”\textsuperscript{12} Most enterprises within this context are not fully legal but since the governments and authorities do not enforce legality (at least not systematically), they are not hidden.

Existing studies on informal networks and the informal sector in Turkey has also dealt with similar questions and concentrated on a few major areas. Some have studied informal economy with the question of migrant workers and their impact on urban economy.\textsuperscript{13} Others have focused changing production relations among small to medium enterprises and their impact on the economy.\textsuperscript{14} Still others studied informality and its impact on gender issues.\textsuperscript{15} Child labor angle was also analyzed.\textsuperscript{16} But the most extensive literature on informality exists in terms of dynamics in the labor market.\textsuperscript{17} More recently works on Laleli district in Istanbul and the suitcase trade with Russia, have emerged to capture the transnational aspects of this informality.\textsuperscript{18} There are also numerous macroeconomic attempts to measure informality in Turkey through various econometric and monetary models and forecasts.\textsuperscript{19}

*Recasting informality in Turkey*

Although most of the studies above provide insights into various informal settings and practices in Turkey, they either concentrate on one aspect of informality (such as informal labor markets) or provide too big of a macro picture. They fail to provide an overview of *common* informal practices and how prevalent these practices are among various economic actors. Our survey aims at doing just that.
In order to assess the degree to which informality and informal practices are common in Turkey, we have asked six questions all across our four samples, household, shopkeepers, bazaaris and street vendors which provide us with six different pictures of informality.

We propose that whether or not the individuals are insured or benefit from some sort of an insurance system (whether public or private) constitute one of the determinants of informality. We found that, 38.1% of the entire household had no insurance coverage even through one of the household members (see Table 1 below). This ratio is considerably lower among the shopkeepers (25.5%) who indicate a higher sense of social security and formality. However, this absence of a social security network is quite visible among the bazaaris and the street vendors. 69.3% of all the bazaaris and an overwhelming majority of the street vendors (83.2%) go without insurance. Absence of insurance signifies that regardless of whether these individuals work or not and all in our three samples, the shopkeepers, the bazaaris and street vendors obviously do, they do not have any registration in the health system. Those who work do not have any registration in the labor market. The bazaaris and the street vendors in particular indicate during our in-depth qualitative interviews that they are afraid of two things: one is getting sick and the other is getting old. We consider absence of insurance a significant determinant of informality as these people work and live beyond the regulation and services of the state. Willingly and, as we will suggest below, often unwillingly, these people live on the “margins” of the state regulatory framework with no access to public health services and are not subject to state labor laws and regulations.

On the consumer end, how well the individuals collect receipts in their transactions (some of which they can claim for tax return) can also be another sign of informality. Those who do not collect receipts in their transactions are clearly less interested in overall tax collection, or in the ability of the state to collect those taxes. Among the four different samples, the shopkeepers appear to be most diligent in collecting taxes only 10% reporting that they do not collect any receipts in
any of their transactions. This may also be a reflection of the fact that the shopkeepers have a much wider set of opportunities through their business to claim for tax refund or use these receipts as part of their business accounting practices. This ratio is higher among the households with 12.4% and 18.3% among the bazaaris. Street vendors appear to be the least concerned, with 30.3% of them reporting they never collect any receipts. The practice of not collecting any receipts is essentially linked to the prospect of not having to pay the VAT on the product. When asked about the percentage of their purchases without receipts for which they have received price reductions, the household, shopkeepers, bazaaris and the street vendors give the following percentages respectively, 82%, 10.6%, 9% and 96%. Complaint over the high-value added tax, might also explain the reluctance to collect receipts. When asked whether they think people would collect more receipts if the VATs were reduced, more than 60% among the households and shopkeepers have responded positively. In short, when given an opportunity to get the state’s share in the price as VAT by not asking for a receipt, the customers, by-pass the state and opt to directly benefit from reduced price. Instead of getting a tax return by paying the full price, individuals choose to get a direct price reduction. Lacking confidence amongst the citizens as to where and how these monies are being spent stands as a viable explanation for such informal behaviors. Nevertheless, despite the lack of diligence when it comes to collecting receipts, 62% of the household members still file for VAT tax return forms in which the individuals can receive some of the paid VAT back from the state.²¹ Though this might seem paradoxical at first sight, it also shows that the household members can collect receipts from others and through various informal networks to file for returns.

We also know that 64% of the household has been to a bazaar an average of 3 times during the month prior to our fieldwork and 31% have shopped from a street vendor. Bazaars account for an average 27% of the total reported household expenditures while street vendors account for an average of 5.3%. The prevalence of shopping from bazaaris and street vendors where a receipt is hardly ever provided, if any, is yet another reflection of informality.²²
Whether or not the individuals pay their taxes fully is yet another classic indication of informality. Those who say they do not pay their due taxes at all are considerably higher among the bazaaris and street vendors. This question is asked as an individual subjective evaluation of the extent to which one pays his or her due taxes on a scale that range from 1 indicating that one is not paying any taxes at all to 10 indicating that all due taxes are fully paid. We have taken here only those who picked 1 in this scale. The shopkeepers appear most diligent with only 1.6% of them declaring that they do not pay their due taxes at all, this percentage is higher among the household with 5.4%. 11.4% of the bazaaris and a surprisingly high percentage of the street vendors (33.9%) openly declare that they hardly pay any taxes. Given the fact that individuals would be more inclined to overstate their tax payment rather than understate it, these surprisingly high rates among the bazaaris and street vendors that they do not pay their due taxes lends itself to at least three possible interpretations: one is that they do not think of their income levels as taxable, i.e. they do not earn enough to pay income taxes, second is that they think they cannot survive paying their taxes fully hence legitimize their nonpayment and/or that they do not expect or fear any control or reprisal from tax collectors or state officials. We have however no direct information from our survey that would support either one of these interpretations.

We have also asked our samples how they would meet the health costs such as doctors, check-ups, medicine and hospitals if one of the members of the family became ill. Those who say that they would rely on the social security of one of the family members or would use their green card, which is a special health card issued by the state for the poor, are considered to have solved their health problems through formal means. Those however, who either paid those costs out of their own pockets, or borrowed from friends and/or relatives, or in which the employers have helped, are considered to have solved their health crises in an informal manner. Thus we propose that the propensity to revert to informal means in solving the health problems (either because of preference or lack of alternatives) is yet another of reflection of informality. We have found that
while 18.5% of the households do not mention either one of the two formal means of resolving their health crises, this ratio rises to 22.5% for the shopkeepers, 47.7% of the bazaaris and 55.5% of the street vendors. Once again, the tendency to remain informal, or in this case simply not being able to use a formal means to resolve a health crisis rises considerably with bazaaris and street vendors for which about fifty percent indicate no use of state provided formal means. This factor reflects the insufficient social security coverage on the part of the state which leaves no option for the individuals to somehow generate funds. As such, the mechanisms that are generated beyond the reach and capacity of the state when it comes to basic health services can indeed be defined as a reflection of informality.

The final two indicators of informality used in all four samples concern whether the individuals have bank accounts and whether they have credit cards. Both bank accounts and credits cards are considered as primary features of a formal economy since using cash in economic transactions, completing business deals through hand shakes without ever using banks inherently keeps track of transactions which ultimately leads to registered economic activity. Once again the shopkeepers appear to be the most formal group with regards to the bank and credit card ownership. Only 48.1% of the shopkeepers do not have a bank account and 45.9% of them do not have credit cards. These numbers go up to 55.2% and 59.7% respectively when it comes to the household. Bank account and credit card ownership is almost non-existent among the bazaaris and the street vendors. While 77.1% of the bazaaris and 84.1% of the street vendors do not have any bank accounts, and 83.3% of the bazaaris and a galloping 90.8% of the street vendors do not have credit cards. Not surprisingly, credit card usage is also not wide-spread. On average, household members have used credit cards only for 13% of their total shopping from their neighborhood shopkeepers during the previous month. The rest (87%) they have paid in cash. During our in-depth interviews with informal sector players we have been repeatedly told that credit cards are kept as insurance for unexpected urgent payments. Especially, if the family needs to go to the hospital or needs
medication for which there may be no available accumulated savings, the credit card is used to cover these expenditures. We have also been told that it is hard to afford using credit cards on a regular basis especially if the family does not have a dependable and predictable income with which to cover the credit card expenditures. If the accounts remain unpaid the credit used become very expensive for these low income families and lead to legal action for collection of debts by the banks. In order to avoid such shortcomings credit card usage is kept limited. However, all these complaints obviously refer to not only the apparent vulnerability of those who refuse to use credit cards but also their apparent need to remain beyond reach of legal action by the banks. All in all, remaining informal is convenient and preferred by these players justifying our usage of these as part of our index of informality.

These six indicators allow us to compare and contrast informality across the four different samples. We observe that while the bazaaris and street vendors appear significantly more informal according to these six indicators, the shop keepers and the general household remain relatively more formal. No group however, is completely formal or informal. Different shades of formality or informality is the primary finding that arises out of these data. Only secondarily we observe relative informality amongst the street vendors and bazaaris.

In order to underscore the inherent degree of variation across our three business groups we further focused on their activities. There are also various business practices that are unique to the trading communities, be they shopkeepers, bazaaris and street vendors. In order to assess degree of informality among these groups comparatively, we have added four additional variables.

One is the length of credit the traders have when they buy their goods from producers and wholesalers. A significant percentage (69%) of the shopkeepers say they buy their goods from producers or wholesalers on credit with long term payment, but the average maximum term of the credit is 53 days and only 28.6% of the shopkeepers say that when buying goods with long term payments only a hand sake and an oral promise is enough to finalize the deal. On average, a
shopkeeper would buy 55.2% of all the goods and services on credit and never make instant payments. The shopkeepers appear to prefer more formal means when buying with long term payment, such as writing checks with term or signing fix-date notes in completing their business deals.

A lower percentage of bazaaris (55%) can buy with long term credit from producers and wholesales but higher percentage of the bazaaris (36%) say that they can finalize their deals with a handshake and a mere oral promise (without formal, written contracts, notes or checks) when they are buying goods on long term payment. This is an indication of trust and informal networks the bazaaris appear to have developed over time. However, their average maximum term of credit is lower among the bazaaris with 42 days. Nevertheless, a bazaari would buy 65% of all the goods and services with long term credit.

Given the uncertainty of the street vending (the goods may spoil, weather conditions, police confiscations etc.), street vendors appear to have a more difficult time in buying goods with long term credit. Only 36% of them say they buy goods on credits and 32% say they were able to buy goods on credit with a mere hand shake and promise. When they can buy on credit, the street vendors do indeed use informal means to finalize deals but because of the fragile and vulnerable nature of their jobs, the maximum term of credit they get when buying goods is also considerably lower with an average of 29 days.

The use of cash in buying goods from producers and wholesalers is yet another good indication of unregistered commercial activity. The ratio of those who indicate they use cash in 75% of more than their payments when they buy their goods systematically increase as we move from shopkeepers to the street vendors. When buying goods, 61.2% of the shopkeepers make 75% or more of their payments in cash followed by 82.4% of the bazaaris and 96% of the street vendors. In other words, only a fraction of total transactions seem to be carried out without cash being involved. For the street vendors almost all their payments to their suppliers are in the form of cash while those
of the bazaaris are also in excess of eighty percent. Only for about the 40% of the relatively well-established shopkeepers can one talk about cash payments in less than 75% of the total transactions.

The traders’ transactions with their customers are also based on cash. Not surprisingly the ratio of those who indicate, that 75% or more of the payments by the customers are done in cash, increase as we move from shopkeepers to the street vendors. All of the street vendors say 75% or more of the payments are done in cash, declining to 98% with the bazaaris, and 80% with the shopkeepers. The prevalence of the use of cash is not surprising as the customers often choose bazaars and street vendors because of their price advantages. Bazaaris say that and average 64% of their customers bargain with them and end up receiving an average price deduction of 14.4%. 57% of the customers bargain with the street vendors and receive a deduction of 12.5%. The shopkeepers appear a bit more lukewarm towards bargaining. Only 43% of the customers bargain with them and they agree to an average price deduction of 10%.

The shopkeepers have one particular advantage over the bazaaris and the street vendors. They can sell goods to their customers with long term payment. Out of their total sales, 44% are done on long term payment. 77.5% of the shopkeepers, who say they sell their goods to customers with credit, also say that they do so predominantly for their permanent customers on an average maximum term of 57 days. Once again 83% of all such sales on credit are completed with a handshake and oral promise rather than written notes or checks. All such transactions underscore once again the importance of social skills and informal networks when it comes to doing business.

Finally, the provision of receipts in commercial transactions in buying goods for the shops is another useful indicator in assessing the degree of informality among the traders. 13.4% of the shopkeepers, 28.1% of the bazaaris and 59.3% of the street vendors indicate that they buy 50% or more of their goods for their shops/stalls/trucks without any receipts. In short, the absence of giving and receiving receipts in business practices captures a very important dimension of informal practices.
It is also important to note that adding these four new dimensions with regards to the informal business practices (finalizing deals with hand shake in buying goods, using cash in buying goods, selling goods with cash and not collecting receipts when buying goods) among the shopkeepers, bazaaris and the street vendors do not change the overall ranking of these groups with regards to informality. Shopkeepers tend to be relatively more formal, followed by the bazaaris and then by the street vendors.

**Understanding economic vulnerability**

When asked about their last six month’s average family income including all of the wages, pensions and rental income of all the family members, it is clear that the bazaaris and street vendors have a visibly lower income than that of the household and shopkeepers. While 51.6% and 41.7% of all the household and shopkeepers respectively indicate that their income is below 600 dollars/month, this ratio is considerably higher among the bazaaris with 65.4% and is an overwhelming majority among the street vendors with 83%. While a good one third of the household and shopkeepers have reported income levels between 600-1200 dollars, these ratios drop to 25.2% among bazaaris and 13.1% among the street vendors. A higher ratio of the shopkeepers also appears to have incomes higher than 1200 dollars with 22% as opposed to 13.3% of household. Not surprisingly, higher income group ratios are very low among bazaaris (7.6%) and the street vendors (3.8%).

*[Table 2 about here]*

Based on these declared incomes, we suggest that those who have a per capita household income of approximately 2.5 dollars a day or less (approximately 100 YTL) can be considered economically vulnerable. Though most economic vulnerability indexes are based on consumption and the cost of basic and non-basic goods, we have used income numbers but have used a much lower threshold since the individuals are very likely to understate their income. Based on the threshold of 100 YTL and less declared income, we found that 24% of households had a per capita
household income of 100 YTL (see Table 2). This percentage drops a little among the shopkeepers and is more than doubles among the bazaaris (41.8%). A significant percentage of 57.5% of the street vendors report a per capita household income of 100 YTL or less.

When asked whether this income can meet the needs of their respective households, 28.4% of the street vendors and 23.5% of the bazaaris have responded negatively while this number has dropped to 13.8% among the household and to 9.9% among the shopkeepers underscoring once again the insufficiency of earnings in providing for the basic needs of the families. Obviously, these are subjective measures of the adequacy of household income and thus reflect expectation differences across our four target groups. However, even with such reflection of subjectivity our expected pattern of inadequacy is being observed.

The wedge between the household and shopkeepers on the one hand and the bazaaris and street vendors on the other also become much more visible with regards to the reported length of time they could manage, if their income was cut off for some reason. 69.8% the household and 58.4% of the shopkeepers report that they could survive 30 days or less if their source of income was depleted suddenly (see Table 3 below). Managing only a month or less after complete income loss, appears to be much more prevalent among the bazaaris and street vendors as this percentage skyrockets to 82.4% and 88.4% respectively. This intense economic vulnerability, (absence of security money or savings) can be one of the important factors that can explain why people prefer, or better yet, do not have another option but to work in the informal sector.

[Table 3 about here]

In such times of crises, people do not appear to have too many people to rely on either. When asked whom they would ask for help at the end of their savings and/or resources, more than 70% all across the four samples have suggested that they would ask family members and relatives. This is a reflection not only of economic vulnerability but also absence of formal channels through
which the individuals can address their financial problems. Informal means such as family and friends, however feeble, become the only mechanism to provide for social security network.\textsuperscript{23}

Ownership patterns reflect a very similar picture in terms of degree of economic vulnerability as well. While approximately 60\% of bazaaris and shopkeepers do not own a car, this number goes up to 77\% among household and 90\% among the street vendors. This clearly is partially a reflection of the necessity for these two groups to own a car for business purposes. Those who do not have a washing machine in their homes constitute 11.7\% of the households, 8.9\% of the shopkeepers 22.9\% of the bazaaris and 37.6\% of the street vendors. Finally, those who do not own a house or an apartment is 41.7\% among household respondents, 32.1\% among shopkeepers, 48\% among the bazaaris and 61.2\% among the street vendors.

Table 2 provides the distribution of our vulnerability index for our four samples. Those who show no sign of vulnerability (or a score of 0 on our index) is largest for the shopkeepers with 11.1\%. Those who are not vulnerable by our six indicators are much lower in the bazaari and street vendor samples with 26\% and 0.3\% respectively and the household sample has 6.3\% as non-vulnerable. The weighted average vulnerability score for all four samples combined is 2.5 on our scale of 0 to 6. Taking this overall weighted average as our reference point, we see that 42\% of the households, 28.1\% of the shopkeepers, 55.6\% of the bazaaris and a galloping 81\% of the street vendors appear economically vulnerable.\textsuperscript{24}

\textit{What accounts for informality in Turkey?: Bringing economic vulnerability back in}

In order to test the expected link between economic vulnerability and informality, we estimated an explanatory equation for each one of our four samples using our above described informality index as our dependent variable. Measurement of informality via our index is inherently a rank order measurement; they represent categories of informality that are simply ranked from the lowest to the
highest. As such, using ordinary least squares estimation methods is not justified. Instead, we use an ordered logit model to estimate the determinants of informality for our four samples.

Our models use the same set of independent variables across all four samples. We tested a number of variables such as the interpersonal trust indicators, gender, evaluations of economic conditions and political party preferences. None of these independent variables, however, proved significant except the following four: the length of residency in the city relative to one’s age, the ethnic identity (Kurdish background), level of education and the level of economic vulnerability. First in this set of independent variables is the percentage of a given respondent’s life spent in the city of his or her residence. We expect that this variable captures the impact of being a newcomer to the urban setting within which we carried out our interviews. The existing literature on informality suggests that new migrants into urban areas tend to constitute an important segment of informal workers. That is why we expect that the longer the individuals live in the city, the lower their informality will be. We also use level of education of our respondents as a control variable. Since our vulnerability index does not include any aspect of education we expect this variable to reflect an increasing shift towards the formal sector as the level of education increases. Ethnic background is also included in our model. Our expectation is that relatively disadvantaged citizens of Kurdish origin would be more inclined to be engaged in higher informality levels than those who are not from a Kurdish background. Lastly we included our economic vulnerability index in our model expecting that as vulnerability increases so will the level of informality.

The measures for the goodness of fit for our models indicate that the household equation is the most successful one followed by the bazaaris, shopkeepers and street vendors (see Table 4). Our threshold estimates indicate that our indices for all four samples are differentiable on the basis of our model for only the lowest and highest levels of informality according to our index. Beyond level one for the household sample for example, the level two and three are not significantly differentiable whereas the level four and five are significantly differentiated by our model. For the
shopkeepers only the lowest level and the highest level thresholds are significant. For bazaaris and street vendors, mid-range informality levels (levels 3 and 4) are not differentiable while the lower and highest levels are significantly differentiated. In other words, all of the variables we analyze above appear to influence the level of informality at the lower and higher ends of our index.

Table 4 shows that when urban residence is measured as percentage of respondent’s age lived in the city where the interview was conducted it has a statistically significant impact on the probability of being at different levels of informality for all four samples. However, this impact is not negative as we expected but positive and quite small thus not changing the relative standings of the probabilities of being at different levels of informality. The highest likelihood at all levels of urban residence is the level two, followed by level one and zero. It is important to note that level zero informality never appears as the most likely rank of informality in any one of our analyses. In other words, after controlling for the influences of our independent variables the most likely rank of informality appears to be one that reflects some moderate level of informality according to our index. The fact that the length of urban residence relative to one’s age has a slight positive impact upon informality rankings implies that informality is not, as we expected from the start, necessarily a phenomenon of the newly urbanized segments or new migrants in society. In fact, controlling for the impacts of economic vulnerability, ethnicity and education level, we see that the longer an individual lives his or her life in the urban setting the higher his or her informality is expected to be. This may be an indication of a well established informal sector in urban settings wherein newcomers can not easily enter. Further investigation is necessary to delineate the extent to which there exist entry barriers to informal sector activity for newly urbanized, incoming migrant populations.

Economic vulnerability is significant in differentiating placement along our informality index for the household, bazaaris and the street vendor samples. For shopkeepers low levels of economic vulnerability have a significant impact of the expected direction but higher levels are not
significantly differentiating shopkeepers’ informality. Since our shopkeeper sample exhibits the lowest vulnerability among our four samples, such ineffective differentiation at the higher levels is not surprising. However, it is worthy of note that even for the shopkeepers community, those who show no economic vulnerability have a significantly lower level of informality than those who exhibit just one economic vulnerability indicator. For the bazaaris, no significant impact occurs at the highest level and for the street vendors at the lowest. This is primarily due to low number of observations at these levels for these two samples.

[Table 4 about here]

Figure 1 illustrates the impact of economic vulnerability upon the predicted probabilities by our model of being placed at different levels in our index of informality for the household sample. One pattern that catches the attention is that at the lowest level of economic vulnerability the highest predicted level of informality is for level two where our index indicates that two out of six of our informality indicators are observed. In other words, even when people are not at all economically vulnerable by our measurements and when other factors, i.e., ethnic background, education level and length of urban residence in one’s life, are all controlled by our equation, the predicted level of informality is still well-above zero. This finding is significant as it depicts the prevalence of semi-formality in Turkey across four samples even when all the presumed determinant factors are controlled. The level of zero informality in our index is only likely at about 20% level whereas that of level one and two are considerably higher (7% higher for level 1 and 12% higher for level 2). The expected level of informality for someone of non-Kurdish background, who is illiterate and who lived 50% of his or her life in the city where the interview is conducted, is a low-moderate level, at around two on our six point scale of informality. We observe that as economic vulnerability increases the probability of observing a low moderate informality level between 0 and 2 on our six point informality scale continuously declines, while the probability of observing higher informality increases.
The ranking of probabilities changes drastically at around four on our scale of economic vulnerability. At economic vulnerability level of four, we see that probability of informality of level three is largest, followed by level four. At economic vulnerability level five, informality level four is predicted to be most likely followed by level three and five. The striking finding however comes at economic vulnerability level six where informality level five is predicted to be most likely followed by level 4 and three. In other words, up to level three of economic vulnerability, the predicted informality level remains at around two or lower. Beyond level three economic vulnerability the predicted levels of informality rise quickly and reach four and five on an informality scale of 6 points. This shows that level of economic vulnerability is quite significant in determining informality levels of individuals and that there exists a critical level of vulnerability beyond which relatively high levels of informality is to be expected.

For the shopkeepers sample a similar picture is obtained. The critical turning point in shopkeeper community is also level four vulnerability beyond which level four informality becomes dominant followed by level three. For the bazaaris and street vendors samples the critical switching occurs at a much lower level of vulnerability of level 2. For the bazaaris at zero vulnerability the most expected level of informality is again of level two with 30% likelihood. However, when level two of vulnerability is reached this likelihood is halved while level four informality reaches the highest likelihood with 44% followed by level 3 with 20%. Level four informality remains the highest likelihood until level 6 vulnerability is reached when informality level five becomes the most likely outcome with about 43% likelihood, followed by level four informality. For the street vendors, there is very few zero informality and vulnerability showing respondents. Beyond vulnerability level two, the most likely outcome becomes level four informality, and holds this dominant position through the highest level of vulnerability with little change in predicted probabilities.
These findings are particularly important as they suggest that even though semi-formal activities are all prevalent across the four samples in Turkey, a level of economic vulnerability beyond a certain threshold triggers a higher level of informality. These findings are also in line with the literature and evidence that sudden economic crises or displacements caused by globalization in the economy is likely to generate higher level of informality as the individuals rush to find informal means to survive.\textsuperscript{31}

Levels of education are also significant in differentiating between informality levels of households and the shopkeepers but not of bazaaris and street vendors suggesting that in these two samples, where levels of informality is higher than the household and shopkeepers, there is little variation in education levels that is of consequence for informality. Figures 2 and 3 show the impact of education level upon predicted probabilities of being observed in different levels of informality for respondents of Kurdish and non-Kurdish background after controlling for the impacts of vulnerability and residence in urban areas. Similar to the impact of vulnerability, we observe here again a level of education beyond which informality level is expected to be lower. For people of non-Kurdish background, that switching point occurs at a much lower level of education beyond the primary school, whereas for the people of Kurdish background such a switching down to lower level of informality occurs only beyond high school.

For the people of non-Kurdish background we observe that at the level of primary school education the likelihood of being informal at level 0, 1 or 2 are all about the same at around 29%. Those with no formal schooling, irrespective of their literacy, are expected to have a level of about two informality with about 32% likelihood, and level one with 27% and level 0 with 21%. Beyond primary education however, the likelihood of zero level of informality reaches 51% for junior high school and 55% for high school and finally at university or higher level of education likelihood of being at zero level of informality on our index rises up to 82%. A similar switching occurs for the people of Kurdish origin only after high school level. However for the university or higher level of
education the likelihood of being at zero level of informality is only 57% compared to 82% for the non-Kurdish group. A very similar picture is obtained for the impact of education levels upon informality for the shopkeeper sample where once again switching to a low level of informality occurs beyond primary school for the non-Kurdish group. For the shopkeepers with a Kurdish background however, switching to a low level of informality only occurs beyond high school education.

In short, education seems to bring about a certain level shift from informal to formal practices after controlling for the impacts of economic vulnerability and urban residency. The relatively higher level of education necessary for switching to low levels of informality in the group of Kurdish background, however, suggests that education system fails to integrate people of different ethnic background into the formal sector in the country. People of Kurdish background seem to take approximately six years longer in education system on average to effectively switch to a low level of informality. The fact that schooling of Kurdish speakers beyond primary school is relatively low is also problematic since many among this group may never have the opportunity to go to school beyond primary school. In other words, given the low education levels of Kurdish speakers their integration into the formal sector is expected to remain distinctively low for the years to come posing a genuine policy challenge for any Turkish government.

Conclusions

We suggest that one can study informality through looking at the prevalence of the most-commonly accepted informal practices such as whether they are insured, whether they pay their taxes, whether they collect receipts and/or invoices, whether they use bank accounts or own credit cards. Through the four comparative surveys conducted in Turkey among households, shopkeepers, bazaaris and street vendors, it was possible to discern an increasing prevalence of informal practices and assess various degrees of informality. Overall, the shopkeepers appeared relatively more
formal, followed by the households, then by bazaaris and the street vendors. Informality measurements could also be improved through adding additional indicators (whether they use informal means in buying and selling, whether they use cash in their business transactions, whether they use invoice/receipts) when only the traders, with similar business practices are systematically compared. These indicators also reinforce the earlier ranking with street vendors as most informal, bazaaris a bit less so and the shopkeepers most formal. However, we should underline here that in none of these sample comparisons, the level of informality ever reached an absolute zero level. For every one of our four samples we diagnosed a certain level of informality as the prevalent state of affairs.

Another interesting result of these surveys was that informality overlaps almost one to one with economic vulnerability. Once again, it is possible to compare and contrast degrees of economic vulnerability among various groups, using various ownership and income indicators. The shopkeepers are the ones who are relatively better off with a lower percentage of them being economically vulnerable. The household members are significantly more vulnerable economically, but the bazaaris and the street vendors are the generally most poor and economically most vulnerable group.

Our analyses of the determinants of informality also diagnose several common patterns across four samples. The most significant is the strong link between economic vulnerability and informality after controlling for the effects of the length of urban residence, education and ethnic background. Most interesting however, is our diagnosis of a switching level of economic vulnerability beyond which people in all four samples seem to revert to more informal activity. At lower levels of economic vulnerability people seem to remain at a relatively low level of informality. The tendency to be more informal increases significantly after a certain high level of economic vulnerability is reached. Similar switching or transformative impact is also observed for education as well. However, the impact of education is significantly different for the people of
Kurdish background as opposed to those who have no Kurdish background. Beyond typically primary school education a lower level of informality is relatively more likely after controlling for the effects of vulnerability, ethnic background and length of urban residence. This positive impact of education appears much later however for the people of Kurdish background.

What are the implications of these findings for the policy makers? One is that given the range and the very different degrees of informality, “one size fits all” strategy of grappling with informality is more likely to fail. Informal practices are very prevalent, and informality, or rather semi-formality as a mixture of formal and informal practices is very much here to stay in the Turkish context. Recognizing these different degrees of informality and exploring why these different degrees of informality exist can be a starting point. An approach that recognizes varying degrees of informality rather than breaking down informality into occupational groups or different economic activities with or without informality attributes such as self-employed informal entrepreneurs as opposed to formal businesses, informal wage workers and their informal bosses as opposed to unionized labor in formal industries can actually produce better policy options. As our comparative sample on Turkish traders indicate, for instance, there are significant variations in terms of degrees of informality among the shopkeepers and even among the bazaaris and street vendors even though all three of these are by and large all semi-formal.

We observe that informality may have already matured in the Turkish context and developed certain barriers to entry for the newly urbanized segments or new migrant in the urban landscape. The longer an individual has lived in the urban context the more likely that he or she seems to be at a higher level of informality. It seems that the widespread nature of informality is partly responsible for this finding, but further investigation is necessary as to the degree of opportunities open for informal activity for the newly migrated rural populations or whether the often presumed solidarity networks between old and new migrant still persist.
Our findings suggest that education is also very effective in regulating informality. The higher educated people are significantly less likely to be engaged in high levels of informal activity. However, at this juncture we also diagnose that differences in education levels of Kurds as opposed to non-Kurds also matter in regards to switching to low levels of informality. It seems that people of Kurdish origin are not effectively integrated into the formal sector until at a relatively much later age compared to non-Kurds in the Turkish context. This suggests that education policy is also an integral part of policies that target informality.

More importantly, however, the significant overlap between informality and economic vulnerability within the context of Turkey, suggests that although there are many determinants of informal practices, the degree of economic vulnerability emerge as a very significant factor. Hence developing economic and social policies to reduce economic vulnerability is bound to have an impact on informal practices. Informality is clearly not going to “wither away” through economic growth only. Increasing state capacity, expanding social security network and targeting the economically most vulnerable sectors of the society can be the starting point.
Table 1. Measuring Informality across for Target Populations

<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Household</th>
<th>Shopkeepers</th>
<th>Bazaaris</th>
<th>Street Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Those without an insurance</td>
<td>38.1</td>
<td>25.5</td>
<td>69.3</td>
<td>83.2</td>
</tr>
<tr>
<td>2. Those who declare that they do not collect receipts at all in their transactions</td>
<td>12.4</td>
<td>10.0</td>
<td>18.3</td>
<td>30.3</td>
</tr>
<tr>
<td>3. Those who declare paying no due taxes at all</td>
<td>5.4</td>
<td>1.6</td>
<td>11.4</td>
<td>33.9</td>
</tr>
<tr>
<td>4. Those who declare reverting to informal means in resolving their health problems</td>
<td>18.5</td>
<td>22.5</td>
<td>47.7</td>
<td>55.0</td>
</tr>
<tr>
<td>5. Those who do not have a bank account</td>
<td>55.2</td>
<td>48.1</td>
<td>77.1</td>
<td>84.1</td>
</tr>
<tr>
<td>6. Those who do not have a credit card</td>
<td>59.7</td>
<td>45.9</td>
<td>83.3</td>
<td>90.8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Informality index (add from 1 to 6)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.22.2</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1.19.6</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2.25.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.15.8</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.10.1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.5.0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.0.4</td>
<td></td>
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<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean</th>
<th>1.9</th>
<th>1.5</th>
<th>3.1</th>
<th>3.8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Deviation</td>
<td>1.5</td>
<td>1.4</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Cronbach's Alpha</td>
<td>0.63</td>
<td>0.64</td>
<td>0.61</td>
<td>0.45</td>
</tr>
</tbody>
</table>

- Those who indicated that when buying goods with long-term payments only a handshake is enough to finalize the deal
- Those who indicated that when buying goods 75% or more of the payments are made in cash
- Those who indicated that when selling goods 75% or more of the payments of their customers are made in cash
- Those who indicated that 50% or more of the goods they are selling are obtained without receipt

<table>
<thead>
<tr>
<th>Informality index (add from 1 to 4)</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>0.8.1</td>
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<td>1.21.3</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>2.36.2</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>3.24.7</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.2.7</td>
<td></td>
<td></td>
<td></td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Mean</th>
<th>1.9</th>
<th>2.5</th>
<th>2.9</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard Deviation</td>
<td>1.0</td>
<td>0.8</td>
<td>0.7</td>
</tr>
<tr>
<td>Cronbach's Alpha</td>
<td>N*</td>
<td>1221</td>
<td>619</td>
</tr>
</tbody>
</table>

*Missing values in some of the questions leads to different sample sizes for different target groups that are smaller than the total number of interviews conducted.
<table>
<thead>
<tr>
<th>Variable Description</th>
<th>Household %</th>
<th>Shopkeepers %</th>
<th>Bazaaris %</th>
<th>Street Vendors %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Those who do not own a car</td>
<td>76.8</td>
<td>61.4</td>
<td>62.4</td>
<td>89.9</td>
</tr>
<tr>
<td>2 Those who do not own a washing machine</td>
<td>11.7</td>
<td>8.9</td>
<td>22.9</td>
<td>37.6</td>
</tr>
<tr>
<td>3 Those who do not own a house/apartment</td>
<td>41.7</td>
<td>32.1</td>
<td>47.7</td>
<td>61.2</td>
</tr>
<tr>
<td>4 Per capita household income less than 100 YTL</td>
<td>24.0</td>
<td>20.7</td>
<td>41.8</td>
<td>57.5</td>
</tr>
<tr>
<td>5 Those who declare that their income is not at all satisfactory</td>
<td>13.8</td>
<td>9.9</td>
<td>23.5</td>
<td>28.4</td>
</tr>
<tr>
<td>6 Those who declare that they can only a month or less if their income is somehow cut</td>
<td>69.8</td>
<td>58.5</td>
<td>82.4</td>
<td>88.4</td>
</tr>
<tr>
<td>Vulnerability index (add from 1 to 6)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>6.3</td>
<td>11.1</td>
<td>2.6</td>
<td>0.3</td>
</tr>
<tr>
<td>1</td>
<td>17.5</td>
<td>26.0</td>
<td>19.9</td>
<td>6.1</td>
</tr>
<tr>
<td>2</td>
<td>29.9</td>
<td>27.6</td>
<td>19.6</td>
<td>11.3</td>
</tr>
<tr>
<td>3</td>
<td>23.1</td>
<td>16.5</td>
<td>23.9</td>
<td>27.5</td>
</tr>
<tr>
<td>4</td>
<td>11.6</td>
<td>8.9</td>
<td>16.7</td>
<td>27.2</td>
</tr>
<tr>
<td>5</td>
<td>5.4</td>
<td>2.1</td>
<td>10.1</td>
<td>17.4</td>
</tr>
<tr>
<td>6</td>
<td>1.9</td>
<td>0.6</td>
<td>4.9</td>
<td>8.9</td>
</tr>
<tr>
<td>Above four sample's average vulnerability (3-6)</td>
<td>42.0</td>
<td>28.1</td>
<td>55.6</td>
<td>81.0</td>
</tr>
<tr>
<td>Mean</td>
<td>2.4</td>
<td>1.9</td>
<td>2.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>1.3</td>
<td>1.3</td>
<td>1.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Cronbach's Alpha</td>
<td>0.52</td>
<td>0.44</td>
<td>0.55</td>
<td>0.44</td>
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</table>
Table 3. Reported length of time that could be managed, if household income was cut off for some reason

<table>
<thead>
<tr>
<th></th>
<th>Household</th>
<th>Shopkeepers</th>
<th>Bazaaris</th>
<th>Street Vendors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Could not manage a single day</td>
<td>19.2</td>
<td>15.3</td>
<td>14.4</td>
<td>20.8</td>
</tr>
<tr>
<td>Less than 1 month</td>
<td>50.6</td>
<td>43.1</td>
<td>68.0</td>
<td>67.6</td>
</tr>
<tr>
<td>1 to 3 months</td>
<td>9.4</td>
<td>17.3</td>
<td>10.5</td>
<td>7.0</td>
</tr>
<tr>
<td>3 to 6 months</td>
<td>7.7</td>
<td>8.9</td>
<td>2.6</td>
<td>1.5</td>
</tr>
<tr>
<td>6 to 12 months</td>
<td>2.8</td>
<td>0.6</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>1 year and longer</td>
<td>7.9</td>
<td>13.4</td>
<td>4.2</td>
<td>2.1</td>
</tr>
<tr>
<td>NR</td>
<td>2.4</td>
<td>1.3</td>
<td>0.3</td>
<td>0.9</td>
</tr>
<tr>
<td>Threshold</td>
<td>Household</td>
<td>Shopkeepers</td>
<td>Bazaars</td>
<td>Street Vendors</td>
</tr>
<tr>
<td>----------------</td>
<td>------------</td>
<td>-------------</td>
<td>----------</td>
<td>----------------</td>
</tr>
<tr>
<td></td>
<td>Estimate</td>
<td>Sig.</td>
<td>Estimate</td>
<td>Sig.</td>
</tr>
<tr>
<td>Informality index=0</td>
<td>-3.59</td>
<td>5.55E-13</td>
<td>-2.56</td>
<td>8.79E-03</td>
</tr>
<tr>
<td>Informality index=1</td>
<td>-2.36</td>
<td>2.31E-06</td>
<td>-1.36</td>
<td>1.66E-01</td>
</tr>
<tr>
<td>Informality index=2</td>
<td>-0.86</td>
<td>8.32E-02</td>
<td>-0.15</td>
<td>8.79E-01</td>
</tr>
<tr>
<td>Informality index=3</td>
<td>0.44</td>
<td>3.69E-01</td>
<td>0.73</td>
<td>4.54E-01</td>
</tr>
<tr>
<td>Informality index=4</td>
<td>2.07</td>
<td>2.08E-05</td>
<td>2.21</td>
<td>2.40E-02</td>
</tr>
<tr>
<td>Informality index=5</td>
<td>5.03</td>
<td>8.35E-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Percentage of respondent's age lived in the city</td>
<td>0.00</td>
<td>5.16E-03</td>
<td>0.01</td>
<td>3.86E-02</td>
</tr>
<tr>
<td>Illiterate</td>
<td>2.85</td>
<td>1.30E-21</td>
<td>1.89</td>
<td>3.08E-02</td>
</tr>
<tr>
<td>Literate but no primary school diploma</td>
<td>2.81</td>
<td>1.22E-14</td>
<td>1.60</td>
<td>2.87E-02</td>
</tr>
<tr>
<td>Primary school</td>
<td>2.43</td>
<td>7.97E-32</td>
<td>1.05</td>
<td>6.41E-04</td>
</tr>
<tr>
<td>Junior high school</td>
<td>1.51</td>
<td>4.16E-10</td>
<td>1.04</td>
<td>1.74E-03</td>
</tr>
<tr>
<td>High school</td>
<td>1.35</td>
<td>3.43E-11</td>
<td>0.65</td>
<td>3.03E-02</td>
</tr>
<tr>
<td>Not of Kurdish origin</td>
<td>-1.27</td>
<td>1.31E-15</td>
<td>-1.45</td>
<td>4.25E-12</td>
</tr>
<tr>
<td>Vulnerability index=0</td>
<td>-4.09</td>
<td>2.51E-16</td>
<td>-2.28</td>
<td>1.60E-02</td>
</tr>
<tr>
<td>Vulnerability index=2</td>
<td>-3.15</td>
<td>2.78E-12</td>
<td>-1.73</td>
<td>6.10E-02</td>
</tr>
<tr>
<td>Vulnerability index=3</td>
<td>-2.69</td>
<td>2.26E-09</td>
<td>-0.80</td>
<td>3.89E-01</td>
</tr>
<tr>
<td>Vulnerability index=4</td>
<td>-1.77</td>
<td>9.68E-05</td>
<td>-0.48</td>
<td>6.07E-01</td>
</tr>
<tr>
<td>Vulnerability index=5</td>
<td>-1.21</td>
<td>1.14E-02</td>
<td>-0.55</td>
<td>5.94E-01</td>
</tr>
</tbody>
</table>

**Goodness of fit measures**

* Cox and Snell: 0.41, 0.23, 0.30, 0.19
* Nagelkerke: 0.43, 0.24, 0.31, 0.19
* McFadden: 0.16, 0.08, 0.10, 0.06

*Kurdish origin is determined by whether or not the respondent reports to have spoken to their parents in their childhood in Kurdish or Zaza.

**Reference category is Kurdish origin university graduates with the highest level of vulnerability.
Figure 1. Predicted Probabilities of Different Levels of Informality, Household Sample

Vulnerability Levels
Non-Kurdish, illiterate, lived in the city for 50% of his life
Figure 2. Impact of Education on Predicted Probabilities of Different Levels of Informality, Household Sample without Kurdish background taken into account
Figure 3. Impact of Education on Predicted Probabilities of Different Levels of Informality, Household Sample with Kurdish background taken into account.
Appendix 1: Sampling Methodology

The nature of the informal economic activity impedes one to set a well-defined target population from which to sample. Rather we chose to focus on the households for which there are well-tested sampling procedures in Turkey. This sampling procedure first creates regions of provinces on the basis of socio-economic criteria and allocates target populations across these regions. We chose to focus on urban populations in our work and thus created regions according to urban populations of provinces. Then the total sample size is distributed across these regions according to their shares of the total urban population. Then from within these regions representative provinces are chosen according to their respective target population sizes. Once the provinces within each region and their respective sample sizes are determined then districts and neighborhoods within each chosen district is selected in a similar fashion. Within each neighborhood streets are randomly selected. However, at this stage since the number of households in each street is not known the principle of allocating the same equal probability of being chosen in the sample is broken. Each street is given the same weight and equal numbers of interviews are conducted in each chosen street.

We followed the same principles in selecting our urban sample. We then adopted these principles in the selection of our samples for three additional target populations. One of these populations was the shopkeepers, the other was bazaar tradesmen and finally the street vendors. For the shopkeepers we took the selected streets as our starting point. In every street we aimed at interviewing one shopkeeper. In every street a list of shops were made and one shop is selected randomly. Since most streets would predominantly have similar types of shops we also restricted our interviewers to reach different types of shops in every street. In other words, we did not want to obtain data only on grocery stores, sellers of fruits and vegetables, pharmacies and the like, which can be found on most streets. If in one street in a neighborhood yields one type of shop for interview in the other street a different type is selected if it at all existed.
For the bazaars we took the chosen districts for our household survey as our starting point and went to the municipality administrations in these to obtain a full list of neighborhood bazaars. In every bazaar we aimed at reaching at most 10 stall-keepers. Half of these interviews are then reserved for fruit, vegetables etc. and the other half is reserved for sellers of dried or manufactured foodstuff, textiles and other household items.

We followed a similar procedure for selecting the street vendors. The total numbers of interviews are first distributed to the selected districts according to their population shares. Obviously street vendors are not present in every street in every neighborhood. Rather they cluster in specific central localities. Thus in every district locations wherein street vendors are expected to be present are determined. Then we applied a quota for selecting the vendors. At most one third of the interviews could be of one type in any given district.

As such our samples are not random in the sense of making the probability of selecting every targeted unit equal to one another but they are comparable to one another since their socio-economic environments are all controlled for in our procedure. All four samples come from same localities and are comparably selected. A total of 1232 interviews were completed with the household, 619 with shopkeepers, 306 with bazaaris and 327 with the street vendors.
Appendix 2: Survey questions

INFORMALITY

Do you have anyone of the following insurance schemes (SSK, Bag-Kur, Retirement Fund etc)?
1> Yes, I do  2> No, I do not

How frequently do you collect receipts in your shopping for the house?
1> Never  2> Sometimes  3> Frequently  4> All the time

How much of your due taxes do you actually pay?
Not paying  2> Partially  3> Fully

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If someone in the family becomes ill, how would you meet the associated costs such as doctors, check-ups, medicine and hospital?
1) We would use the insurance of one of the family member (SSK; Bag-Kur, Retirement Fund etc)
2) We would use a green card
3) We would pay out of our own pocket
4) We would borrow from our relatives
5) We would borrow from friends
6) Employer helps
7) Other

Which of the following items do you or your wife/husband have/own? (answer obtained for each item)
a) Mobile phone  b) Bank account  c) Credit card

When you buy goods from a producer or a wholesaler, do you ever buy with a credit, (long term payment)?
1> Yes, I do  2> No, I do not

(If he/she buys on credit)

What is the maximum length of time can you buy on credit? (open ended)

When you buy goods on credit with long term payment, how do you do that?
1) Shaking hands and getting an oral promise
2) Making them sign a promisory note
3) Having them sign a check with a longer term date
4) Other (writing in a book, creating an open account, credit cards)

What is the percentage of the goods and services that you buy on credit in our entire purchase? (open ended)

In your purchases of goods and services for your business, how much of your payments do you do in cash, and/or check/note and/or credit card?
Cash  (open ended)
Checks/Notes  (open ended)
Credit cards  (open ended)

How much of the payments your customers make is done in cash, checks/notes and credit cards?
Cash  (open ended)
Checks/notes  (open ended)
Credit cards  (open ended)

How much of the goods you buy for your business is without any receipts? (open ended)

What is the percentage of your shopping customers who go without receipts? (open ended)

What is the percentage of customers who bargain with you? (open ended)

How much of a price reduction would you agree as a result of this bargaining? (open ended)
(Asked only to shopkeepers)

Do you ever sell with long term payment to your customers?
1> Yes, I do  2> No, I do not

If yes, what the maximum length of time you would allow customers to have long term payment?
(open ended)

What is the percentage of sales with long term payment in your total sales? (open ended)

Whom do you sell goods on long term payment the most?
   a) permanent customers
   b) old customers I like
   c) If the market is bad, almost to everyone
   d) To those who come on the recommendation of friends and colleagues
   Other

How do you sell your customers on a long term payment basis?
1> Shaking hands and getting an oral promise
2> Making them sign a promisory note
3> Having them sign a check with a longer term date
   Other (writing in a book, creating an open account)

(Only to the household members)

During the previous month, have you ever gone to a bazaar?
1> Yes, I did  2> No, I did not

If yes, how many times did you go? (open ended)

How much of the total household expenditures is spent in the bazaars? (open ended)

Have you ever shopped from a street vendor during the previous month?
1> Yes, I did  2> No, I did not

If yes, how many times? (open ended)

How much of your total household expenditures is spent with the street vendors? (open ended)

VULNERABILITY QUESTIONS

If you take into account the previous six months, could you tell us which one of the following range is closest to your total average monthly household income including wages, rents, pensions etc of all the members living in your house?

<table>
<thead>
<tr>
<th>1. Less than 150 YTL</th>
<th>2. 150-250 YTL</th>
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<tbody>
<tr>
<td>3. 250-350 YTL</td>
<td>4. 350-450 YTL</td>
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<tr>
<td>5. 440-550 YTL</td>
<td>6. 550-750 YTL</td>
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<tr>
<td>7. 750-1000 YTL</td>
<td>8. 100-1500 YTL</td>
</tr>
<tr>
<td>11. 3000-5000 YTL</td>
<td>12. above 5000 YTL</td>
</tr>
</tbody>
</table>

With this income to what extent are you able to meet your household needs?
Not at all 1 2 3 4 5 6 7 8 9 10 Meet them fully

If your income was cut off for some reason, how long would you be able to manage? (open ended)

At the end of this time, whom would ask for help?
1. Family members living outside home
2. Relatives
3. Neighbors and those living in the neighborhood
4. Friends
5. Hemseris (local friends coming from the same original cities)
   Other (Noone, ask from state, look for a new job)
Do own the house you are living in, somebody owns buy you don’t pay any rent, you live in employer/state financed housing or do yo pay rent?

1. I own
2. House belongs to another but I dont pay any rent
3. Live in employer or state financed housing
4. Pay rent

Do you or your wife/husband own a car?
If you have one, can you tell us its brand and model? (if more than one, please write the more expensive car)

1) I Don’t have any car
2) Owns a commercial vehicle
3) Lower brand and models
4) Normal brand and models
5) Luxury brands and models

Which one of the following items exist in your house and/or owned by a household member?

1) Exists 2) Does not exist
House phone (fixed line)
Washing machine
Dish washing machine
Computer
Microwave oven
Satellite dish
Air conditioner
Summer house
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University. Binghamton: State University of New York.
END NOTES

1 The term bazaari is used differently in the Turkish context. A bazaari in our sample does not refer to an individual who has a fixed shop in a huge city bazaar as would the case be in many developing countries. We refer to bazaaris as stall holders in open-air neighborhood bazaars. The municipality allocates a fixed area for certain days of the week so that bazaaris can open their stalls.

2 Intentional informality is very difficult to differentiate from one that follows from necessity. We leave this distinction intentionally out of our analysis for the purposes of this article.

3 De Soto (1989).

4 See Bairoch (1973).


7 PREALC (1981).

8 De Soto (1989).

9 See Maloney (2004).

10 See Portes and Schauffler (1993).


In fact, this percentage directly parallels Turkish Statistics Institution (TUIK)’s data on 2000 health expenditure statistics where the public resources account for only 62 percent of the total health expenditures in the country. See www.tuik.gov.tr

The government has recently eliminated the requirement for the pensioners to file for the three monthly VAT tax returns. The VAT (KDV in Turkish) rates vary between 1% - 18% but with the exception of basic staples it is generally applied as 18%. VAT is payable on all local purchases.

76% of the households bargain when they shop receiving an average of 11% reduction as a result.

When ask whom they would ask for help after depleting the emergency savings, a significant group answered as “nobody”. This reflects lack of any security network backing. Among the street vendors, 22% indicated that they would not ask anybody for help. Among shopkeepers this ratio is only half while for bazaaris it is 8.5% and amongst the household respondents about 7%.

These numbers are considerably higher than the poverty and economic vulnerability measurements of TUIK primarily because TUIK measurements are based on household consumption surveys rather than income. Economic vulnerability is measured based on the local cost of basic needs basket including non-food. The numbers on economic vulnerability range between 26-36%. See www.tuik.gov.tr

Although we count the number occurrences that we take as representations of informality for our respondents the differences between these counts can not be assumed to be equal. Although a given respondent scoring 0, therefore no informality according to our index, has lower level of participation in informal activities than someone scoring 1, we do not know how high the informality of that individual scoring one is. Moreover, we also do not know whether the larger informality of someone scoring 4 as opposed to 3 is of equal magnitude comparing someone who got 1 as opposed to 0. In other words, equal differences in our scores do not necessarily correspond to equal differences in the underlying informality of our respondents.

Shopkeepers, bazaaris and street vendors in Turkey are overwhelmingly male. In our household sample, the gender differences do not emerge as a significant determinant of informal behavior. Most questions, however, were asked on household basis rather than gender, which is why the survey would not capture the differences in income or occupation.

Determining one’s Kurdish origin is difficult. For respondents reporting to have spoken with their parents in their childhood in Kurdish, or Zaza, we attributed a Kurdish ethnic background.


Due to space constraints we do not show similar figures for our other three samples but results therein concerning the expected level of informality at zero level of economic vulnerability is similar to the one reported about the household sample.

See Carr and Chen (2001), and Charmes (1998).

For details of these procedures, see Adaman, Çarkoğlu and Senatalar (2005, 2002).