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FORMAL AND INFORMAL SOCIAL PROTECTION IN IRAQ

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Abstract

We study formal and informal insurance in Iraq using empirical data from a household survey. We study access to social security, health insurance, and retirement. Then, we examine the types of risks that Iraqi households face, and the informal coping mechanisms they use to deal with them. After studying formal and informal social protection separately, we study the relationship between the two and test the hypothesis of crowding out. We find that socio-demographic characteristics affect formal insurance detention, the probability of a risk occurring, and the type of risk coping mechanism that a household uses. The most important determinant of receiving formal benefits is the sector of employment: public sector workers are 83% more likely than private sector workers to have formal benefits. Poverty, the type of employment, the place of residence, the size of the household, the gender of the household head, and the education of the household impact the probability with which a household is affected by different types of risks. These socio-demographic characteristics along with the type of risk that the household faced influence the household's choice of risk coping mechanism. We find evidence of crowding out; however, we conclude that this should not translate to a reduction in formal safety nets. Our results have many policy implications to improve access to formal insurance, reduce risks, and mitigate the negative aspects of certain informal coping mechanisms in Iraq.

JEL Classification: R2, I13, J65, 017, 053

Keywords: Social protection, formal and informal insurance, risk coping mechanisms, Iraq.

ملخص

ندرس التأمين الرسمي وغير الرسمي في العراق باستخدام البيانات التجريبية من مسح الأسر المعيشية. ندرس الاستفادة من الضمان الاجتماعي، والتأمين الصحي، والتقاعد. ثم، نقوم بفحص أنواع المخاطر التي تواجه الأسر العراقية، والآليات غير الرسمية التي يستخدمونها لمواجهة التعامل معها. بعد دراسة الحماية الاجتماعية الرسمية وغير الرسمية على حدة، نقوم بدراسة العلاقة بين الاثنين واختبار فرضية مزاحمة. نجد أن الخصائص الاجتماعية والديمغرافية تؤثر على عرقلة التأمين الرسمي ، واحتمال وجود خطر ونوع آلية تعامل الأسر مع هذا خالطر. إن العامل الأكثر أهمية من تلقي الفوائد الرسمية هو قطاع العمل: العاملين في القطاع العام هي أكثر عرضة بنسبة 83٪ أن يكون لها فوائد رسمية من عمال القطاع الخاص. الفقر، ونوع العمل، ومكان الإقامة، وحجم الأسرة، ونوع رب الأسرة، والتعليم تؤثر على الأسرة حسب أنواع مختلفة من المخاطر. هذه الخصائص الاجتماعية والديمغرافية مع نوع المخاطر التي تواجهها الأسرة تؤثر على اختيار الأسرة لآلية التعامل مع المخاطر. نجد دليلا على المزاحمة، إلا أننا نستنتج أن هذا لا ينبغي أن يترجم إلى انخفاض في شبكات الأمان الرسمية. نتائجنا لها انعكاسات كثيرة على السياسات لتحسين فرص الحصول على التأمين الرسمي، والحد من المخاطر، والتخفيف من الجوانب السلبية لبعض آليات التعامل غير الرسمية في العراق.

1. Introduction

We propose to study formal and informal social protection in Iraq using empirical data from a household survey. In terms of formal social protection, our study will focus on access to health insurance and public pension programs. Because much more than half of the Iraqi population does not benefit from these programs, we will also study informal insurance mechanisms through households' responses to adverse events. As El Mekkaoui et al. (2010) show, insurance can have an impact on poverty. Also, according to Dercon (2002), exposure to risk is a cause of persistent poverty. Thus, studying social protection in developing countries is important in order to better understand how to protect vulnerable populations. Finally, we test the relationship between formal and informal insurance in Iraq to test the theory of crowding out. To understand the Iraqi social welfare system, we will use the 2006-2007 Iraq Household Socio Economic Survey (IHSES), which was carried out by the Central Organization for Statistics and Information Technology (COSIT), the Kurdistan Regional Statistics Organization (KRSO), and the World Bank. This survey interviewed over 18,000 households and 127,000 individuals and is designed to be representative of the Iraqi population.

This study complements and contributes to the existing literature in several ways. First, it fills the knowledge gap about the Iraqi social protection system. It completes information on which households have access to formal insurance and explores informal insurance mechanisms other than private transfers. Second, it expands upon the techniques used in Skoufias and Quisumbing (2005). This study goes into more detail than Skoufias and Quisumbing's research by focusing on only one country. It also studies a larger number of risk coping mechanisms. Finally, this study complements the literature on crowding out by examining the relationship between formal and informal forms of social protection in Iraq.

Before discussing public and private social protection in Iraq, it is useful to understand the context of the country and the characteristics of the population. Compared to other countries, Iraq is characterized by a relatively low level of inequality. Over 70% of the population lives in urban areas, and the standards of living vary greatly by region. While the poverty headcount is higher in rural areas, there are fewer inequalities between residents of rural areas than between residents of urban areas. Iraq is a young country (median age 19.3) with a high unemployment rate. There are more than 2 million unemployed workers, representing up to 30 percent of the workforce (Blomquist et al. 2005). Unemployment among the young is nearly twice as high as the overall rate and the participation of women in the workforce is very low. Due to the recent conflict, approximately 1.6 million people were internally displaced between 2003 and 2009. The displacement rate was especially high between 2006 and 2007, during the collection of the IHSES data (Confronting Poverty in Iraq).

According to the World Bank, during the 1980s, Iraq had among the best health and education systems in the region. However, over the past 20 years, the education and health systems have undergone a sharp decline. Primary school enrollment rates fell from 99% in 1998 to 77% in 2006. Illiteracy remains high, between 10-20 percentage points higher than other MENA countries such as Syria and Jordan. Gender disparities are growing; especially in rural areas where up to one third of girls are not enrolled in primary school (Blomquist et al. 2005).

Before the 1991 Gulf War, Iraq used oil revenues to develop one of the most modern healthcare systems in the region. However, due to the war and to the ensuing sanctions, there was a sharp decline in the quality and availability of healthcare during the 1990s (Frankish 2003). Garfield et al. (2003) estimated that the sanctions and the 1991 Gulf War caused an 85-90% decline in food and medicine imports. In 2011, life expectancy was only 58 years in Iraq, while it was 70 on average in other MENA countries. However, most of the

anthropomorphic measures of Iraqi children were better than those of the average MENA country.

This paper will be structured in seven sections. In the following section, we review the literature, discuss the Iraqi social welfare system, and highlight the main contributions of our paper. Third, we present our empirical models and methodology. Then, we analyze the socio-demographic characteristics that are tied to formal insurance detention. The fifth section analyzes the risks that Iraqi households face and the informal coping mechanisms that they use to deal with these risks. The sixth section examines the relationship between formal and informal social protection and tests the theory of crowding out. Finally, we will conclude and present policy recommendations for social system reform in Iraq.

2. Literature Review

This study draws inspiration from several trends in the literature. While only a few studies test the importance of formal social protection systems in developing countries, there is a fairly extensive body of both theoretical and empirical literature on informal social safety nets in developing countries. Several studies make the distinction between risk management and risk coping techniques, and much of the literature focuses on models of risk sharing. Another trend in the literature regards the relationship between formal and informal insurance and tests the hypothesis of crowding out. After discussing each of these trends, this literature review will present the structure of the social protection system in Iraq.

2.1 Formal social welfare systems

Before delving into the different trends in the literature regarding formal social protection, it is important to define social protection. Harvey et al. (2007) summarize the definitions of social protection used in various other papers. Social protection "refers to interventions implemented by the state, or those operating in the public interest, such as NGOs, to respond to levels of vulnerability, risk and deprivation which are deemed socially unacceptable within a given polity or society." It responds to the dual goal of addressing both economic and social risk and vulnerability through protective, preventative, promotive and transformative actions (9-10). Van Ginneken (1999) offers a wider, but similar, definition: "The provision of benefits to households and individuals through public or collective arrangements to protect against low or declining living standards arising from a number of basic risks and needs" (3).

Much of the literature on insurance and savings in developed countries is based on the life-cycle model (Modigliani and Brumberg 1954; Ando and Modigliani 1963; Friedman 1957). In its simplest version, individuals live two periods. In the first period, each person earns a wage from his/her labor supply, and in the second period, the person retires. Individuals save part of their income during the first period to provide for the second-period consumption. The interest rate is supposed constant, regardless of the level of savings. The main result obtained from this framework is that consumption is smoothed in the sense of maintaining a constant marginal utility throughout life. Individuals save in order to transfer purchasing power to the retirement period.

Outreville (1996) tests this model using a panel of 48 developing countries. He finds that the life-cycle hypothesis does not explain the aggregate savings in developing countries well due to the poor organization of capital markets, consumption linked to immediate needs rather than consumption smoothing, young populations that tend to consume more, large fluctuations in income, and financial repression. He also finds that the development of the life insurance market is linked to the country's level of financial development and anticipated inflation.

Like Outreville and Rosenzweig (2001) also reject the relevance of the life cycle hypothesis for developing countries. They note that in many developing countries, households are inter-

generational: the life cycle of the household may not match that of the individual. Furthermore, households may display forward-looking behavior through other mechanisms such as investments in human capital and in children. Rosenzweig also discusses the permanent income model, in which households may freely save and borrow money in order to smooth their consumption. Their utility is only based upon consumption, and production is only based upon rainfall, which is random and i.i.d. Transitory shocks to income should not affect consumption; however, consumption will be affected by changes in persistent components of income. He finds some evidence supporting the permanent income model: "an increase in transitory income on savings exceeds that of an equivalent change in permanent income" (4).

While some of the literature on formal insurance focuses on models of savings and consumption, Van Ginneken discusses exclusion from formal safety nets. He notes that half of the global population is excluded from any form of social protection, and in Sub-Saharan Africa and South Asia, social security only covers between 5 and 10% of the working population. In most cases, informal sector workers are excluded from social security programs. They are often unable to join social insurance programs due to their financial situation or due to government regulations, and many prefer to invest in business, land or housing because they rely on their children to support them when they reach retirement. He notes, however, that healthcare costs can be devastating to a household, and most households, including poor households, spend 5-10% of their income on healthcare. In addition to expanding public health insurance schemes, Van Ginneken proposes ways to promote self-financed schemes.

Such self-financed schemes, or community based health insurance schemes (CBHIS) constitute another branch of the literature on formal social protection in developing countries. While it may be difficult to foster solidarity and reach an agreement about the extent of coverage at a national level, it may be more feasible to reach such consensus among community groups. Such groups are formed to share risk and provide access to either hospital care or primary care services. While Jutting (2003) demonstrates the potential of CBHIS to help part of the vulnerable population increase their access to healthcare in Senegal, Carrin (2002) and Carrin et al (2005) discuss some of the problems of the implementation of such schemes. They note, however, that a higher level of income, better administrative structures, and providing coverage at the household rather than the individual level encourage the development of CBHIS. Asfaw and von Braun (2005) test if CBHIS could improve the health system in rural Ethiopia. Unlike previous studies that suggest weak participation in CBHIS, they find that nearly 60% of respondents would be willing to pay for a CBHIS with the first or second bid prices shown to them. Furthermore, respondents were willing to contribute an average of 3.5% of their monthly income to CBHIS. Finally, Asfaw and von Braun (2005) test the socio-demographic characteristics that influence the household's declared willingness to pay. They find that the sex of the household head, the ethnic group, family size, membership in iddirs (funeral insurance groups) and income all influence household's willingness to pay for CBHIS.

2.2 Informal social safety nets

The literature on informal insurance is divided into two main streams. The first branch of literature discusses the differences between risk management and risk coping strategies and the determinants that influence households' choices of risk management and coping strategies. The second branch of the literature on informal insurance focuses on one type of risk coping strategy, risk-sharing agreements. Several variants of risk-sharing models have been developed and tested using empirical data from different countries.

2.3 Risk management and risk coping mechanisms

Alderman and Paxon (1992) make an important distinction between risk management and risk coping. Risk management refers to efforts ex-ante to smooth income fluctuations through the diversification of income generating activities and portfolio diversification. The choices regarding risk management depend on a household's risk aversion and ability to sacrifice riskier, higher income generating activities for that are more stable but have a lower return. Risk coping refers to mechanisms that households use ex-post to deal with a negative income shock. These mechanisms allow households to smooth consumption in the face of income fluctuations. Households may smooth consumption intertemporally or across households. Intertemporal mechanisms rely on savings and investments to develop a capital stock during years with positive income generation for use during years with negative income shocks. Households may also use formal or informal credit markets to smooth their consumption across time periods. Risk coping mechanisms that smooth consumption across households rely on either formal insurance markets or informal risk pooling arrangements between households.

There are different motives for informal risk sharing arrangements among households according to Alderman and Paxon (1992). They cite studies that show that shared norms and values can generate solidarity among households. They also discuss models based on self-interest. Households participate in risk sharing arrangements because they will benefit from such arrangements during negative income shocks. Much of the literature on informal insurance explores these self-interest based models and is discussed in the following section.

Deaton (2002) further develops the possibilities and limits of risk management and risk coping mechanisms discussed in Alderman and Paxon (1992). Income diversification as a risk management strategy is not always effective. During economic downturns, the demand for goods and services falls. Agricultural and non-agricultural income may be highly correlated in small villages. Furthermore, the income generating activities that are better protected from agricultural cycles, such as transportation, cattle herding, or shop keeping, require a large amount of capital. Thus, there is an entry barrier to such secure, lucrative activities. He also discusses different ways to diversify income, through increasing labor force participation of women and children and through migration to find work.

In relation to asset accumulation and savings as a way to self-insure, Deaton notes the problem of correlated shocks. If negative income shocks are related to weather or other common shocks, households will want to sell their assets during the same period, driving down the prices of these assets. Likewise, during prosperous periods, the price of commonly held assets increases because there is a higher demand to accumulate assets. Furthermore, "lumpy" assets can limit the effectiveness of self-insurance. "Lumpy" assets are goods, such as cattle, that can only be purchased in their entirety. They require a large amount of cash to acquire, and if the household needs to sell it, it has to sell the asset in its entirety, even if it is at a loss.

Habton and Ruys (2007) test, which risk coping mechanisms, are the most widely used in Eritrea to deal with health shocks. They examine mechanisms such as receiving monetary help from members of the extended family, borrowing money from neighbors and friends, receiving assistance from quasi-religious mutual aid community associations, religious groups, or professional or occupational associations, and selling household assets. They also analyze the type of contributions that households receive. While the results vary by the geographic zone studied, they find that labor in time is the most common type of contribution, followed by monetary contributions, in kind contributions and attention.

Skoufias and Quisumbing (2005) take this analysis a step further by examining the determinants of the choice of risk coping mechanisms in Bangladesh, Mali, Mexico, Russia,

and Ethiopia. In all of the countries except Mexico, in which panel data was not available, they used fixed effect logit regressions to test if the type of risk coping mechanism used depends on the type of risk that the household faced. In Mexico, they use simple logit regressions and calculate the marginal probability of using a specific risk coping mechanism after different adverse events. They find that in Mali, there is a significant difference in the type of coping strategies adopted in asset rich families and asset poor families. In Bangladesh, the time invariant characteristics of the households are important to the choice of risk coping mechanism. Poorer households have less access to credit, while debt is higher for better-educated households and those with a higher proportion of non-land assets. Furthermore, remittances are higher in larger families and those with a higher proportion of females. They examined such risk coping strategies as getting a second job, becoming involved in informal economic activities, receiving remittances, receiving public transfers, debt, selling assets, cultivating land, or changing the composition of food consumption. The types of coping mechanisms used in each country depend on the institutions and cultural context, and households usually use a variety of strategies rather than a single mechanism.

While Skoufias and Quisumbing (2005) examine a variety of different risk coping mechanisms, LeMay Boucher (2009) tests the determinants of participation in informal insurance groups. He compares participation in Ethiopian "iddirs," which are groups primarily designed to protect families against funeral expenses, and participation in informal groups in Benin. After comparing the two systems, he uses a probit marginal effects model to test how socio-demographic characteristics influence participation in each of these groups. In Ethiopia, he finds that households that are wealthier in terms of livestock, female headed households and household size all significantly and positively impact the probability that a household participates in at least one "iddir." Wealth measured in terms of land and the age of the head of household have no significant impact on "iddir" participation. In Benin, however, LeMay Boucher finds that wealth increases the probability of joining an informal insurance group. Age has a significant non-linear effect on the probability of joining. Unlike the Ethiopian data, household size and the gender of the head of household are not statistically significant.

3. Risk Sharing Models

As discussed above, one particular risk coping strategy involves risk sharing across households. There is a broad body of literature on these risk-sharing models. Coate and Ravaillon (1993) present a basic model of risk sharing using game theory. The model includes two risk-adverse households that have the same expected income and preferences. Their income varies at each date, and they cannot save between periods. The households work out an agreement ex-ante that the household that receives a larger income will share some of its wealth with the less fortunate household. After the households receive their income, they will honor the agreement if it is a repeated game with an unlimited time frame and if the implementation constraint holds. It is assumed that if one household reneges on the agreement, it cannot enter into another risk sharing agreement for the rest of the time periods. The implementation constraint must be fulfilled: the sum of a household's expected utility for all periods when honoring the agreement must be higher than its utility from reneging on the agreement plus the sum of its expected utility for all future periods in autarky. Coate and Ravaillon (1993) suggest that the first best solution is complete risk sharing; however, if complete risk sharing does not meet the implementation constraint, partial risk sharing is the second best solution.

Many studies test risk-sharing models in developing countries and build upon the basic risk-sharing model presented in Coate and Ravaillon (1993).[1] Townsend (1994) was one of the

[1] For a good summary of different risk sharing models and studies that test these models, see Morduch (1999).

first to test risk-sharing models. He used data from the ICRISTAT villages in Southern India to test how consumption fluctuated in relation to income fluctuations. He found that the marginal propensity to consume did not vary much with personal income, a finding that supports risk-sharing models. However, most other studies have rejected the presence of full risk sharing in favor of partial risk sharing hypotheses.

Dercon and Krishnan (2003) test risk sharing using a fairly traditional model. They test if positive income shocks affect households' consumption through personal income or only through the increase in aggregate village resources. When controlling for community fixed effects, they find that positive shocks to personal income in the form of food aid affect a household's consumption level. A 10% increase in food aid increases consumption by 0.8%. They reject the complete risk-sharing model because there is an effect of personal income on consumption; however, they find evidence of partial risk sharing.

Skoufias and Quisumbing (2005) make an interesting distinction between food and non-food consumption in their tests of risk sharing. When they test total consumption, they find that consumption is not fully insured from idiosyncratic income shocks in Ethiopia, Mali, Mexico or Russia. Consumption varies significantly with negative income shocks. However, when they separate the types of consumption, they find that food consumption is better insured from income shocks than non-food consumption in all four of the countries studied. In Mali and in Ethiopia, food consumption is almost completely covered through informal arrangements. It appears that households sacrifice non-food consumption in order to secure their food consumption.

Ligon et al. (2001) attempt to explain the failure of full risk pooling models by developing the concept of limited commitment. They build upon Coate and Ravaillon's static model to create a dynamic limited commitment model. In this model, transfers depend not only upon current income but also upon previous transfers. This model also includes a discount factor. They use data on three Indian villages to test their model and find that the dynamic limited commitment model explains the relationship between individual income and idiosyncratic shocks better than a static model or than a full risk-pooling model. However, this model does not predict the distribution of consumption among households in the village effectively.

Hoogeveen (2003) also offers an extension on traditional risk-sharing models. He argues that an absence of correlation between household income and household consumption does not necessarily imply risk-sharing agreements: households may accumulate assets and use them during difficult times to self-insure. To test for risk sharing while controlling for asset buffers, Hoogeveen generates a model with a village-level centralized planner that sets the aggregate savings rate in order to maximize utility for the village. A household's change in consumption depends on their individual income change, village level changes, a change in individual asset detention and error. He tests the model using data from rural Zimbabwe and finds evidence of partial risk sharing.

Vanderpuye, Orgle, and Barrett (2009) present another modification of the risk-sharing model. They test if informal insurance coverage depends on a person's social visibility. They tested social visibility in several ways. Survey participants were asked about their relationship with other randomly selected members of the community. The different social visibility measures were constructed using the responses of an individual about the people he or she knows and the number of other community members that reported knowing this person. Using data from rural Ghana, they find that there is a group of socially "invisible" people, who tend to be younger, engaged in farming, new to the area, poor, or from parents that did not hold any village offices. They find that the degree of risk sharing depends greatly on one's social visibility. For the subsample of socially visible people, they cannot reject the hypothesis of complete risk sharing. However, for the subsample of socially invisible people,

they overwhelmingly reject the null hypothesis of complete sharing and they cannot reject the hypothesis of no risk sharing. Thus, access to informal insurance depends on one's social network.

Alderman and Paxson (1992) note that while evidence supports partial risk sharing, certain types of transfers are difficult to measure. Households may transfer people or labor instead of money. They may also work insurance components into rent contracts. Furthermore, Alderman and Paxson argue that not all transfers are for insurance purposes. Some people may transfer money or services in order to secure their inheritance, for altruistic purposes, or to repay previous services. Indeed, De Weerdt and Fafchamps (2011) prove the importance of kinship ties and altruism in both the frequency and the size of transfers using data from a household panel survey in a Tanzanian village. They find that 34% of transfers happen between related households, although these households only represent 6% of the pairs of households. Transfers among kin represent 43% of the total value of transfers. Other proximity variables, such as geographic distance, religion or clan also significantly and positively affect the amount and the frequency of transfers between households. These findings have two possible implications. Some of the transfers observed in other studies may be due to altruism or kinship ties rather than pre-existing informal insurance arrangements. Alternatively, these transfers may represent pre-existing informal insurance arrangements; however, households prefer to have such arrangements with kin or people with other ties to them.

3.1 Crowding out

While the literature discussed thus far has focused on either formal or informal insurance mechanisms, another trend in the literature regards the relationship between formal and informal social protection. Notably, this literature focuses on the phenomenon of crowding out, or formal insurance replacing informal insurance mechanisms. One of the first major empirical tests of the relationship between private and public transfers is Cox and Jimenez (1992), which studied this relationship in Peru using the Peruvian Living Standards Survey. While they did not find complete crowding out, as predicted in Becker (1974) and Barro (1974), they did find evidence of partial crowding out. They estimated that the probability that an urban household receives an inter-household transfer decreases 8 percentage points when the household receives social security. Furthermore, removing social security would cause a 7.07% increase in inter-generational transfers. Thus, public transfers do partially crowd out private transfers in Peru.

Dercon (2002) discusses Cox and Jimenez's findings and their implication for policies. He argues that the impact of public transfers is usually smaller than the total transfer amount, as private transfers are often reduced. Poor households may actually become more vulnerable as they leave informal arrangements due to the newly received transfers. He argues that policy could target groups of individuals rather than individuals. In this way, the transfer affects all members of a group risk sharing agreement, and their incentives to maintain the informal arrangement rest relatively unchanged. Policies could also encourage group insurance rather than bilateral insurance between private parties.

Dercon and Krishnan (2003) test how food aid affects informal risk sharing arrangements. Their study first tests if household consumption responds to positive income shocks in the form of food aid. They find evidence of partial risk sharing arrangements in the community. In order to test if food aid decreases the amount of partial risk sharing in a community, they introduce interacted variables into the traditional risk sharing equation discussed in the previous section. These variables interact food aid with observable idiosyncratic shocks, such as crop or livestock shocks. The null hypothesis that the coefficient of these interacted variables is zero is rejected. They find that villages in which there is food aid, idiosyncratic

shocks have a larger impact on household consumption. This implies that traditional risk sharing mechanisms are weaker in villages that received food aid.

In contrast to much of the literature that takes an empirical approach, Heemskerk and Norton (2004) take an ethnographic approach to understand how public insurance affects informal insurance in rural Latin America. Through qualitative interviews they find that "informal insurance fails when shocks are cumulative, co-variant, irreversible, unforeseen and extremely costly" (3). They argue that while formal insurance may crowd out certain informal arrangements, it still has important welfare enhancing effects for families. Formal insurance increases the number and variety of survival strategies for vulnerable households and can improve the standard of living in recipient communities. Heemskerk and Norton even argue that public welfare might help to strengthen traditional safety nets, as "reciprocity works better when there is more to share" (11). Furthermore, with higher incomes, households may be better able to save and self-insure.

3.2 Insurance in Iraq[2]

Iraq has a rather unique public welfare system, marked especially by the Public Distribution System (PDS). While other countries in the MENA region spend an average of 3.6% of GDP on public social safety nets, Iraq spent 8.8% of their GDP on social safety nets in 2008. The formal social protection system can be broken down into three different categories: the Public Distribution System (PDS), the Social Protection Net (SPN), and job-related benefits. This section will first detail each of these programs and then discuss the literature on private transfers.

The largest public welfare program is the Public Distribution System (PDS), which distributes food rations to 99.7% of Iraqi households. These rations include ten different staples and provide 85% of the average caloric requirement. The program was introduced in 1990 when food imports declined due to sanctions, and the PDS was expanded during the Oil for Food Program. While the distribution system was affected by conflict in 2006, by 2007, the most households were again receiving their rations on time. The program represents 8.6% of GDP. However, while this program is the largest social program in Iraq, it has certain problems. First, as it is universal, it does not target poor or vulnerable households. Because of its size, it has caused some distortions in the food market that have depressed food prices and thus hurt rural farmers. There is some evidence also that the PDS has introduced labor distortions. Iraq has unusually low labor market participation rates. Only 57% of adults are active, and 87% of women are out of the labor market. The report "Confronting Poverty in Iraq" suggested that the unusually low labor market participation in Iraq could be due to the guarantee of food rations.

Iraq is gradually moving toward reform of the PDS in order to support programs that can have a larger impact on poverty reduction. In 2009, a five-year reform plan of the PDS was adopted. Reforms included a reduction in the number of participants, a revision of the food basket, decentralization to governorates that have effective capacity and to the Kurdistan Regional Government, and capacity building to help the private sector provide food. Finally, reforms aim to merge the PDS and the SPN by 2015. By 2010, eligibility had already been terminated for some of the wealthiest households (Iraq Briefing Book).

The Ministry of Labor and Social Affairs introduced the Social Protection Net (SPN) in 2004 in order to better target social policies and reduce poverty. The SPN is a cash transfer program meant to target poor and vulnerable populations. In addition to providing cash benefits, the SPN also provides other social benefits, such as vocational training, career counseling and support for income-generating projects (Iraq Briefing Book). The SPN

[2] The majority of this section is based on information in "Confronting Poverty in Iraq," unless otherwise noted.

currently targets groups of individuals that are believed to be vulnerable, such as the disabled, orphaned children, divorced or widowed women, married male university students, families of imprisoned or missing persons, those unable to work due to terrorism, and the internally displaced. Despite the efforts to target vulnerable populations, the SPN does not effectively target poor individuals. The program reaches less than 10% of the poor, and two-thirds of beneficiaries live above the poverty line. In fact, not all of the groups targeted are more vulnerable or poorer than the average Iraqi. Some of the groups that are targeted actually have a lower poverty head count and poverty gap than the whole population. According to the Economist Intelligence Unit Iraq Country Report, another problem with the SPN is the lack of sufficient funds to meet the demand of those that are eligible to receive transfers. Indeed, the Iraq Briefing Book estimated that the SPN only reaches about 112,000 of the 850,000 eligible families. Furthermore, the benefits are relatively small, as they are less than 10% of the median income of the lowest quintile.

While workers in both the formal and informal sectors are eligible for the PDS and the SPN, other formal social welfare programs are limited to wage workers in the formal sector. Public sector workers receive pension benefits, and private sector workers often receive retirement, healthcare, and other benefits. While these benefits are linked with employment in the formal sector, not all formal wageworkers receive these benefits; 68% of Iraqis work for wages, of which 50% receive benefits. Only 30% of Iraqi workers are covered by job benefits, and only 15% of poor workers are covered. Pension benefits are relatively generous, and on average they constitute 16% of transfer income to the poor and 25% of transfer income to the non-poor. Nevertheless, these systems are unsustainable because the contribution rates are not sufficient to cover the benefits. Furthermore, they primarily assist households living above the poverty line.

Iraq was one of the first countries in the region to create a public social protection system. They established a provident fund in 1956, which became the social security plan in 1964 (Turner and Lichtenstein 2002). Both employers and employees contribute to the defined benefit retirement program. Oil companies contribute 20%, while other companies contribute 12% to cover employment injury, retirement benefits, and other benefits. Employees contribute 7% of their salary to the social security system. Retirement benefits are distributed in the form of annuities, which is similar to the system in other MENA countries (Turner and Lichtenstein 2002). The benefits are calculated based on the "length of contribution/service, some measure of the individual's wage and a policy parameter setting the generosity of the scheme, the so called accrual rate" (Akhtar et al. 2009). The mandatory retirement age is 63 years of age, and one has to contribute 15 years in order to receive full benefits.

In 2007, Iraq passed a law to reform the social security system, and the World Bank's Emergency Social Protection Project provided technical assistance to conceive and implement the reforms. One of the biggest changes under the 2007 reform was to merge public and private pension systems by 2010. Previously, the State Pension System (SPS) administered the public sector while the Social Security System (SSS) administered the private sector pension and healthcare plans. The reforms created the National Board of Pensions (NBP) to administer these two systems in order to decrease labor market segmentation. One challenge that the NBP now faces is that the SSS includes other social insurance components such as health insurance, while SPF only includes retirement benefits (Akhtar 2009).

There are different assessments of the performance of the Iraqi pension system. According to Turner and Lichtenstein (2002), the Iraqi pension system functions relatively well compared to other countries in the region. Although the public social security program in Iraq only covers about 30% of Iraqi workers, this is slightly above the average for the MENA region, in

which 25% or less of the labor force is covered on average by social security programs (Turner and Lichtenstein 2002). While Turner and Lichtenstein (2002) presented a rather optimistic view of the pension system's reach in Iraq, Akhtar et al. (2009) estimated that even if pension reforms are effective, only a quarter of laborers will be covered, and Iraq would be 10% below the average coverage rates in the MENA region. According to this study, only Yemen and the West Bank and Gaza would have a lower retirement protection rates than Iraq. Furthermore, they argue that the pension system reinforces old age poverty, as only the middle and upper classes have access to the system. Akhtar et al (2009) also note using data from 2005 that pension payments represented 5.6% of GDP and that extensions to the system would make it unsustainable.

Overall, public and private transfers account for 28% of poor people's income in Iraq and for 21% of the income of households living above the poverty line. The public welfare system is the largest source of income transfers in Iraq, as 83% of the transfers that households receive come from the PDS or the SPN. While private transfers represent a much smaller part of transfer income, they come from more varied sources, including gifts from other households, remittances from abroad, zakat, or income from NGOs. A quarter of poor households receive private transfers. A similar percentage of non-poor households receive private transfers; however, households above the poverty line usually receive greater transfer amounts than poor households. Most transfers are domestic: less than 5% of transfers come from abroad. Households with female heads tend to receive more and larger private transfers than those with male heads. To our knowledge, there are no studies that examine other informal insurance mechanisms than private transfers in Iraq.

This study complements and contributes to the existing literature in several ways. First, it fills the knowledge gap about the Iraqi social protection system. It completes information on which households have access to formal insurance and explores informal insurance mechanisms other than private transfers. Second, it expands upon techniques used in Skoufias and Quisumbing (2005). This study goes into more detail than Skoufias and Quisumbing's research by focusing on only one country. It also studies a larger number of risk coping mechanisms. Finally, this study complements the literature on crowding out by examining the relationship between formal and informal forms of social protection in Iraq.

4. Economic Models for Testing Formal and Informal Insurance

To understand the factors that affect access to and use of formal and informal insurance mechanisms, we use data from the Iraq Household Socio Economic Survey (IHSES) 2006-2007, which was carried out by the Central Organization for Statistics and Information Technology (COSIT), the Kurdistan Region Statistics Organization (KRSO), and the World Bank. This survey interviewed over 18,000 households and 127,000 individuals and is designed to be representative of the Iraqi population. The survey contains data on many different socio-demographic characteristics at both the individual and household level. All individuals over 6 years of age were inquired about their employment and formal insurance benefits; thus, the analysis of formal insurance is done at the individual level. On the other hand, the questions regarding risks and informal coping mechanisms were asked at the household level; thus, the section on informal insurance uses household level analysis.

4.1 Formal insurance

As mentioned above, over 99% of the Iraqi population has access to the food rations under the Public Distribution Service (PDS). As this program is almost universal, it does not make sense to examine the determinants of participation in this social safety net. The IHSES 2006-2007 does not contain information on benefits received from the Social Protection Net (SPN). However, it does include information on access to other formal social protection programs, including health insurance and retirement benefits. As health insurance and retirement

benefits are linked with formal wage employment, only those holding wage jobs were inquired if their job offered one of the aforementioned benefits. Thus, our analysis of formal insurance detention only applies to wage workers in the formal sector. We test how socio-demographic characteristics influence whether a wageworker benefits from health insurance and retirement benefits. The model can be written:

$$\Pr(HealthInsurance = 1) = \alpha_1 + \alpha_2 poor + \alpha_3 urban + \alpha_4 education + \alpha_5 hhsize + \alpha_6 age + \alpha_7 gender + \alpha_8 public + \alpha_9 governorate + \mu$$

$$\Pr(Pensions = 1) = \alpha_1 + \alpha_2 poor + \alpha_3 urban + \alpha_4 education + \alpha_5 hhsize + \alpha_6 age + \alpha_7 gender + \alpha_8 public + \alpha_9 governorate + \mu$$

Poor is a dichotomous variable that takes the value of one if the household lives below the poverty line, as defined through the calculations leading up to the Poverty Reduction Strategy Paper and described in Amendola and Vecchi (2011).[3] Education is a set of seven dichotomous variables that represent the highest level of education that the individual received (illiterate, incomplete primary, primary, intermediate, secondary, diploma, university. The variable *hh* size refers to the size of the household in which the individual lives, and public is a dummy variable that takes the value of one if the individual is employed in the public sector and zero otherwise. Finally, governorate is a series of dichotomous variables that represent the 18 governorates, or administrative regions, in Iraq.

4.2 Informal Insurance

After testing the determinants of access to formal insurance, our study focuses on risks that Iraqi households face and on informal social protection. The IHSES includes a module on risks that the household faced within the 12 months preceding the survey, and it inquires households that faced at least one difficulty about the risk coping mechanisms they used. As these questions were asked at the household level, the analysis for the rest of the study is conducted at the household level. We begin by analyzing the risks that households face and if households' socio-demographic characteristics influence the probability that will they experience a certain risk.

We calculated the descriptive statistics using all 11 questions on risks that the household faced originally included in the survey. However, in order to facilitate the regressions, we regrouped the questions in the IHSES to include four categories: job-related risks, health-related risks, violence, and other. Our job related risk category regroups the questions pertaining to whether or not in the past twelve months any household member lost a job, experienced a salary decrease, or whether a family business went bankrupt. Health related risks include severe sickness or accident, the death of a working household member and the death of another household member. The questions on the experience of theft, violence due to the unusual circumstances in Iraq, kidnapping or death threats related to the civil war and other types of violence were regrouped into the violence related risks category. Finally, the survey asked households if they encountered another major problem.

After analyzing the descriptive statistics we run logit and probit regressions on the following model:

$$\Pr(JobRisk = 1) = \alpha_1 + \alpha_2 poor + \alpha_3 urban + \alpha_4 hhedu + \alpha_5 hsize + \alpha_6 agehhead + \alpha_7 headfem + \alpha_8 governorate + \mu$$

The variables in this model are similar to those in the formal insurance model. However, as everything is at the household level, hhedu represents the education level of the household head, agehhead and headfem are the age and gender of the household head respectively. The sector of employment was excluded from this model, as this information was only available

[3] The poverty line was calculated using a consumption aggregate and the cost of basic needs approach. Please see Amendola and Vecchi (2011) for a detailed explanation.

for wageworkers in the formal sector. The same model is used for health, violence, and other risks.

After testing how household characteristics influence the risks that they face, we test how households cope with difficulties. We regrouped the coping mechanisms included in the survey to form 11 groups. The mechanisms studied include: reducing consumption or spending, using savings or investments, taking out loans, receiving transfers, selling assets, migration, joining the military, using child labor, forcing young girls to marry, other, and nothing. We test the following model on each of the mechanisms listed above in order to understand how the type of risk that the household faced and its socio-demographic characteristics influence the choice of risk coping mechanism.

$$\Pr(CopingMechanism = 1) = \beta_1 + \beta_2 jobrisk + \beta_3 healthrisk + \beta_4 violence + \beta_5 otherrisk + \beta_6 hhcharacteristics + \mu$$

Where hhcharacteristics is a vector of different socio-demographic characteristics, including poverty, area of residence (urban/rural), education, size, age and gender. As in the analysis of risks, the analysis takes place at the household level, and thus variables such as age, gender and education refer to those of the household head.

As only households that experienced problems were asked the questions regarding coping mechanisms, our regressions in this section correct for selection bias. Because the households that faced risks may have different characteristics than those that did not face risks, uncorrected results may not represent the entire Iraqi population, which is the population that interests us. Thus, we use bivariate probit models with sample selection to control for sample selection bias. This type of model simultaneously estimates two probit models: one being the outcome equation described above, and the other being the selection equation. The selection equation we use tests the probability that a household faced a problem, given its characteristics and its region of residence. Because we cannot compute the marginal affects using this model, we also estimate probit and logit models in order to determine the marginal effects. In the section on robustness checks, we test if these marginal effects are robust despite selection bias.

While using the household head's education level to represent the education of the household has its limits, we found that this was the most appropriate variable to use for our study. First, the variable is intuitive and easily interpreted. Second, culturally it is reasonable to assume that the head of household has a very strong influence on the household's decisions, and we are mainly interested on how education could influence the decisions that the household makes. However, we also tested the models with a composite household education variable calculated using a method similar to that in Grimm, Guénard and Mesplé-Somps (2000), which takes into account the education level and the age of all household members. This indicator allows us to understand the general level of the household's education, as any individual could influence household decisions. The indicator shows the percentage of the household's education potential that was achieved. It assumes that all individuals over 22 could have achieved at least 13 years of education, as there are 12 years of compulsory education in Iraq, and the 13^{th} year differentiates those that have had at least one year of university or technical training after high school. The household level education potential indicator sums the number of years of successful schooling that each member of the household achieved and divides it by the number of successful years that the household could have received taking into account each individual's age. Those over age 22 could have received 13 years of education; however those younger than 22 could have received their age minus six (age at which children start school).

The advantage of the composite education potential indicator is that it allows us to see how the general level of education in the household affects the probability that households face a

risk or choose how do cope with risks. However, this indicator is more difficult to interpret, and it assumes that the education of each household member affects decisions equally. We test this indicator in all of our descriptive statistics and regressions on informal insurance, and we find that the results do not change based on the type of education indicator used. In the discussions and appendixes, however, we consider the level of the household head's education.

4.3 Crowding out

After understanding the determinants of both formal and informal social protection, we test the relationship between formal and informal insurance. As discussed in the literature review, many studies have tried to understand the extent to which formal insurance crowds out informal insurance. To test this in the case of Iraq, we re-estimate the equations on the use of coping mechanisms including different formal insurance variables. The equation can be written:

$$\Pr(copingmechanism = 1) = \alpha_1 + \alpha_2 formal + \alpha_3 risk + \alpha_4 hhcharacteristics + \mu$$

$$\Pr(copingmechanism = 1) = \alpha_1 + \alpha_2 healthinsurance + \alpha_3 risk + \alpha_4 hhcharacteristics + \mu$$

$$\Pr(copingmechanism = 1) = \alpha_1 + \alpha_2 retirement + \alpha_3 risk + \alpha_4 hhcharacteristics + \mu$$

where formal is a dummy variable that takes the value of one if at least one household member has formal insurance, healthinsurance is a dummy variable representing at least one person in the household who has formal health insurance, and retirement is a dummy variable that takes the value of one if at least one household member has retirement insurance. Risk is a vector of dummy variables of whether or not the household experienced job, health, violence or other risks. Hhcharacteristics is a vector of household characteristics, identical to that used in the previous section.

If the coefficient of formal, retirement or health insurance is significant and negative, there is evidence of crowding out, except in the case of using no coping mechanisms in which a significant and positive coefficient signals crowding out. The interpretation of the results is rather intuitive. Because the household is less likely to use an informal coping mechanism when at least one household member has formal insurance, we can conclude that formal insurance crowds out this type of coping mechanism. Our approach differs slightly from the one used in most of the literature. Most of the literature focuses only on transfers; however, our analysis allows us to test if having formal insurance reduces the use of various informal coping mechanisms. Furthermore, we can understand which informal coping mechanisms are used less.

Because only households in which at least one household member has a wage job have access to formal insurance, this part of the analysis is only done using households in which at least one member has a wage job. Moreover, we also use bivariate probit regressions with sample selection in this section in order to control for sample selection bias. We only have the information on coping mechanisms for the sub-sample of households that faced difficulties in which there was at least one wage worker; thus, if we want to understand the magnitude of crowding out for the Iraqi population, we must use corrected regressions to avoid problems of sample selection bias.

5. Analysis of Formal Insurance

5.1 Descriptive Statistics

As discussed above, our discussion of formal insurance includes access to health insurance and retirement benefits. Only wageworkers in the formal sector have access to these formal social programs; thus, the following analysis only considers the determinants of participation in formal insurance among formal wageworkers. Less than half (46.5%) of formal wage-

workers benefit from at least one of the aforementioned programs; 45.5% of wage-workers have retirement benefits, but only 30.2% of wage-workers have healthcare benefits. The vast majority of those with healthcare benefits also have retirement benefits. The descriptive statistics that figure in appendix two implicate that coverage depends on socio-demographic characteristics.

Individuals that live in families living above the poverty line are twice as likely as those living below it to have access to formal insurance. Those living in urban areas have a slightly higher coverage rate than those in rural areas, and the coverage rates also vary by governorate from 35.6% of households in Najaf to 66.6% of households in Al-Anbar with formal insurance. Individuals that live in larger households are less likely to have health insurance or pension benefits. Gender seems to have a very high influence on the detention of formal insurance, and females are much more likely than males to benefit from insurance. 90.7% of women employed in formal wage jobs have insurance, but only 39.7% of men employed in formal wage jobs have formal social protection. Formal insurance coverage increases significantly with the level of education; however, we observe a threshold effect. There is a large increase in coverage between intermediate, secondary and post secondary education. Only 36.2% of those with intermediate education have formal insurance, while 62% of those with secondary education are covered, and 83% of those with an additional diploma have formal insurance. The coverage rates also seem linked to the age of the individual; however, this relationship seems to be non-linear. The formal insurance coverage rate increases in each age group up to 46-60, and then decreases with the age group 60 years of age or more. Participation in social protection programs is overwhelmingly linked to the sector of employment. 88.8% of public sector workers are covered; however, only 1.7% of private sector or non-profit employees have coverage.

5.2 Regression results

The probit regressions on formal insurance detention figured in appendix 3 and 4 confirm most of the relationships between socio-demographic characteristics and formal insurance detention discussed in the descriptive statistics. Education does positively influence insurance detention, and the marginal effects confirm the threshold effect. For retirement insurance, those with intermediate education are 18% more likely than illiterate individuals to have insurance, while the marginal effect increases to 28% for those with secondary education and to 42% for those with a post-secondary degree. While we also observe a different threshold effect for health insurance detention, in that we observe that individuals with primary education are only 3% more likely than those who are illiterate to have health insurance, but those with intermediate education are 9% more likely to have health insurance, and those with secondary education or higher are 13% more likely than illiterate individuals to have health insurance.

Age does have a significant positive effect on the detention of formal insurance, and the relationship between age and retirement protection is non-linear. The probability of having formal retirement increases until age 62 when it begins to decrease. As the descriptive statistics showed, the sector of employment has an important influence on formal insurance detention. Public sector workers are 83% more likely to have retirement insurance and 44% more likely to have formal health insurance than private sector workers. The relationship between gender and insurance detention is confirmed for retirement insurance but not for health insurance. Men are 25% less likely than women to have retirement insurance.

While most of the relationships that the descriptive statistics suggested are confirmed in the regression results, some of the relationships are not statistically significant and there is one seemingly counter intuitive result. First, neither household size nor poverty has statistically significant coefficients. Second, there is no relationship between area of residence and health

insurance detention. Furthermore, the regression results show a statistically significant and negative relationship between living in an urban area and having retirement insurance. While at first this result contradicts the descriptive statistics and seems counter intuitive, it is most likely evidence of another relationship. Living in an urban area is significantly and negatively correlated with working for the public sector, in which case the relationship between the area of residence and retirement insurance is actually reflecting this correlation.

6. Analysis of Informal Insurance

6.1 Do different types of households face different risks?

The descriptive statistics show that the amount of risk to which households are exposed depends upon their socio-demographic characteristics and their geographic location. A greater percentage of households with younger or female household heads report experiencing at least one problem during the 12 months preceding the survey. There is a higher incidence of risk among households with wageworkers, those that live above the poverty line and those in urban areas. The percentage of households that reported problems in the 12 months leading up to the survey varies significantly by governorate. Economic, health or security risks in Salah al-Deen affected only 5.92% of households, while 36.5% of households in Al-Anbar reported problems.

Additionally, socio-demographic characteristics and geographic location also affect the types of risk that households face, as shown in appendix 5. In terms of economic or employment risks, urban households are more likely than rural households to experience any of the three types of job-related risks. Often in rural locations, households own their means of production and are self-employed. As a result, the questions on loss of job or lowering of wages may not be as relevant as in an urban context. A higher percentage of poor families experienced job loss than those above the poverty line. A higher percentage of households with at least one wageworker or a female household head reported experiencing a pay decrease than households with no wageworkers or male heads. Finally, education seems to have an effect on the occurrence of job-related risks, but only at the university level.

Socio-demographic characteristics seem to have a smaller impact upon the incidence of health risks. Education level seems to have the most important impact on the occurrence of health risks. The percentage of households that reported sickness or death decreased as the household head's education increased. Additionally, large households are more likely to report illness or death. Households with female heads are more likely to declare a death in the household but less likely to report illness than households with male heads.

The risk of violence depends on socio-demographic characteristics and geographic location. There is a higher prevalence of violence, theft and kidnapping among households whose head had a university degree. Well-educated households may be targets because of the wealth and social positions that are correlated with a high degree of education. In a similar manner, there is a higher rate of theft or violence among households living above the poverty line. Finally, large households are less likely to experience violence.

The governorate in which a household resides greatly affects the type of problems that the household faces. Economic woes are centered in a few governorates that have exceptionally high rates of job loss, bankruptcy or lowered wages. These governorates include: Al Anbar, Baghdad, Kerbela, Thi-Qar, and Basrah. The percentage of households that experienced job loss in Al Anbar, Baghdad and Kerbela exceeded ten percent. The incidence of economic risk varies significantly among the other governorates. The incidence of health related risks also vary among governorates, but to a lesser degree than economic risk. The governorates that are most affected by health related shocks are not necessarily the same ones that were most affected by economic shocks. Violence only significantly affects households in Diyala, Al-

Anbar and Baghdad; however, the percentages of households that are affected by war-related violence in these governorates are 25%, 18%, and 15% respectively.

For the most part, the probit regressions presented in appendix 6 and the marginal effects presented in appendix 7 confirm the trends in the descriptive statistics discussed above, and the socio demographic characteristics do not affect the probability of facing different risks in the same way. Being poor, living in a larger household or in urban areas, and having a female head of household increases the probability that one experiences job related problems. The probability of job related problems decreases with the age of the head of household and when the head of household has obtained a post-secondary school diploma or university degree. The governorate in which a household is situated also affects the probability that it experiences job related difficulties. More precisely, poor households are 1% more likely than households living above the poverty line to experience job risks, and urban families are 3% more likely to face job difficulties than rural households. Compared with households with illiterate heads, the probability of a job related problem decreases 2% in households where the head has a diploma and 3% in households where the head has been to university. The other education variables, however, are not statistically significant, which suggests that education has a threshold effect.

All of the socio demographic characteristics studied have a statistically significant relationship with the occurrence of a health risk. The probability of experiencing a health related risk increases 1% among urban households compared to rural ones, 0.2% with the size of the household, and 4% among female-headed households. While in much of the literature, women tend to spend more resources on health and nutrition than men, which would imply that female headed households should be less likely to experience health problems, our result is not counterintuitive due to the structure of the health variable. The death of a household member is included in the health risk variable, and women may become the head of household after the death of their husband. The descriptive statistics confirm that a higher rate of households with women heads reported the death of a family member, while the percentage reporting illness was lower than that of male-headed households. This potential endogeneity problem is discussed in more detail in the robustness checks section of the paper. The probability of facing health risk declines 1% if the head of household has at least been to secondary school and 2% if he/she has been to university. When there is at least one wageworker in the household, the risk of health problems decreases 1%, and with the age of the household head it decreases 0.03%. Somewhat surprisingly, poor households are 0.7% more likely than non-poor households to experience health related problems. However, if the general state of health in poor households is lower than in non-poor households, perhaps they are less likely to report illnesses as severe.

While the regression results for job risks and health risks are consistent with the descriptive statistics, the only statistically significant factors affecting the probability of reporting violence are the size of the household, the area of residence and the governorate. Urban households are 0.8% more likely than rural ones to experience violence, and the risk of violence increases by 0.2% with an additional household member. Larger households are more likely to face violence. Certain governorates have an extremely high probability of violence. Residents of Diyala are 35% more likely than residents of Duhok to report violence, those in Al-Anbar are 39% more likely to report violence, and those in Baghdad are 30% more likely to report violence.

6.2 What determines the choice of risk coping mechanisms?

The IHSES asked households that had faced one of the problems discussed in the previous section about the types of risk coping mechanisms that they used to deal with the problems they faced. The questionnaire included 24 possible risk coping mechanisms, which we

regrouped into 11 groups. The risk coping mechanisms under study include decreasing consumption or spending, using savings or investments, taking out loans, receiving transfers, selling assets or durable goods, migrating to another region or abroad, joining the military, using child labor, forcing young girls to get married, other mechanisms including begging, or doing nothing.

By far, the most widely used risk coping mechanism used in Iraq is decreasing consumption or spending, as 74% of households reported using this type of strategy. The next most common mechanisms are using savings or investments and taking out loans, used by 47% and 44% of households, respectively. 19% percent of households received transfers, and 17% sold assets or durable goods. The amount of households that resorted to child labor or child brides was non negligible. In the entire sample, 3% of households put their children to work, and more than 1% married off their young daughters.

Analysis of the descriptive statistics that figure in appendix 8 implies that the choice of risk coping mechanism depends on geographic location, the socio-demographic characteristics of the household and the type of risk that the household faced. A higher percentage of rural households decrease consumption, spend savings, or take out loans than urban households. However, urban households are more likely than rural households to join the military or use child labor. Households only use child marriage to cope with difficulties in urban areas.

In addition to the type of locality in which the household is situated, the percentage of households that use different risk coping mechanisms varies significantly by governorate. For example, in Qadisiya only 41% of households reported decreasing consumption or spending in response to a problem, while in Maysan, 93% of households used this technique. Migration and spending savings or investments also fluctuate greatly among different governorates. Some of the other coping mechanisms seem to be almost uniquely used in a few governorates. Joining the military is used almost exclusively in Diyala, Baghdad and Wasit. Additionally, in many governorates, households do not use child labor or marry off their daughters. The rate of child labor is exceptionally high in Baghdad and Basrah, and the rate of using marriage as a coping mechanism is especially elevated in Baghdad and Wasit. Finally, in Kirkuk less than 1% of households did nothing to cope with their problems, whereas in Sulaimaniya, Al-Anbar and Babylon, between a fifth and a third of households did not use any risk coping mechanisms after a problem.

The socio-demographic characteristics of the household also seem to influence the choice of risk coping mechanism. Households with women heads tend to decrease consumption or spend savings more frequently than households that have male heads. Consistent with the literature on the subject, households with women heads also receive transfers in a higher proportion than their male counterparts. Despite the literature that argues that in general women are more protective of and concerned with the welfare of their children, households with women heads are much more likely to use child labor or force their young daughters to marry.

The age of the household head also affects the choice of risk coping mechanism. Whereas younger household heads tend to use loans, older household heads tend to use savings. This result is quite logical, as households with younger heads might not have had enough time to build up savings. Younger households also tend to receive more transfers or migrate more after facing a difficulty. Using marriage as a risk coping mechanism is only important for households whose head is 46 years old or older.

The size of the household also seems to affect the choice of risk coping mechanisms. Households with less than ten people are more likely to decrease consumption or spending, spend savings, receive transfers or migrate. Households with ten or more members are more

likely to cope with risks by joining the military, using child labor, marrying young daughters, or doing nothing than those that are smaller. Having wageworkers in the household also affects the choice of risk coping mechanism. Households with at least one wageworker are less likely to decrease consumption, spend savings, take out loans, receive transfers, or sell durable goods; however, they are more likely to migrate, join the military, or use child labor or marriage.

The education of the head of household also affects the choice of risk coping mechanism. The difference is especially marked among those that have university education. Fewer of these households use consumption, loans, transfers, and selling of assets or joining the military than households whose household head has less education. University educated household heads also tend to use migration more or to not use any coping mechanisms. Another important result is that no households whose head has a university-level education used child labor.

Poverty also affects the use of risk coping mechanisms. Poor households are one third as likely as households living above the poverty line to do nothing to cope with risk. Poor households are more likely to decrease consumption or take out loans; however, they are less likely to use savings to deal with problems. This is rather logical, as households below the poverty line may have difficulty saving. Somewhat surprisingly, poor households are less likely to use child labor or to use marriage as a coping mechanism. However, perhaps in these households children may already work or young marriages are more common; thus, these would not be seen as coping mechanisms.

In addition to geographic and socio-demographic characteristics of the household, the type of risk that the household faced also affects the choice of risk coping mechanism. After a job related problem, a larger percentage of households reduce consumption. More households tend to use loans or transfers to deal with health related problems than for other types of problems. After a violence related problem, households tend to use savings or migrate more; however, they do not take out as many loans. Higher percentages of households use transfers and child labor to respond to both job or health risks than for violence and other types of problems.

Not all of the inferences drawn from the descriptive statistics above are confirmed in the regression results. While above we examined which coping mechanisms people with different characteristics and facing different problems privilege, in this section, we test how the characteristics and types of problems influence the probability of using a specific coping mechanism. To eliminate selection bias we estimated bivariate probit with sample selection models; however, as this type of model does not allow us to calculate marginal effects, we also estimated probit regressions. While there is evidence of sample selection bias, the results do not seem to be compromised by selection bias. This will be further discussed in the section on robustness checks. The results from the bivariate probit regressions with sample selection are in appendix 9. The results from the probit regressions figure in appendix 10, and the marginal effects figure in appendix 11.

Decreasing consumption or spending seems to be a mechanism used more frequently after job risks than other risks. The marginal effect of facing a job related risk on the probability of using this coping mechanism is 37%, while the marginal effects for health, violence or other related risks are 9%, 21% and 12% respectively. Poor households are 16% more likely than non-poor households to decrease their consumption spending, and urban households are 7% less likely than rural households to use decreasing consumption as a coping mechanism. The probability of using consumption as a coping mechanism decreases by 2% with each additional household member. Finally, we observe a threshold effect with regards to the household head's level of education. Only the education dummies for having a secondary school diploma or for a university degree are statistically significant. Households in which

the head has a university level education are 11% more likely than those with an illiterate head of household to decrease consumption as a means of coping with a problem.

The probability of using savings as a coping mechanism increases 32% after violence related problems. The age and the education of the household head also positively influence the use of savings to cope with problems. However, urban households are 9% less likely then rural ones to use savings, and larger households are less likely to use this coping mechanism. Households in which there is at least one wageworker are 7% less likely than households with no wageworkers to spend their savings. People that experienced job, health, or other types of problems were respectively 15%, 17%, and 14% more likely to take out loans as those that did not experience these problems. However, those that are affected by violence are 8% less likely than others to use loans to deal with difficulties. The use of loans decreases with the household's education and the household head's age. The unstable environment may discourage lenders and break the trust between borrowers and lenders. Poor households are 9% more likely to use loans to deal with problems, which may make these households more vulnerable. As with consumption, we observe a threshold effect regarding the level of education of the household head. There is no statistically significant effect of education up to the levels of diploma and university, at which the household becomes 11% and 18% less likely to take out loans respectively.

Transfers seemed to be especially linked to health related problems. The marginal effects of experiencing health risks on the receipt of transfers is 16%, while the marginal effects of job, violence and other problems are 11%, 5% and 6% respectively. Logically, poor households are 5% more likely than non-poor households to receive transfers, and consistent with the literature, women heads of households are 10% more likely than their male counterparts to receive transfers. Another interesting result is that the size of the household and the existence of at least one wageworker in the household decrease the probability that the household will receive a transfer after a risk. Perhaps their social networks expect that with more members or with more diversified income sources, these households do not need as much financial assistance.

Regarding using the sale of assets or durable goods to deal with difficulties, there is no significant relationship between experiencing violence and selling assets, which implies that households do not sell their assets after experiencing violence. Households with older heads and with at least one wageworker are less likely to sell assets. Migrating to deal with difficulties is strongly tied to the experience of violence. Households that experienced violence are between 12% more likely to use migration as a risk coping technique than those that did not experience violence. Furthermore, the coefficients for experiencing a job related problem and other problems are statistically significant and negative. In terms of socio demographic characteristics, poor households and university-educated heads of households are more likely than those living above the poverty line or those with illiterate heads to use migration. Perhaps on the one hand, poor households may be more easily mobile, and on the other, those with a university degree may be able to find better opportunities. Another interesting result related to migration is that the probability of migrating decreases as the household size and the age of the head increase. It may be more difficult to move larger families, and older generations may be less willing to move.

Joining the military in response to a problem seems to especially be the case in households that experienced risks other than job, health, or violence, as these households are 3% more likely to use the military as a coping mechanism than those that did not have these other problems. Health and job related risks are also correlated with a higher rate of joining the military to deal with difficulties, though to a lesser extent than other problems.

Using child labor seems more influenced by the type of risk that the household faced than its characteristics, and it is linked to the occurrence of job and health related risks. Households that underwent either a health or a job shock are 2% more likely than those that did not experience a health or job related issue to use child labor. The size of the household positively and significantly affects the decision to use child labor. Additionally, households with wageworkers are more likely to use child labor, which may come from an easier access to paid employment. Similarly to child labor, the type of risk faced has an important impact on the use of child marriage to cope with difficulties. The effects are largest for health and other problems, though they are also statistically significant for job and violence related risks. Additionally, the regressions confirm one of the implications of the descriptive statistics: women household heads are 1.5% more likely than their male counterparts to use child marriage as a coping mechanism. The size of the household has a very slight, but statistically significant, influence on the use of child marriage.

There is not a strong relationship between household characteristics and risks and using other coping mechanisms than the ones described so far. Finally, poor families are less likely to do nothing in the face of difficulties. However, the probability of doing nothing to cope with problems seems to depend on the socio demographic characteristics of the household. Poor households are 5% less likely than non-poor households to do nothing, while households in which the head has attained a university level education are 7% more likely than those with illiterate heads to do nothing after a risk has occurred. Interestingly, households with wageworkers are 2% more likely than those without wageworkers to do nothing, which may support the hypothesis of crowding out. The following section will further examine the determinants of doing nothing in the face of risk in order to further examine the possibility that formal insurance crowds out the use of informal coping mechanisms.

6.3 Crowding out

Our crowding out model allows us to test whether or not formal insurance lowers the use of informal coping mechanisms, which type of formal insurance impacts these choices the most, and which informal coping mechanisms have actually been crowded out. As described in the section on methodology, we inserted the dummy variables that at least one person in the household had formal insurance into the probit regressions on the different coping mechanisms. If the coefficient of a the dummy variable is statistically significant and negative, there is evidence of crowding out, except in the case of not using any coping mechanisms, in which a positive sign is evidence of crowding out.

Overall, we find evidence of crowding out, and retirement detention tends to lower the use of informal coping mechanisms more than health insurance detention. The coefficients for the three dummy variables tested in the regression on whether the household did not use any coping mechanisms are all statistically significant and positive. Because the probability of not using informal mechanisms increases by 4% when a member of the household has retirement insurance but only by 3% when a member of the household has health insurance, we conclude that retirement insurance induces a larger phenomenon of crowding out than health insurance.

By studying the marginal effects of each regression on the different coping mechanisms, we can understand which coping mechanisms households use less when they have access to formal insurance. Formal insurance detention crowds out especially the use of lowering consumption and receiving transfers. Households with access to formal insurance were 12% less likely to lower their consumption and 7% less likely to receive transfers in response to a risk than those without formal insurance. Those with formal insurance were also 5% less likely to use their savings, 4% less likely to sell their assets and 1% less likely to use child labor than those without insurance. However, there was no reduction in the use of loans or

child marriage among households with formal insurance. One surprising result is that formal insurance actually seems to crowd in military service as a response to problems that the household faced. Those with formal insurance were actually 2% more likely to join the military than those without formal insurance. Perhaps households in which at least one member has a wage job may have more connections to people with positions in the public sector or public services.

When we isolated the two different types of insurance, we found that the types of mechanisms that households use less when considering retirement insurance are largely similar to the results of formal insurance in general. However, the results change somewhat when considering health insurance. While decreasing consumption is no longer significant, taking out loans is significant and negative. This implies that access to health insurance leads households to resort less to taking out loans, but it does not affect their consumption patterns.

Consistent with many of the findings in the literature, we find that having access to formal insurance can decrease the use of informal coping mechanisms, and notably transfers. However, this is not necessarily an argument against the expansion of formal insurance. Many of the traditional coping mechanisms can have negative consequences for the household and for the larger society. Using coping mechanisms such as loans and selling productive assets can leave a household more vulnerable to poverty and can subject them to unfair lending practices. Reducing consumption in the face of common economic, health, or security shocks can reinforce economic depressions or health problems. At the village level, reduced consumption decreases economic activity. Furthermore, if health or nutritional spending is reduced, individuals will be more vulnerable to disease or death. Child labor has negative social impacts and can be seen as a violation of children's rights. Thus, as we demonstrate that formal insurance is also replacing these traditional coping mechanisms that can have negative effects, crowding out is not an argument against the expansion of formal insurance.

6.4 Robustness checks

This study is subject to several potential problems; however, in this section, we argue that our results are robust despite these issues. First, there is a risk of selection bias in the regressions with the use of coping mechanisms and crowding out. Only households that experienced problems were asked how they dealt with them. Because different households face different risks, the sub-sample of households that responded to questions on coping mechanisms is not representative of the population. Second, there could be problems of reverse causality. Perhaps the risks that a household faces or the coping mechanisms that they use influence their characteristics, such as poverty, place of residence, or size. This section discusses the robustness checks we used to test the sensitivity of our results to these potential problems.

To test for selection bias, we estimated bivariate probit with sample selection models for each of the coping mechanism and crowding out regressions discussed above. Rho measures the correlation between the error terms of the outcome and the selection equations to test the presence of selection bias. For all of the models, we reject the null hypothesis that rho is equal to zero; thus, we find evidence of selection bias. However, when we compare the results of the bivariate probit models with the results from the probit models discussed above, the results do not change. All of the coefficients remain statistically significant, and the value of the coefficients only changes slightly. Thus, despite the presence of selection bias, our results are robust.

After testing for selection bias, we test if reverse causality affects our study of informal insurance and risks. In order to test for reverse causality, we considered each independent variable separately and listed the risks or coping mechanisms that could potentially influence the value of the independent variable. We then used either logit or OLS regressions to test if

these risks or coping mechanisms had a statistically significant effect on the independent variable. There are three cases that are worth discussing.

The most obvious example is that of poverty. Individuals that are poor may be poor because they experienced job, health, or violence related risks or because they decreased their consumption and sold productive assets in response to a crisis. Not surprisingly, decreasing consumption in the face of difficulties increases the probability that a household is poor by 91%. This is not surprising, as poverty is measured through per capita consumption. To see how this reverse causality impacts our study, we redid the regressions on risk and coping mechanisms without including poverty as an independent variable. The results did not change significantly from our original results; thus, it seems that though there is a slight problem of reverse causality, it does not compromise the integrity of this study.

A second potential source of reverse causality is that women may become the head of a household after the death of the male head of household, and health related problems include the death of a household member. When we tested the impact of health related problems on the probability that a household has a woman head, we found that death increased the probability that the household has a women head, while illness decreases this probability. Households that experienced the death of a working member within twelve months of the survey are eight times more likely to have a woman head than those that did not lose a working household member. Thus, there is a problem of reverse causality between the independent variable, female-headed household, and the dependent variable, risk of health related problems. As with poverty, when female household head is excluded from the regression of the probability of facing health risks, the results presented above hold.

The final issue regarding reverse causality is the relationship between holding a wage-earning job and experiencing job related problems. Those who lost their jobs or experienced pay cuts may have tried to diversify their income sources by seeking wage employment. The logit regressions testing the impact of job related difficulties on wage employment are significant. Individuals who lost their jobs within 12 months of the survey are 29% more likely to have been engaged in wage employment within 12 months of the survey. Those who experienced pay cuts were 97% more likely to have been employed for wages. Because the time period used for both the question regarding job related problems and wage employment is the same, it is difficult to establish a direction of causality. The regressions suggest that the causality could be in either direction. However, it is more logical that someone would have job related problems if that individual held formal, wage employment than vice versa. While there is a risk of reverse causality related to job related risks, the coefficients when wage employment is excluded from the regression only change slightly. All remain significant except for two of the governorates.

Finally, as discussed during the methodology section of the paper, we tested the robustness of our results to the choice of an education indicator. Because using the household head's education level to represent the household's education may not represent the level of education of the whole household or the education of all of the decision makers in the household, we also used a composite household level education variable. This variable took into account the education level and age of all members of the household. Our results are not sensitive to the choice of indicator for education.

7. Conclusions and Recommendations

The main contribution of this paper is to better understand formal and informal insurance mechanisms in Iraq and particularly risk coping mechanisms. These conclusions have several implications for policy in order to increase access to formal insurance, to lower the probability that households face risks, and to diminish the problems associated with certain informal coping mechanisms. One general recommendation would be to support the

educational system. Better educated individuals have better access to formal insurance, less chance of experiencing most difficulties, and tend to use informal coping mechanisms that have the least detrimental impacts.

As discussed above, only wage-earning employees in the formal sector are able to receive social security, health insurance or retirement benefits; however, less than half of these individuals are covered. Socio-demographic characteristics are highly correlated with access to formal insurance, especially the sector of activity. Public sector workers are much more likely than private sector workers to receive benefits. As a result, one way to improve access to formal insurance is through encouraging private sector firms to offer formal insurance benefits to their employees. Furthermore, as less-educated workers have less coverage, policy could also push for formal insurance expansion among low-skilled labor.

The risks that households face depend on socio-demographic characteristics and geographic location. Policy should improve job security, both in terms of employment and wages, among poor workers, as poor workers are more likely to experience employment related problems, and these risks make poor households even more vulnerable. Second, programs should target job creation and security and public health in urban areas, as urban residents are more likely to suffer from job or health related risks. Furthermore, the security situation in Diyala, Baghdad, and Al-Anbar should be addressed, as the residents of these governorates were especially affected by violence.

This paper allows us to understand which types of households use which coping mechanisms. As previously mentioned, some coping mechanisms can have detrimental effects, such as increasing vulnerability to poverty or illness, perpetuating economic downturns, or violating children's rights. Thus, the detailed description of which coping mechanisms are the most prevalent and the characteristics of the households that use them can help form policy that encourages the development of mechanisms that have fewer harmful effects and limits the negative impact of others.

Poor households tend to use the coping mechanisms that reinforce poverty, such as reducing consumption, selling productive assets, and taking out loans. In order to reduce the risk of poverty traps, policy makers could try to increase the options of both formal and informal mechanisms available to poor households. Our results showed that reducing consumption is the most widely used coping mechanism in Iraq, followed by savings and loans. Because reducing consumption has a more detrimental effect on the local economy than the other two mechanisms, policy could encourage the development of savings and credit markets. Programs to encourage savings should target less educated, wage-earning, and urban households because these households are less likely to use savings as a coping mechanism. Additionally, ensuring that households have access to loans at fair interest rates can lower the negative effects of loans.

Furthermore, due to ethical reasons, policy should discourage the use of child labor and child marriage. The use of child labor is more prevalent among wageworkers; thus, policy makers should target this population with campaigns against child labor. Child marriage as a coping mechanism is more common among households with female heads; thus, awareness campaigns that attempt to decrease the use of child marriage should target women.

The results of this paper have allowed us to recommend policies that would bolster both the formal and informal protection systems in Iraq. We have made recommendations for how to expand formal sector coverage, how to lower the probability that a household will face a risk, and how to mitigate the negative effects of the informal mechanisms that households use. Further research could study the effectiveness of the Social Protection Net, a social safety net that is available to both wage and self-employed workers. It could also follow the reforms

that are currently taking place to the Public Distribution System, the authority that distributes food rations. Finally, further research could test informal retirement arrangements in order to understand how households prepare for the future, and not simply deal with present difficulties.

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Appendices

1. List of governorates and their codes

Iraq is divided into 18 governorates, or administrative regions. The codes included in this appendix were the ones used in the constructed data from the IHSES 2006-2007. The first number of the code represents the larger region. Although there are different spellings for the region names, we have retained the one used by the COSIT, the World Bank, and the Kurdistan Regional Statistical Commission.

11 Duhok

12 Mosul

13 Sulaimaniya

14 Kirkuk

15 Erbil

21 Diyala

22 Al-Anbar

23 Baghdad

24 Babylon

25 Kerbela

26 Wasit

27 Salah al-Deen

28 Najaf

31 Qadisiya

32 Muthanna

33 Thi-qar

34 Maysan

35 Basrah

2. Formal insurance descriptive statistics (%)

Type of insurance	All Wage Workers %	Poor %	Non-poor %	Urban %	Rural %	Household size: 1-4 %	Household size: 5-9 %	Household size: 10 + %
Health insurance	30.15	13.46	33.67	31.58	24.49	39.21	30.63	23.27
Retirement	45.47	25.43	49.69	46.41	41.76	55.54	45.91	37.97
At least one of the above	46.50	26.66	50.68	47.51	42.49	56.55	46.64	39.62

Type of insurance	Age: 0-17	Age: 18-30	Age: 31-45	Age: 46-60	Age: 61 +	Female	Male	Public Sector Worker	Private/non-profit worker
Health insurance	2.42	22.71	36.46	42.66	37.27	59.04	25.69	57.44	1.27
Retirement	2.25	33.49	54.19	68.96	55.59	90.16	38.56	87.22	1.25
At least one of the above	3.15	34.88	54.97	69.68	56.72	90.66	39.67	88.75	1.74

Type of insurance	Illiterate	Incomplete Primary	Primary	Intermediate	Secondary	Diploma	University
Health insurance	14.39	14.01	16.25	26.60	43.34	54.01	57.36
Retirement	23.77	24.02	26.35	34.74	62.02	82.52	84.60
At least one of the above	25.37	24.96	27.51	36.20	63.35	82.99	84.92

Type of insurance	Duhok	Mosul	Sulaimaniya	Kirkuk	Erbil	Diyala	Anbar	Baghdad	Basrah
Health insurance	49.54	35.60	37.95	41.78	29.21	37.66	42.38	39.22	11.36
Retirement	60.40	34.15	56.66	43.96	58.01	58.28	65.87	40.41	40.70
At least one of the above	62.00	36.11	57.86	45.01	59.10	58.60	66.56	41.78	40.87

Type of insurance	Babylon	Kerbela	Wasit	Salah al-Deen	Najaf	Qadisiya	Muthanna	Thi-qar	Maysan
Health insurance	11.02	25.67	26.72	10.63	4.32	11.16	23.22	19.32	49.62
Retirement	47.90	37.59	47.79	43.24	35.60	37.18	40.78	49.68	52.92
At least one of the above	48.37	41.78	48.63	43.35	35.60	38.35	41.64	49.88	53.04

3. Probit Regressions on Formal Insurance Detention

Probit regressions on formal social protection

Variable	Health	Retirement
poor	-.02392661	-.07319603
urban	.00972932	-.14754083***
Incomplete primary	.10117288*	.24368373***
Primary	.14155205***	.26594084***
Intermediate	.41142039***	.47174165***
Secondary	.54674735***	.71102996***
Diploma	.57582247***	1.107297***
University	.58369275***	1.1650504***
household size	.0040863	.00552103
age	.00443807***	.05637398***
male	-.01975131	-.63486939***
public sector worker	2.4769535***	3.1624879***
Mosul	.27043902***	-.28156742***
Sulaimaniya	-.32255748***	.26464407***
Kirkuk	.18410465**	-.07657905
Erbil	-.70071352***	.30224229***
Diyala	-.63329255***	-.40171446***
Anbar	-.65992179***	-.10016581
Baghdad	.08165407	-.36029135***
Babylon	-1.6691495***	-.16417402*
Kerbela	-.88711681***	-.69341684***
Wasit	-.8705863***	-.40210598***
Salah al-Deen	-1.8706154***	-.32092419***
Najaf	-2.0425167***	-.46724476***
Qadisiya	-1.5702426***	-1.1221304***
Muthanna	-.74719413***	-.37092469***
Thi-quar	-1.1894501***	-.21676484**
Maysan	.10499016	-.17431726*
Basrah	-1.351856***	-.43874753***
age squared		-.00045534***
Constant	-2.3180278***	-3.064178***
N	19438	19446
ll	-6608.7527	-4104.8701
chi2	9699.4375	18740.398
r2_p	.42324308	.69537298

legend: * p<.1; ** p<.05; *** p<.01

4. Marginal Effects on Formal Insurance Detention

4.1 Marginal effects on health insurance detention

Probit regression, reporting marginal effects — Number of obs = 19438
LR chi2(29) = 9699.44
Prob > chi2 = 0.0000
Log likelihood = -6608.7527 — Pseudo R2 = 0.4232

health	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipoor_1*	-.004421	.007728	-0.57	0.571	.179185	-.019568	.010726
_Iurba~1*	.0018096	.0057822	0.31	0.755	.743492	-.009523	.013142
_Iedua~2*	.0197295	.0122787	1.68	0.094	.140035	-.004336	.043795
_Iedua~3*	.027478	.0109515	2.61	0.009	.270707	.006014	.048942
_Iedua~4*	.0924673	.0159497	6.78	0.000	.109116	.061207	.123728
_Iedua~5*	.1303197	.0170061	9.31	0.000	.101605	.096988	.163651
_Iedua~6*	.1359074	.0160992	10.20	0.000	.138955	.104354	.167461
_Iedua~7*	.1391917	.016752	10.11	0.000	.126042	.106358	.172025
hsize	.0007622	.0006643	1.15	0.251	8.15737	-.00054	.002064
age	.0008279	.0002138	3.86	0.000	33.2347	.000409	.001247
_Imale_1*	-.0037166	.0063776	-0.59	0.557	.85909	-.016216	.008783
_Ipubs~1*	.4358184	.0059839	52.07	0.000	.563021	.42409	.447547
_Igov_12*	.0582579	.0196195	3.37	0.001	.047947	.019804	.096711
_Igov_13*	-.0500257	.0090151	-4.54	0.000	.052372	-.067695	-.032356
_Igov_14*	.0379478	.0176834	2.35	0.019	.046816	.003289	.072607
_Igov_15*	-.0871029	.0056503	-10.19	0.000	.054944	-.098177	-.076029
_Igov_21*	-.081287	.0062112	-8.63	0.000	.046867	-.093461	-.069113
_Igov_22*	-.0832721	.0059627	-9.04	0.000	.045787	-.094959	-.071586
_Igov_23*	.0158589	.0138734	1.19	0.235	.094711	-.011332	.04305
_Igov_24*	-.1251323	.0042916	-21.07	0.000	.057156	-.133544	-.116721
_Igov_25*	-.0987656	.0049528	-11.91	0.000	.053298	-.108473	-.089058
_Igov_26*	-.0975109	.0049889	-11.66	0.000	.050674	-.107289	-.087733
_Igov_27*	-.126353	.0043004	-22.98	0.000	.051086	-.134782	-.117924
_Igov_28*	-.1339454	.0044447	-22.74	0.000	.063124	-.142657	-.125234
_Igov_31*	-.1246826	.0043177	-20.85	0.000	.062146	-.133145	-.11622
_Igov_32*	-.0913046	.005633	-10.36	0.000	.063947	-.102345	-.080264
_Igov_33*	-.1108118	.0042678	-15.39	0.000	.04805	-.119176	-.102447
_Igov_34*	.0207447	.0156747	1.40	0.162	.04805	-.009977	.051467
_Igov_35*	-.1198656	.0043224	-18.25	0.000	.065233	-.128337	-.111394
obs. P	.2763659						
pred. P	.1087789	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

4.2 Marginal effects on retirement detention

Probit regression, reporting marginal effects — Number of obs = 19446
LR chi2(30) = 18740.40
Prob > chi2 = 0.0000
Log likelihood = -4104.8701 — Pseudo R2 = 0.6954

retirem	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipoor_1*	-.0270952	.017199	-1.56	0.119	.179111	-.060805	.006614
_Iurba~1*	-.0557512	.0139409	-4.04	0.000	.743598	-.083075	-.028428
_Iedua~2*	.0933899	.0254707	3.74	0.000	.139977	.043468	.143312
_Iedua~3*	.1010966	.0225196	4.55	0.000	.270698	.056959	.145234
_Iedua~4*	.183573	.0265267	7.01	0.000	.109123	.131582	.235564
_Iedua~5*	.2769534	.0263758	10.29	0.000	.101563	.225258	.328649
_Iedua~6*	.4199254	.0236937	15.75	0.000	.139103	.373487	.466364
_Iedua~7*	.4387499	.023361	16.24	0.000	.126041	.392963	.484537
hsize	.0020622	.0015244	1.35	0.176	8.15659	-.000926	.00505
age	.0210566	.0028506	7.36	0.000	33.2358	.015469	.026644
age2	-.0001701	.000036	-4.71	0.000	1237.76	-.000241	-.000099
_Imale_1*	-.2469001	.0216187	-11.44	0.000	.858943	-.289272	-.204528
_Ipubs~1*	.8297536	.0044785	69.80	0.000	.563201	.820976	.838531
_Igov_12*	-.0993624	.0320292	-2.89	0.004	.047928	-.162139	-.036586
_Igov_13*	.1021881	.0374045	2.80	0.005	.052556	.028877	.1755
_Igov_14*	-.0282227	.0351467	-0.79	0.429	.046796	-.097109	.040664
_Igov_15*	.11705	.0353165	3.39	0.001	.054973	.047831	.186269
_Igov_21*	-.1374958	.0295785	-4.15	0.000	.046848	-.195469	-.079523
_Igov_22*	-.0367502	.0365599	-0.99	0.324	.045922	-.108406	.034906
_Igov_23*	-.1257699	.0277878	-4.15	0.000	.094672	-.180233	-.071307
_Igov_24*	-.0595129	.0345117	-1.67	0.096	.057133	-.127155	.008129
_Igov_25*	-.2182128	.0221317	-7.70	0.000	.053276	-.26159	-.174836
_Igov_26*	-.1377285	.0280467	-4.39	0.000	.050653	-.192699	-.082758
_Igov_27*	-.1122311	.0296683	-3.48	0.000	.051064	-.17038	-.054082
_Igov_28*	-.1577442	.0266901	-5.16	0.000	.063098	-.210056	-.105433
_Igov_31*	-.306196	.0141869	-13.45	0.000	.062121	-.334002	-.27839
_Igov_32*	-.1284155	.0276577	-4.21	0.000	.063921	-.182623	-.074207
_Igov_33*	-.0776432	.033072	-2.23	0.026	.04803	-.142463	-.012823
_Igov_34*	-.0630147	.032006	-1.90	0.058	.04803	-.125745	.000284
_Igov_35*	-.1493286	.0267016	-4.95	0.000	.065206	-.201663	-.096995
obs. P	.4900237						
pred. P	.3583325	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

5. Descriptive Statistics on The Occurrence of Risk By Socio-Demographic Characteristics

Risk	of hh affected	Listed at least 1 problem	Experienced 2 or more problems	Urban +	Rural +	Poor +	Non poor +
Loss of job by any household member	6.10	35.34	48.33	38.13	26.71	40.41	33.97
Lowering of wages of any of the household members	4.93	28.57	45.55	31.96	18.11	30.12	28.15
Bankruptcy of commercial family business	1.25	7.26	12.36	8.78	2.56	3.90	8.17
Severe sickness or accident	3.55	20.60	24.17	20.26	21.65	20.43	20.65
Death of a working household member	1.26	7.32	7.03	7.64	6.36	7.86	7.18
Death of another household member	0.97	5.61	6.42	5.93	4.63	4.43	5.93
Theft	0.81	4.68	5.12	5.31	2.76	2.79	5.19
Violence due to the unusual circumstances in Iraq	6.30	36.48	65.93	36.94	35.08	30.86	38.00
Kidnapping or death threats related to the civil war	3.02	17.52	31.99	18.88	13.32	16.92	17.68
Other types of violence	2.66	15.41	32.13	15.79	14.24	13.87	15.83
Another huge problem	2.20	12.77	21.52	10.12	20.94	10.57	13.36

Risk	At least 1 wage worker in household +	No wage workers in household +	Head of household female +	Head of household male +	Household size: 1-4 +	Household size: 5-9 +	Household size: 10 + +
Loss of job by any household member	35.74	34.23	35.00	35.39	32.78	33.00	40.18
Lowering of wages of any of the household members	30.25	23.91	33.24	27.89	33.39	27.27	29.17
Bankruptcy of commercial family business	6.69	8.85	8.19	7.12	6.83	7.10	7.67
Severe sickness or accident	21.68	17.61	16.99	21.13	16.66	17.74	26.80
Death of a working household member	5.69	11.86	32.43	3.65	7.71	6.33	8.89
Death of another household member	5.97	4.61	11.35	4.77	4.14	4.89	7.33
Theft	4.29	5.77	4.19	4.75	5.31	4.91	4.08
Violence due to the unusual circumstances in Iraq	36.43	36.64	38.64	36.17	37.83	41.07	28.21
Kidnapping or death threats related to the civil war	18.29	15.39	26.06	16.27	17.39	16.99	18.46
Other types of violence	15.83	14.26	15.23	15.44	19.20	18.29	9.24
Another huge problem	13.12	11.79	8.34	13.42	14.46	14.12	9.90

Risk	Illiterate +	Incomplete Primary +	Primary +	Intermediate +	Secondary +	Diploma +	University +
Loss of job by any household member	32.86	34.47	35.89	32.80	38.24	30.27	22.32
Lowering of wages of any of the household members	28.81	32.08	27.14	28.51	32.89	29.85	19.51
Bankruptcy of commercial family business	9.09	5.38	6.69	8.38	8.21	4.10	4.90
Severe sickness or accident	26.60	19.50	21.55	15.60	9.28	11.30	7.17
Death of a working household member	10.79	11.23	8.09	3.59	2.68	3.68	1.24
Death of another household member	6.02	4.44	4.70	6.00	5.53	2.79	4.54
Theft	5.01	3.61	4.31	5.89	4.90	3.58	6.80
Violence due to the unusual circumstances in Iraq	29.49	35.57	37.29	44.96	38.65	45.22	53.83
Kidnapping or death threats related to the civil war	15.22	15.97	18.90	15.30	21.23	13.53	28.03
Other types of violence	14.60	15.29	20.03	13.86	17.84	17.75	22.37
Another huge problem	12.47	13.84	15.08	15.76	12.51	13.19	7.03

Risk	Age hh head: 0-30 +	Age hh head: 31-45 +	Age hh head: 46-60 +	Age hh head: 61 + +	Duhok total population	Mosul--Total population	Sulaimaniya--Total population
Loss of job by any household member	32.61	30.59	37.84	34.27	2.87	5.55	3.48
Lowering of wages of any of the household members	25.93	29.75	25.40	31.89	3.59	1.04	1.75
Bankruptcy of commercial family business	10.68	7.02	5.45	6.78	1.83	0.29	1.20
Severe sickness or accident	18.07	17.21	19.09	23.31	2.62	4.23	4.79
Death of a working household member	7.21	5.82	9.19	7.48	0.10	1.91	0.33
Death of another household member	3.89	4.68	6.02	5.89	0.66	0.94	0.78
Theft	3.37	5.13	5.07	4.27	1.16	0.95	2.42
Violence due to the unusual circumstances in Iraq	33.07	38.05	39.19	38.96	0.34	1.70	0.61
Kidnapping or death threats related to the civil war	14.62	18.13	18.36	16.85	0.00	2.39	0.48
Other types of violence	14.53	17.39	16.58	18.25	0.08	0.35	0.63
Another huge problem	13.79	15.59	10.94	10.83	2.77	0.70	0.98

+ Statistics only include those that experienced at least one risk

Risk	Kirkuk--Total population	Erbil--Total population	Diyala--Total population	Anbar--Total population	Baghdad--Total population	Babylon--Total population	Kerbela--Total population
Loss of job by any household member	3.92	4.96	5.50	11.68	10.36	1.93	10.46
Lowering of wages of any of the household members	1.81	1.28	1.23	7.64	9.77	1.79	0.56
Bankruptcy of commercial family business	0.24	1.35	0.44	3.27	2.72	0.10	0.28
Severe sickness or accident	1.45	4.11	4.11	2.23	4.24	1.71	4.76
Death of a working household member	0.31	0.58	1.26	0.98	2.13	1.14	2.99
Death of another household member	0.13	1.52	1.30	0.50	1.65	0.63	0.97
Theft	0.40	1.02	0.99	0.89	0.93	0.25	1.52
Violence due to the unusual circumstances in Iraq	4.23	0.89	24.58	17.64	15.32	1.24	0.94
Kidnapping or death threats related to the civil war	0.93	0.54	6.61	0.77	8.92	0.65	0.79
Other types of violence	0.64	0.09	2.03	0.32	10.15	0.72	0.11
Another huge problem	1.38	1.71	16.07	1.26	3.78	0.87	1.33

Risk	Wasit--Total population	Salah al-Deen--Total population	Najaf--Total population	Qadisiya--Total population	Muthanna--Total population	Thi-qar--Total population	Maysan--Total population
Loss of job by any household member	1.61	1.58	1.73	2.32	4.10	6.20	0.90
Lowering of wages of any of the household members	2.16	0.56	0.52	0.65	0.50	9.43	8.04
Bankruptcy of commercial family business	1.30	0.00	0.34	0.04	0.22	1.72	0.00
Severe sickness or accident	3.14	0.36	3.57	1.87	2.55	4.55	1.79
Death of a working household member	0.70	1.10	1.42	0.54	0.63	1.23	0.28
Death of another household member	0.22	0.18	1.05	0.65	1.39	1.06	0.09
Theft	0.32	0.18	1.09	0.44	0.04	0.20	0.00
Violence due to the unusual circumstances in Iraq	1.17	1.26	0.79	0.79	0.15	1.07	0.69
Kidnapping or death threats related to the civil war	1.19	1.88	1.48	0.28	0.23	0.18	0.53
Other types of violence	0.06	0.89	0.00	0.18	0.08	0.00	0.47
Another huge problem	0.08	0.42	0.60	0.43	0.24	0.60	0.58

Risk	Basrah--Total population	Duhok--Only those reporting problems	Mosul--Only those reporting problems	Sulaimaniya--Only those reporting problems	Kirkuk--Only those reporting problems	Erbil--Only those reporting problems	Diyala--Only those reporting problems
Loss of job by any household member	7.35%	23.32%	36.18%	22.78%	47.47%	32.50%	16.71%
Lowering of wages of any of the household members	9.72%	29.22%	6.76%	11.48%	21.96%	8.38%	3.75%
Bankruptcy of commercial family business	0.68%	14.88%	1.89%	7.89%	2.89%	8.87%	1.34%
Severe sickness or accident	4.90%	21.35%	27.56%	31.37%	17.59%	26.91%	12.48%
Death of a working household member	0.62%	0.78%	12.46%	2.15%	3.79%	3.78%	3.83%
Death of another household member	0.60%	5.40%	6.10%	5.08%	1.63%	9.97%	3.96%
Theft	0.60%	9.43%	6.21%	15.85%	4.88%	6.67%	3.01%
Violence due to the unusual circumstances in Iraq	1.16%	2.76%	1.11%	3.99%	51.23%	5.83%	74.67%
Kidnapping or death threats related to the civil war	0.57%	0.00%	15.56%	3.15%	11.24%	3.51%	20.07%
Other types of violence	0.00%	0.68%	2.28%	4.09%	7.77%	0.58%	6.16%
Another huge problem	0.36%	22.51%	4.58%	6.44%	16.76%	11.21%	48.82%

Risk	Anbar--Only those reporting problems	Baghdad--Only those reporting problems	Babylon--Only those reporting problems	Kerbela--Only those reporting problems	Wasit--Only those reporting problems	Salah al-Deen--Only those reporting problems
Loss of job by any household member	41.62	42.29	22.28	45.78	23.56	30.75
Lowering of wages of any of the household members	27.23	39.89	20.72	2.46	31.45	10.98
Bankruptcy of commercial family business	11.65	11.11	1.20	1.23	18.99	0.00
Severe sickness or accident	7.94	17.32	19.75	20.83	45.83	6.93
Death of a working household member	3.50	8.71	13.17	13.09	10.19	21.36
Death of another household member	1.80	6.75	7.32	4.24	3.25	3.60
Theft	3.17	3.81	2.90	6.64	4.68	3.42
Violence due to the unusual circumstances in Iraq	62.84	62.53	14.30	4.13	17.01	24.60
Kidnapping or death threats related to the civil war	2.75	36.43	7.56	3.44	17.33	36.71
Other types of violence	1.15	41.43	8.32	0.46	0.84	17.43
Another huge problem	4.48	15.44	10.03	5.81	1.14	8.22

Risk	Najaf--Only those reporting problems	Qadisiya--Only those reporting problems	Muthanna--Only those reporting problems	Thi-qar--Only those reporting problems	Maysan--Only those reporting problems	Basrah--Only those reporting problems
Loss of job by any household member	19.25	32.27	47.58	28.19	9.64	45.48
Lowering of wages of any of the household members	5.82	9.05	5.80	42.93	85.81	60.18
Bankruptcy of commercial family business	3.82	0.59	2.56	7.81	0.00	4.20
Severe sickness or accident	39.69	26.03	29.59	20.71	19.12	30.35
Death of a working household member	15.77	7.56	7.29	5.58	3.02	3.85
Death of another household member	11.61	8.99	16.16	4.81	0.91	3.73
Theft	12.11	6.07	0.46	0.93	0.00	3.71
Violence due to the unusual circumstances in Iraq	8.73	10.99	1.74	4.86	7.39	7.20
Kidnapping or death threats related to the civil war	16.45	3.91	2.62	0.83	5.70	3.50
Other types of violence	0.00	2.55	0.92	0.00	5.05	0.00
Another huge problem	6.69	5.96	2.74	2.72	6.16	2.21

6. Probit Regressions on The Occurrence of Risk By Socio-Demographic Characteristics

The effect of household characteristics on the probability of facing a risk

Variable	Job	Health	Violence	Other
Poor	.09570749**	-.08705854*	-.07073434	-.13831212**
Urban	.2618453***	.12660352***	.13725144***	.03982332
Incomplete primary	-.00949284	.08028629	.01690692	-.03569219
Primary	-.05774878	.0138519	.01165531	-.01472091
Intermediate	.02728927	-.01548762	.12018236*	.1261264
Secondary	-.01048811	-.18895714**	-.06011853	-.02870741
Diploma	-.18617***	-.19433855**	-.03670308	-.23886957**
University	-.27313782***	-.30450332***	.01769856	-.15596488
household size	.01019536**	.02944125***	.02926934***	.00909471
Wage workers in hh	-.00328164	-.11409441***	-.06424523	-.04537437
age of the head of hou~d	-.00515425***	-.00320439**	-.00233068	-.00231365
Female head	.09183215*	.36452608***	.09854888	.14016226**
Mosul	-.04978034	.06552397	.64275589***	-.53674091***
Sulaimaniya	-.06781003	.17095176*	.18066006	-.0703809
Kirkuk	-.20926351**	-.36935894***	.68409167***	-.57339671***
Erbil	-.0313617	.2844066***	.07389978	-.1668241
Diyala	-.17363925*	.09220038	1.6958214***	.41310549***
Anbar	.79453379***	.06365846	1.7945612***	-.24091821**
Baghdad	.42627566***	.24435566***	1.5989964***	.0478328
Babylon	-.30828789***	-.01071245	.40023563**	-.49889037***
Kerbela	-.25731088***	.0267227	.4410051**	-.18592912
Wasit	-.37681677***	-.04403596	.33927629*	-.70940905***
Salah al-Deen	-.5509765***	-.28204376**	.49326857***	-.8539699***
Najaf	-.51275167***	.1385697	.2524982	-.4341821***
Qadisiya	-.3349879***	-.12321208	.06863163	-.59296215***
Muthanna	-.21256728**	-.05549124	-.14614046	-.86035073***
Thi-qar	.51283685***	.17001699	.03809203	-.52491398***
Maysan	.05777342	-.34160405***	.27310731	-.6341567***
Basrah	.4755358***	.30654457***	.20446201	-.61830536***
Constant	-1.4899639***	-1.8670263***	-2.624545***	-1.6408596***
N	17653	17653	17653	17653

legend: * p<.1; ** p<.05; *** p<.01

7. Marginal Effects on Risk Regressions

7.1 Marginal effects on job risks

Probit regression, reporting marginal effects — Number of obs = 17653
LR chi2(29) = 831.54
Prob > chi2 = 0.0000
Log likelihood = -4408.9127 — Pseudo R2 = 0.0862

prob_job	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipoor_1*	.0123627	.0057232	2.26	0.024	.17742	.001145	.02358
_Iurba~1*	.0300472	.0037157	7.51	0.000	.684699	.022764	.03733
_Iedua~2*	-.0011635	.0061661	-0.19	0.851	.145754	-.013249	.010922
_Iedua~3*	-.0069628	.0055759	-1.22	0.222	.255197	-.017891	.003966
_Iedua~4*	.0034179	.0072605	0.48	0.632	.105648	-.010812	.017648
_Iedua~5*	-.0012838	.0072392	-0.18	0.860	.096811	-.015472	.012905
_Iedua~6*	-.0203243	.0064754	-2.76	0.006	.07908	-.033016	-.007633
_Iedua~7*	-.0281899	.0059119	-3.93	0.000	.080156	-.039777	-.016603
hsize	.0012561	.0005682	2.21	0.027	7.13437	.000142	.00237
_Ihhwa~1*	-.0004047	.0041022	-0.10	0.921	.710078	-.008445	.007635
agehhead	-.000635	.0001464	-4.33	0.000	46.2217	-.000922	-.000348
_Ihead~1*	.0119544	.0068516	1.84	0.066	.107234	-.001475	.025383
_Igov_12*	-.0059274	.0105503	-0.54	0.587	.054608	-.026606	.014751
_Igov_13*	-.0079778	.0101196	-0.75	0.452	.058177	-.027812	.011856
_Igov_14*	-.0223104	.0088416	-2.15	0.031	.053532	-.03964	-.004981
_Igov_15*	-.0037813	.0107208	-0.35	0.730	.052229	-.024794	.017231
_Igov_21*	-.0189625	.0095989	-1.73	0.083	.050926	-.037776	-.000149
_Igov_22*	.1601132	.0232599	9.72	0.000	.051606	.114525	.205702
_Igov_23*	.0680457	.0152779	5.55	0.000	.089843	.038102	.09799
_Igov_24*	-.0306815	.008026	-3.00	0.003	.053532	-.046412	-.014951
_Igov_25*	-.0265349	.0083602	-2.60	0.009	.053815	-.042921	-.010149
_Igov_26*	-.0357605	.0072814	-3.62	0.000	.053532	-.050032	-.021489
_Igov_27*	-.0464121	.0060083	-4.80	0.000	.053985	-.058188	-.034636
_Igov_28*	-.0443223	.0062081	-4.61	0.000	.053759	-.05649	-.032155
_Igov_31*	-.0327408	.00761	-3.30	0.001	.054325	-.047656	-.017826
_Igov_32*	-.0226182	.008702	-2.22	0.027	.054495	-.039674	-.005563
_Igov_33*	.0880582	.0183126	6.28	0.000	.053985	.052166	.12395
_Igov_34*	.0074033	.0118124	0.65	0.515	.054042	-.015749	.030555
_Igov_35*	.0798649	.0178621	5.76	0.000	.053475	.044856	.114874
obs. P	.0777771						
pred. P	.0626413	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

7.2 Marginal effects on health risks

Probit regression, reporting marginal effects — Number of obs = 17653
LR chi2(29) = 250.26
Prob > chi2 = 0.0000
Log likelihood = -2946.4275 — Pseudo R2 = 0.0407

prob_h~h	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipoor_1*	-.0066136	.003688	-1.70	0.089	.17742	-.013842	.000615
_Iurba~1*	.0097082	.0029546	3.15	0.002	.684699	.003917	.015499
_Iedua~2*	.0067488	.0049437	1.43	0.151	.145754	-.002941	.016438
_Iedua~3*	.001113	.0043743	0.26	0.798	.255197	-.00746	.009687
_Iedua~4*	-.0012235	.0053924	-0.22	0.822	.105648	-.011792	.009345
_Iedua~5*	-.0131742	.0046673	-2.44	0.015	.096811	-.022322	-.004026
_Iedua~6*	-.013411	.0049553	-2.31	0.021	.07908	-.023123	-.003699
_Iedua~7*	-.0193776	.0044464	-3.37	0.001	.080156	-.028092	-.010663
hsize	.0023513	.0003921	5.97	0.000	7.13437	.001583	.00312
_Ihhwa~1*	-.0095207	.0033245	-2.99	0.003	.710078	-.016037	-.003005
agehhead	-.0002559	.0001108	-2.31	0.021	46.2217	-.000473	-.000039
_Ihead~1*	.0376064	.0066974	6.99	0.000	.107234	.02448	.050733
_Igov_12*	.005514	.0094843	0.61	0.541	.054608	-.013075	.024103
_Igov_13*	.0156263	.0105451	1.68	0.093	.058177	-.005042	.036294
_Igov_14*	-.0219973	.0055049	-2.83	0.005	.053532	-.032787	-.011208
_Igov_15*	.0284811	.0122514	2.84	0.005	.052229	.004469	.052493
_Igov_21*	.0079303	.0105462	0.81	0.419	.050926	-.01274	.0286
_Igov_22*	.0053509	.0099221	0.57	0.571	.051606	-.014096	.024798
_Igov_23*	.0233494	.0106281	2.59	0.010	.089843	.002519	.04418
_Igov_24*	-.0008482	.008856	-0.09	0.924	.053532	-.018206	.016509
_Igov_25*	.0021803	.0091163	0.24	0.807	.053815	-.015687	.020048
_Igov_26*	-.0033951	.008351	-0.39	0.695	.053532	-.019763	.012973
_Igov_27*	-.0179924	.0062307	-2.24	0.025	.053985	-.030204	-.00578
_Igov_28*	.0123611	.0104321	1.32	0.188	.053759	-.008086	.032808
_Igov_31*	-.0089175	.0074912	-1.07	0.283	.054325	-.0236	.005765
_Igov_32*	-.0042396	.0080271	-0.50	0.614	.054495	-.019972	.011493
_Igov_33*	.0155484	.0108136	1.63	0.103	.053985	-.005646	.036743
_Igov_34*	-.0207972	.0056989	-2.66	0.008	.054042	-.031967	-.009628
_Igov_35*	.031214	.0128406	3.01	0.003	.053475	.006047	.056381
obs. P	.0419192						
pred. P	.0364396	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

7.3 Marginal effects on violence risks

Probit regression, reporting marginal effects — Number of obs = 17653
LR chi2(29) = 1656.32
Prob > chi2 = 0.0000
Log likelihood = -2906.2165 — Pseudo R2 = 0.2218

prob_v~e	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipoor_1*	-.0041907	.0030285	-1.32	0.185	.17742	-.010126	.001745
_Iurba~1*	.0081046	.0023895	3.24	0.001	.684699	.003421	.012788
_Iedua~2*	.0010586	.0044217	0.24	0.809	.145754	-.007608	.009725
_Iedua~3*	.0007254	.0038827	0.19	0.851	.255197	-.006885	.008335
_Iedua~4*	.0081546	.005294	1.68	0.093	.105648	-.002221	.018531
_Iedua~5*	-.0035513	.0043699	-0.78	0.438	.096811	-.012116	.005014
_Iedua~6*	-.002205	.0047851	-0.45	0.655	.07908	-.011584	.007174
_Iedua~7*	.0011113	.0049193	0.23	0.819	.080156	-.00853	.010753
hsize	.0018116	.0003511	5.15	0.000	7.13437	.001123	.0025
_Ihhwa~1*	-.0040829	.0026082	-1.61	0.108	.710078	-.009195	.001029
agehhead	-.0001443	.0000942	-1.53	0.126	46.2217	-.000329	.00004
_Ihead~1*	.0065747	.0044306	1.60	0.111	.107234	-.002109	.015259
_Igov_12*	.0682723	.0260884	3.90	0.000	.054608	.01714	.119405
_Igov_13*	.013046	.0153911	0.98	0.329	.058177	-.01712	.043212
_Igov_14*	.0751575	.0273543	4.16	0.000	.053532	.021544	.128771
_Igov_15*	.0048759	.013746	0.38	0.706	.052229	-.022066	.031818
_Igov_21*	.3522383	.0547255	10.93	0.000	.050926	.244978	.459498
_Igov_22*	.3880824	.0556827	11.65	0.000	.051606	.278946	.497218
_Igov_23*	.2983066	.0481806	10.60	0.000	.089843	.203874	.392739
_Igov_24*	.0348953	.0202188	2.29	0.022	.053532	-.004733	.074523
_Igov_25*	.0397748	.0210715	2.56	0.010	.053815	-.001525	.081074
_Igov_26*	.0280986	.018721	1.92	0.055	.053532	-.008594	.064791
_Igov_27*	.0464507	.0223622	2.89	0.004	.053985	.002622	.09028
_Igov_28*	.0194205	.0168382	1.40	0.162	.053759	-.013582	.052423
_Igov_31*	.0045065	.0133914	0.36	0.722	.054325	-.02174	.030753
_Igov_32*	-.0079811	.0101941	-0.68	0.494	.054495	-.027961	.011999
_Igov_33*	.0024363	.012949	0.19	0.846	.053985	-.022943	.027816
_Igov_34*	.0213757	.0172887	1.52	0.129	.054042	-.01251	.055261
_Igov_35*	.0150935	.0160088	1.11	0.269	.053475	-.016283	.04647
obs. P	.054495						
pred. P	.0267731	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

7.4 Marginal effects on other risks

Probit regression, reporting marginal effects — Number of obs = 17653
LR chi2(29) = 302.20
Prob > chi2 = 0.0000
Log likelihood = -1845.1263 — Pseudo R2 = 0.0757

prob_o~r	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipoor_1*	-.0054789	.0024812	-2.00	0.045	.17742	-.010342	-.000616
_Iurba~1*	.0017034	.0020735	0.81	0.419	.684699	-.002361	.005767
_Iedua~2*	-.0015096	.0030941	-0.48	0.635	.145754	-.007574	.004555
_Iedua~3*	-.0006346	.0029639	-0.21	0.832	.255197	-.006444	.005175
_Iedua~4*	.0060884	.0043401	1.55	0.121	.105648	-.002418	.014595
_Iedua~5*	-.0012169	.0036798	-0.32	0.747	.096811	-.008429	.005995
_Iedua~6*	-.0084294	.0030197	-2.22	0.026	.07908	-.014348	-.002511
_Iedua~7*	-.0059109	.0032765	-1.56	0.118	.080156	-.012333	.000511
hsize	.000395	.0003041	1.30	0.194	7.13437	-.000201	.000991
_Ihhwa~1*	-.0020112	.0021667	-0.95	0.344	.710078	-.006258	.002236
agehhead	-.0001005	.0000756	-1.33	0.184	46.2217	-.000249	.000048
_Ihead~1*	.0068435	.0037669	2.03	0.043	.107234	-.000539	.014226
_Igov_12*	-.0144334	.0020949	-3.97	0.000	.054608	-.018539	-.010327
_Igov_13*	-.0028638	.0039521	-0.68	0.498	.058177	-.01061	.004882
_Igov_14*	-.0149393	.0019926	-4.16	0.000	.053532	-.018845	-.011034
_Igov_15*	-.0062005	.0034615	-1.52	0.129	.052229	-.012985	.000584
_Igov_21*	.0265624	.0089231	4.14	0.000	.050926	.009073	.044051
_Igov_22*	-.0083642	.0032591	-2.01	0.044	.051606	-.014752	-.001976
_Igov_23*	.0021654	.0044368	0.51	0.611	.089843	-.006531	.010861
_Igov_24*	-.0138293	.0022547	-3.66	0.000	.053532	-.018249	-.00941
_Igov_25*	-.0067945	.0034435	-1.64	0.101	.053815	-.013544	.000045
_Igov_26*	-.0165796	.001757	-4.55	0.000	.053532	-.020023	-.013136
_Igov_27*	-.0179195	.0015503	-4.87	0.000	.053985	-.020958	-.014881
_Igov_28*	-.0127207	.0023994	-3.40	0.001	.053759	-.017423	-.008018
_Igov_31*	-.0152203	.001986	-4.16	0.000	.054325	-.019113	-.011328
_Igov_32*	-.0179887	.0015446	-4.89	0.000	.054495	-.021016	-.014961
_Igov_33*	-.0142441	.0021359	-3.88	0.000	.053985	-.01843	-.010058
_Igov_34*	-.0157395	.001878	-4.37	0.000	.054042	-.01942	-.012059
_Igov_35*	-.01553	.0019388	-4.22	0.000	.053475	-.01933	-.01173
obs. P	.0239619						
pred. P	.0176025	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

8. Descriptive Statistics on Risk Coping Mechanisms

Type of coping mechanism	Whole Sample	Urban	Rural	Poor	Non poor	Head of household female	Head of household male
Decrease consumption or spending	74.36	73.11	78.48	85.35	72.20	78.22	73.70
Spend savings or investments	46.94	45.31	52.34	41.88	47.94	51.79	46.11
Loans	43.68	41.81	49.85	49.93	42.45	43.43	43.72
Transfers	18.64	19.07	17.20	20.36	18.30	29.74	16.73
Sale of assets/durable goods	16.85	17.00	16.37	17.09	16.80	14.69	17.22
Migration	8.40	8.35	8.57	10.66	7.95	6.24	8.77
Join Military	2.46	2.70	1.70	0.64	2.82	1.13	2.69
Child labor	2.76	3.39	0.65	2.40	2.83	4.30	2.49
Marry young daughters	1.31	1.71	0.00	0.86	1.40	3.74	0.89
Other	2.48	2.46	2.54	0.20	2.93	1.91	2.58
Nothing	8.52	9.04	6.81	3.33	9.54	6.72	8.83

Type of coping mechanism	Age hh head: 0-30	Age hh head: 31-45	Age hh head: 46-60	Age hh head: 61 +	Household size: 1-4	Household size: 5-9	Household size: 10 +
Decrease consumption or spending	71.10	78.32	74.04	67.66	77.76	77.10	61.21
Spend savings or investments	43.33	46.96	48.53	46.63	49.20	49.79	34.89
Loans	48.11	46.47	43.56	34.04	42.58	43.37	46.10
Transfers	20.12	18.57	19.54	16.61	23.28	18.30	13.75
Sale of assets/durable goods	17.48	19.05	17.06	11.18	14.32	17.61	17.65
Migration	12.74	7.48	6.53	9.86	9.75	8.18	7.36
Join Military	3.11	2.28	2.23	2.96	1.43	2.47	3.78
Child labor	3.25	1.88	3.58	2.78	1.73	2.50	4.88
Marry young daughters	0.00	0.57	2.24	2.60	0.98	0.90	3.06
Other	2.11	3.06	1.60	3.00	2.29	2.51	2.61
Nothing	9.94	6.18	10.07	10.63	6.54	8.19	12.13

Type of coping mechanism	HH head illiterate	HH head incomplete primary	HH head primary	HH head intermediate	HH head secondary	HH head diploma	HH head university
Decrease consumption or spending	73.02	77.39	77.20	77.17	85.15	72.94	56.01
Spend savings or investments	42.68	43.79	47.76	53.27	48.89	51.16	44.75
Loans	47.25	48.69	44.54	46.98	41.44	35.07	25.32
Transfers	20.82	17.45	19.36	17.62	22.61	13.06	13.81
Sale of assets/durable goods	15.71	21.63	12.07	20.51	22.19	22.92	9.79
Migration	7.26	5.45	8.03	9.17	6.45	11.73	17.36
Join Military	1.09	2.66	4.21	4.40	7.00	0.00	1.07
Child labor	4.02	2.23	2.53	4.17	2.72	1.43	0.00
Marry young daughters	3.24	0.00	1.38	1.38	0.16	0.00	1.07
Other	3.15	1.33	3.15	2.04	1.96	2.41	1.98
Nothing	7.70	7.33	6.10	6.41	10.44	9.95	22.53

Type of coping mechanism	Head of hh is wage worker	Head of hh is not wage worker	At least 1 wage worker in hh	No wage workers in hh	Job related risk	Health related risk	Violence related risk	Other risk
Decrease consumption or spending	73.34	70.57	72.94	77.73	85.78	67.82	80.96	77.82
Spend savings or investments	45.29	46.93	46.21	48.67	49.69	45.05	68.06	61.36
Loans	42.91	41.15	42.87	45.59	48.35	54.17	36.35	45.78
Transfers	16.54	14.24	16.77	23.06	23.42	26.02	17.88	17.98
Sale of assets/durable goods	15.83	18.07	15.63	19.75	20.23	21.38	16.77	21.61
Migration	9.74	8.64	9.43	5.95	5.77	4.80	16.47	4.90
Join Military	2.94	2.00	2.92	1.39	3.57	4.08	2.95	5.42
Child labor	2.49	0.89	3.41	1.20	4.73	5.12	3.11	2.68
Marry young daughters	1.02	0.08	1.56	0.73	2.20	2.88	1.92	1.55
Other	3.04	1.91	2.54	2.33	1.16	2.05	3.12	6.35
Nothing	9.33	10.43	9.13	7.06	3.24	8.50	8.36	8.12

Type of coping mechanism	Duhok	Mosul	Sulaimaniya	Najaf	Qadisiya	Muthanna	Thi-qar
Decrease consumption or spending	69.61	71.99	40.96	68.16	40.75	70.69	58.97
Spend savings or investments	10.52	25.03	26.35	17.23	11.86	37.85	4.82
Loans	55.93	54.09	35.20	50.94	53.73	60.71	63.53
Transfers	6.73	19.59	8.60	16.86	10.29	19.08	12.01
Sale of assets/durable goods	6.57	20.04	10.94	28.77	11.23	19.47	10.07
Migration	1.95	6.54	3.46	10.15	7.55	1.28	0.48
Join Military	0.00	0.86	1.17	0.34	0.00	0.00	0.57
Child labor	0.00	0.00	1.98	3.20	0.00	1.28	0.00
Marry young daughters	0.00	0.00	0.00	0.78	0.00	0.00	0.00
Other	1.40	6.96	2.83	1.20	1.37	0.00	0.00
Nothing	9.52	13.33	33.53	4.85	16.56	1.49	3.96

Type of coping mechanism	Kirkuk	Erbil	Diyala	Anbar	Baghdad	Babylon
Decrease consumption or spending	92.08	62.13	91.92	53.98	83.89	45.61
Spend savings or investments	52.05	26.66	75.51	29.32	76.07	23.61
Loans	45.18	42.69	55.32	26.63	33.58	46.51
Transfers	12.44	14.77	11.86	14.25	23.06	6.96
Sale of assets/durable goods	5.81	12.30	28.73	8.96	17.73	13.72
Migration	0.16	3.00	23.91	4.68	12.12	2.09
Join Military	0.00	0.50	4.17	0.39	4.79	0.00
Child labor	2.21	2.08	0.27	2.34	5.22	0.00
Marry young daughters	0.00	0.00	0.55	0.00	3.14	0.00
Other	6.05	6.37	4.49	0.39	1.72	4.54
Nothing	0.13	9.33	1.86	26.65	3.91	20.61

Type of coping mechanism	Maysan	Basrah	Wasit	Salah al-Deen	Kerbela
Decrease consumption or spending	92.73	87.15	55.57	62.18	83.92
Spend savings or investments	19.08	33.03	14.33	42.79	15.99
Loans	53.38	58.09	55.08	36.99	51.45
Transfers	9.30	45.27	12.92	36.25	6.71
Sale of assets/durable goods	19.31	18.53	36.07	24.72	12.46
Migration	0.89	1.83	3.89	11.69	0.89
Join Military	0.00	1.18	6.44	0.61	0.53
Child labor	0.39	5.35	2.33	3.00	0.00
Marry young daughters	0.00	1.59	4.40	0.00	0.00
Other	1.28	1.05	6.24	2.18	0.29
Nothing	1.43	1.59	7.93	8.27	3.28

9. Bivariate Probit Regressions on Coping Mechanisms

Probit model with sample selection

Number of obs	= 17653
Censored obs	= 15040
Uncensored obs	= 2613
Wald chi2(16)	= 379.66
Prob > chi2	= 0.0000

Log likelihood = -1404.282

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cm_conso						
_lprob_job_1	1.147351	.0740878	15.49	0.000	1.002141	1.29256
_lprob_hea~1	.2733822	.0787876	3.47	0.001	.1189614	.427803
_lprob_vio~1	.6943398	.0726066	9.56	0.000	.5520335	.8366461
_lprob_oth~1	.4056209	.0876786	4.63	0.000	.233774	.5774679
_lpoor_1	.5638873	.0860151	6.56	0.000	.3953008	.7324738
_lurban_1	-.211038	.0663103	-3.18	0.001	-.3410039	-.0810722
_leduachmo~2	.0863585	.0991161	0.87	0.384	-.1079135	.2806146
_leduachmo~3	.0223527	.0890293	0.25	0.802	-.1521416	.1968469
_leduachmo~4	.0073302	.1077978	0.07	0.946	-.2039496	.21861
_leduachmo~5	-.0520965	.1113448	-0.47	0.640	-.2703283	.1661353
_leduachmo~6	-.2115546	.1227976	-1.72	0.085	-.4522335	.0291242
_leduachmo~7	-.3816494	.1196891	-2.52	0.012	-.5362357	-.0670631
hsize	-.0688557	.0087518	-7.87	0.000	-.0860089	-.0517025
_lhhwagejo~1	-.0754327	.0629376	-1.20	0.231	-.1987881	.0479227
agehhead	.0003287	.0022613	0.15	0.884	-.0041034	.0047607
_lheadfem_1	.1461946	.0918544	1.59	0.111	-.0338366	.3262258
_cons	.2347593	.1582076	1.48	0.138	-.075322	.5448405
select						
problem	7.21246	.4435462	16.26	0.000	6.343125	8.081794
_lpoor_1	-.2276321	.4081749	-0.56	0.577	-1.02764	.5723761
_lurban_1	.159087	.2988869	0.53	0.595	-.4267207	.7448946
_leduachmo~2	-.1672983	.4817997	-0.35	0.728	-1.1116	.7770197
_leduachmo~3	.1357356	.3845031	0.35	0.724	-.6178766	.8893479
_leduachmo~4	-.1505515	.5740048	-0.26	0.793	-1.27558	.9744772
_leduachmo~5	.3665197	.4306943	0.85	0.395	-.4776255	1.210665
_leduachmo~6	-.2650271	.6824392	-0.39	0.698	-1.602583	1.072529
_leduachmo~7	-1.012482	.587083	-1.72	0.085	-2.163143	.13818
hsize	-.0068852	.0346043	-0.20	0.842	-.0747083	.060938
_lhhwagejo~1	.2114257	.3041704	0.70	0.487	-.3847373	.8075888
agehhead	.017575	.00969	1.81	0.070	-.001417	.036567
_lheadfem_1	-.3387153	.4410608	-0.77	0.443	-1.203179	.5257481
_lregion_2	.2447815	.3333888	0.73	0.463	-.4086486	.8982117
_lregion_3	.2546671	.3713424	0.69	0.493	-.4731585	.9824848
_cons	-4.790017	.8162499	-5.87	0.000	-6.389837	-3.190196
/athrho	-.0562488	.2058689	-0.27	0.785	-.4597446	.3472469
rho	-.0561896	.205219			-.429876	.3339317

LR test of indep. eqns. (rho = 0): chi2(1) = 0.08 Prob > chi2 = 0.7831

Probit model with sample selection

Number of obs	17653
Censored obs	15040
Uncensored obs	2613
Wald chi2(16)	290.75
Prob > chi2	0.0000

Log likelihood = -1632.216

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ca_savings						
_lprob_job_1	.4337771	.0606545	7.15	0.000	.3148965	.5526578
_lprob_hea~1	.244973	.0671082	3.65	0.000	.1134434	.3765026
_lprob_vio~1	.8495211	.0591462	14.36	0.000	.7335967	.9654456
_lprob_oth~1	.3751894	.0767159	4.89	0.000	.224829	.5255497
_lpoor_1	-.1070957	.0752349	-1.42	0.155	-.2545533	.0403619
_lurban_1	-.2458226	.0614189	-4.00	0.000	-.3662015	-.1254438
_leduachmo~2	.1386629	.0918709	1.42	0.155	-.0494007	.3107265
_leduachmo~3	.2897913	.083337	3.48	0.001	.1264538	.4531288
_leduachmo~4	.3374819	.098173	3.44	0.001	.1450663	.5298975
_leduachmo~5	.3641053	.1045478	3.48	0.000	.1591954	.5690153
_leduachmo~6	.280355	.1182577	2.37	0.018	.0485742	.5121357
_leduachmo~7	.2077617	.115324	1.80	0.072	-.0182692	.4337925
hsize	-.0183853	.0083381	-2.20	0.027	-.0347277	-.0020429
_lhhwagejo~1	-.1732927	.0573757	-3.02	0.003	-.2857471	-.0608384
agehhead	.0061885	.0021251	2.91	0.004	.0020234	.0103537
_lheadfem_1	.1263772	.0824222	1.53	0.125	-.0351674	.2879218
_cons	-1.04771	.1468685	-7.13	0.000	-1.335567	-.7598532
select						
problem	7.212597	.4433842	16.27	0.000	6.34358	8.081614
_lpoor_1	-.2347321	.4093819	-0.57	0.566	-1.037106	.5676417
_lurban_1	.1577655	.2999465	0.53	0.599	-.4301188	.7456498
_leduachmo~2	-.1757739	.4826712	-0.36	0.716	-1.121792	.7702443
_leduachmo~3	.1197919	.3851262	0.31	0.756	-.6350416	.8746254
_leduachmo~4	-.1571241	.5735552	-0.27	0.784	-1.281272	.9670235
_leduachmo~5	.3613005	.4293496	0.84	0.400	-.4802092	1.20281
_leduachmo~6	-.2787939	.6863676	-0.41	0.685	-1.62405	1.066462
_leduachmo~7	-1.023284	.588829	-1.74	0.082	-2.177367	.1307999
hsize	-.005999	.0345414	-0.17	0.862	-.073699	.061701
_lhhwagejo~1	.2130337	.3851158	0.70	0.485	-.3849823	.8110497
agehhead	.0172882	.0096946	1.78	0.075	-.0017128	.0362891
_lheadfem_1	-.3288288	.440122	-0.75	0.456	-1.190644	.5346026
_lregion_2	.2552997	.3348736	0.76	0.446	-.4010406	.91164
_lregion_3	.2696461	.3713697	0.73	0.468	-.4582253	.9975174
_cons	-4.783724	.8162262	-5.86	0.000	-6.383497	-3.18395
/athrho	.0793496	.2070037	0.38	0.701	-.3263702	.4850694
rho	.0791835	.2057058			-.3152555	.4502943

LR test of indep. eqns. (rho = 0): chi2(1) = 0.14 Prob > chi2 = 0.7034

Probit model with sample selection

Number of obs	17653
Censored obs	15040
Uncensored obs	2613
Wald chi2(16)	179.40
Prob > chi2	0.0000

Log likelihood = -1752.322

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ca_loans						
_lprob_job_1	.3903122	.0594538	6.56	0.000	.2737849	.5068395
_lprob_hea~1	.4303884	.0650642	6.61	0.000	.3028649	.5579118
_lprob_vio~1	-.1911151	.0574353	-3.33	0.001	-.3036862	-.0785441
_lprob_oth~1	.3477367	.0736415	4.72	0.000	.203402	.4920713
_lpoor_1	.2218515	.0714465	3.11	0.002	.081819	.361884
_lurban_1	.01388	.0592346	0.23	0.815	-.1022177	.1299777
_leduachmo~2	-.0229463	.0870919	-0.26	0.792	-.1936432	.1477506
_leduachmo~3	-.101108	.0788654	-1.28	0.200	-.2556813	.0534653
_leduachmo~4	-.0534919	.0946692	-0.57	0.572	-.2390402	.1320563
_leduachmo~5	-.1541628	.1010606	-1.53	0.127	-.3522379	.0439124
_leduachmo~6	-.2735947	.1156474	-2.37	0.018	-.5002595	-.04693
_leduachmo~7	-.4734933	.1171238	-4.04	0.000	-.7030517	-.243935
hsize	.0100439	.0079659	1.26	0.207	-.005569	.0256568
_lhhwagejo~1	-.00072	.0561752	-0.01	0.990	-.1108214	.1093814
agehhead	-.0077415	.0020422	-3.79	0.000	-.0117441	-.0037389
_lheadfem_1	-.120319	.0801476	-1.50	0.133	-.2774054	.0367674
_cons	-.0812228	.1403953	-0.58	0.563	-.3563926	.1939471
select						
problem	7.212942	.4436263	16.26	0.000	6.34345	8.082433
_lpoor_1	-.228434	.4084844	-0.56	0.576	-1.029049	.5721806
_lurban_1	.1595505	.2992512	0.53	0.594	-.4269711	.7460721
_leduachmo~2	-.1691067	.4819567	-0.35	0.726	-1.113724	.7755111
_leduachmo~3	.1337763	.3846588	0.35	0.728	-.620141	.8876937
_leduachmo~4	-.1504331	.5735041	-0.26	0.793	-1.27448	.9736143
_leduachmo~5	.3652792	.4305374	0.85	0.396	-.4785587	1.209117
_leduachmo~6	-.2685589	.6835405	-0.39	0.694	-1.608274	1.071156
_leduachmo~7	-1.014357	.5875801	-1.73	0.084	-2.165993	.1372789
hsize	-.007043	.034739	-0.20	0.839	-.0751382	.0610443
_lhhwagejo~1	.2124288	.3044283	0.70	0.485	-.3842396	.8090973
agehhead	.0175549	.0096878	1.81	0.070	-.0014329	.0365426
_lheadfem_1	-.3386801	.4416985	-0.77	0.443	-1.204378	.5270173
_lregion_2	.2466824	.3338172	0.74	0.460	-.4075874	.9009521
_lregion_3	.2573934	.3711821	0.69	0.488	-.4701101	.9848968
_cons	-4.789567	.8163123	-5.87	0.000	-6.389509	-3.189624
/athrho	-.0370457	.1932935	-0.19	0.848	-.415894	.3418027
rho	-.0370287	.1930285			-.3934658	.3290858

LR test of indep. eqns. (rho = 0): chi2(1) = 0.04 Prob > chi2 = 0.8475

Probit model with sample selection

Number of obs	17653
Censored obs	15040
Uncensored obs	2613
Wald chi2(16)	147.77
Prob > chi2	0.0000

Log likelihood = -1159.571

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ca_transfers						
_lprob_job_1	.4586809	.0677975	6.77	0.000	.3258801	.5915616
_lprob_hea~1	.5878454	.0726713	8.09	0.000	.4454122	.7302786
_lprob_vio~1	.288602	.0669854	3.11	0.002	.0773131	.339891
_lprob_oth~1	.2385385	.085887	2.78	0.005	.0702029	.406874
_lpoor_1	.1878815	.0837445	2.24	0.025	.0237453	.3520176
_lurban_1	-.105471	.0698662	-1.51	0.131	-.2424063	.0314643
_leduachmo~2	.0639974	.1022559	0.63	0.531	-.1364205	.2644153
_leduachmo~3	.0613893	.0940712	0.65	0.514	-.1229869	.2457654
_leduachmo~4	-.0231108	.1144917	-0.20	0.840	-.2475104	.2012889
_leduachmo~5	.1824272	.1183852	1.54	0.123	-.0494467	.4143011
_leduachmo~6	-.0719587	.1446244	-0.50	0.619	-.3554172	.2114999
_leduachmo~7	-.0013757	.1410996	-0.01	0.992	-.2779258	.2751744
hsize	-.0339635	.0098896	-3.43	0.001	-.0533468	-.0145803
_lhhwagejo~1	-.2150002	.0647164	-3.32	0.001	-.3418421	-.0881583
agehhead	-.0024982	.0024531	-1.02	0.308	-.0073062	.0023098
_lheadfem_1	.3780427	.0877777	4.31	0.000	.2060017	.5500838
_cons	-1.068031	.1659624	-6.44	0.000	-1.393311	-.7427501
select						
problem	7.170343	.4321508	16.59	0.000	6.323343	8.017343
_lpoor_1	-.178097	.3794228	-0.47	0.639	-.921752	.565558
_lurban_1	.1751961	.3013402	0.58	0.561	-.4154199	.7658121
_leduachmo~2	-.1631935	.4821713	-0.34	0.735	-1.108232	.7818449
_leduachmo~3	.1371595	.3873864	0.35	0.723	-.6221039	.8964229
_leduachmo~4	-.1354635	.5655536	-0.24	0.811	-1.243928	.9730012
_leduachmo~5	.3663873	.4320172	0.85	0.396	-.480351	1.213125
_leduachmo~6	-.288945	.7070564	-0.41	0.683	-1.67475	1.09686
_leduachmo~7	-.9427308	.5923251	-1.59	0.111	-2.103667	.2182051
hsize	-.0106681	.0054178	-0.30	0.763	-.0800857	.0587495
_lhhwagejo~1	.2454803	.3185345	0.77	0.441	-.3788358	.8697964
agehhead	.016991	.0097269	1.75	0.081	-.0020734	.0360554
_lheadfem_1	-.2882175	.4271686	-0.67	0.500	-1.125453	.5490176
_lregion_2	.2558219	.332353	0.77	0.441	-.395578	.9072219
_lregion_3	.2901545	.3641267	0.80	0.426	-.4235208	1.00383
_cons	-4.797296	.8303145	-5.78	0.000	-6.424683	-3.16991
/athrho	-2.443569	67.85003	-0.04	0.971	-135.4272	130.5401
rho	-.985027	2.016627			-1	1

LR test of indep. eqns. (rho = 0): chi2(1) = 0.47 Prob > chi2 = 0.4952

Probit model with sample selection

Number of obs	17653
Censored obs	15040
Uncensored obs	2613
Wald chi2(16)	48.37
Prob > chi2	0.0000

Log likelihood = -1190.3

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cm_sale						
_lprob_job_1	.1979824	.0673637	2.94	0.003	.065952	.3300128
_lprob_hea~1	.3511885	.0726833	4.83	0.000	.2087319	.4936451
_lprob_vio~1	.0989233	.0664486	1.49	0.137	-.0313134	.2291601
_lprob_oth~1	.3321631	.0824011	4.03	0.000	.1706598	.4936663
_lpoor_1	.1129405	.0828331	1.36	0.173	-.0494094	.2752904
_lurban_1	.1086566	.0710628	1.53	0.126	-.0306239	.2479372
_leduachmo~2	-.0138956	.1031996	-0.13	0.893	-.2161631	.188372
_leduachmo~3	-.0338053	.0933897	-0.36	0.717	-.2168458	.1492353
_leduachmo~4	.0472944	.1105802	0.43	0.669	-.1694389	.2640276
_leduachmo~5	.0365419	.1186451	0.31	0.758	-.1959982	.269082
_leduachmo~6	.2143552	.1300476	1.65	0.099	-.0405333	.4692438
_leduachmo~7	-.0284031	.1358417	-0.21	0.834	-.294648	.2378417
hsize	.0094984	.0092821	1.02	0.306	-.0086941	.027691
_lhhwagejo~1	-.1303886	.0652216	-2.00	0.046	-.2582206	-.0025565
agehhead	-.0043681	.0024305	-1.80	0.072	-.0091318	.0003955
_lheadfem_1	.0255732	.0932143	0.27	0.784	-.1571235	.20827
_cons	-1.182623	.1639853	-7.21	0.000	-1.504028	-.8612174
select						
problem	7.213461	.443431	16.27	0.000	6.344352	8.08257
_lpoor_1	-.2375469	.406503	-0.58	0.559	-1.034278	.5591844
_lurban_1	.156026	.2990658	0.52	0.602	-.4301322	.7421843
_leduachmo~2	-.1793896	.4796736	-0.37	0.708	-1.119533	.7607533
_leduachmo~3	.099083	.3865633	0.26	0.798	-.6585672	.8567331
_leduachmo~4	-.1632489	.5714744	-0.29	0.775	-1.283318	.9568202
_leduachmo~5	.3564185	.427538	0.83	0.404	-.4815405	1.194378
_leduachmo~6	-.2914465	.6906348	-0.42	0.673	-1.645066	1.062173
_leduachmo~7	-1.033381	.5866666	-1.76	0.078	-2.183226	.1164645
hsize	-.0047421	.0345713	-0.14	0.891	-.0725007	.0630164
_lhhwagejo~1	.2090263	.3041856	0.69	0.492	-.3871665	.8052191
agehhead	.0171548	.0096981	1.77	0.077	-.0018531	.0361626
_lheadfem_1	-.3273929	.4410188	-0.74	0.458	-1.191774	.536988
_lregion_2	.2708566	.3353256	0.81	0.419	-.3863694	.9280827
_lregion_3	.2827329	.3729919	0.76	0.448	-.4483179	1.013784
_cons	-4.784823	.8193264	-5.84	0.000	-6.390674	-3.178973
/athrho	.2198747	.2101873	1.05	0.296	-.192085	.6318343
rho	.2163986	.2003446			-.1897569	.559314

LR test of indep. eqns. (rho = 0): chi2(1) = 1.07 Prob > chi2 = 0.3006

Probit model with sample selection

Number of obs	17653
Censored obs	15040
Uncensored obs	2613
Wald chi2(16)	182.61
Prob > chi2	0.0000

Log likelihood = -555.0487

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ca_migration						
_lprob_job_1	-.1971127	.0936139	-2.11	0.035	-.3805925	-.0136329
_lprob_hea~1	-.0791719	.1203734	-0.66	0.511	-.3150995	.1567557
_lprob_vio~1	1.096106	.1077418	10.17	0.000	.884936	1.307276
_lprob_oth~1	-.4194235	.1312119	-3.20	0.001	-.6765941	-.1622528
_lpoor_1	.3531554	.1168882	3.02	0.003	.1240587	.5822521
_lurban_1	-.0477297	.1016469	-0.47	0.639	-.246954	.1514945
_leduachmo~2	.0467918	.1733581	0.27	0.787	-.2929838	.3865674
_leduachmo~3	.1919017	.1494621	1.28	0.199	-.1010387	.484842
_leduachmo~4	.0012768	.1779741	0.01	0.994	-.3475461	.3500997
_leduachmo~5	.061083	.1896394	0.32	0.747	-.3106833	.4327694
_leduachmo~6	-.0250038	.2096796	-0.12	0.905	-.4359683	.3859607
_leduachmo~7	.3859649	.1792422	2.15	0.031	.0346566	.7372732
hsize	-.0322499	.0153499	-2.10	0.036	-.0623352	-.0021646
_lhhwagejo~1	.1509683	.0987905	1.53	0.126	-.0426576	.3445942
agehhead	-.0067922	.0037875	-1.79	0.073	-.0142156	.0006312
_lheadfem_1	.0907179	.1422024	0.64	0.524	-.1879937	.3694295
_cons	-1.725821	.2582985	-6.68	0.000	-2.232077	-1.219566
select						
problem	7.210361	.4431339	16.27	0.000	6.341835	8.078888
_lpoor_1	-.2296671	.4081367	-0.56	0.574	-1.0296	.570266
_lurban_1	.1563455	.298864	0.52	0.600	-.4278492	.7405402
_leduachmo~2	-.1746132	.484234	-0.36	0.718	-1.123694	.7744679
_leduachmo~3	.1295314	.3841107	0.34	0.736	-.6233117	.8823745
_leduachmo~4	-.15106	.5729397	-0.26	0.792	-1.274001	.9718811
_leduachmo~5	.363941	.4301965	0.85	0.398	-.4792287	1.207111
_leduachmo~6	-.2748924	.6879184	-0.40	0.689	-1.623188	1.073403
_leduachmo~7	-1.01256	.5872604	-1.72	0.085	-2.16357	.138449
hsize	-.0070096	.0346462	-0.20	0.840	-.0749148	.0608957
_lhhwagejo~1	.2088818	.3038047	0.69	0.492	-.3865646	.8043281
agehhead	.0174517	.0096619	1.81	0.071	-.0014853	.0363886
_lheadfem_1	-.3315804	.4406269	-0.75	0.452	-1.195193	.5320324
_lregion_2	.2516698	.3332158	0.76	0.450	-.4014212	.9047607
_lregion_3	.2592634	.3719682	0.70	0.486	-.4697889	.9883077
_cons	-4.779908	.8156566	-5.86	0.000	-6.378565	-3.18125
/athrho	-.1909862	.8702205	-0.22	0.826	-1.896587	1.514615
rho	-.1886975	.8392348			-.9559443	.9077546

LR test of indep. eqns. (rho = 0): chi2(1) = 0.07 Prob > chi2 = 0.7856

Probit model with sample selection

Number of obs	17694
Censored obs	15079
Uncensored obs	2615
Wald chi2(11)	57.95
Prob > chi2	0.0000

Log likelihood = -222.7147

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cm_military						
_Iprob_job_1	.4248094	.1480586	2.87	0.004	.1346199	.7149989
_Iprob_hea~1	.4142138	.1445472	2.87	0.004	.1309066	.6975211
_Iprob_vio~1	.1140052	.1421068	0.80	0.422	-.164519	.3925294
_Iprob_oth~1	.7397996	.1577544	4.69	0.000	.4306067	1.048993
_Ipoor_1	-.3324558	.1997106	-1.66	0.096	-.7238813	.0589698
_Iurban_1	.3548611	.1873573	1.89	0.058	-.0123523	.7220746
hhedu	-.4781994	.3182014	-1.50	0.133	-1.101863	.1454638
hsize	.0483684	.0170958	2.83	0.005	.0148612	.0818756
_Ihhwagejo~1	.4371632	.1774948	2.46	0.014	.0892798	.7850466
agehhead	.0035274	.0048419	0.73	0.466	-.0059625	.0130173
_Iheadfem_1	-.2250049	.2427109	-0.93	0.354	-.7007096	.2506997
_cons	-3.619506	.3628388	-9.98	0.000	-4.330657	-2.908355
select						
problem	6.87762	.3164167	21.74	0.000	6.257455	7.497785
_Ipoor_1	-.1249337	.3275323	-0.38	0.703	-.7668852	.5170178
_Iurban_1	.2155131	.2811594	0.77	0.443	-.3355493	.7665754
hhedu	-.6558819	.5615025	-1.17	0.243	-1.756407	.4446427
hsize	-.013538	.0347108	-0.39	0.697	-.0815699	.054494
_Ihhwagejo~1	.2094542	.2734211	0.77	0.444	-.3264414	.7453497
agehhead	.0131397	.0081677	1.61	0.108	-.0028686	.0291481
_Iheadfem_1	-.3023826	.3833395	-0.79	0.430	-1.053714	.4489489
_Iregion_2	.2932917	.3118415	0.94	0.347	-.3179064	.9044898
_Iregion_3	.2380936	.347938	0.68	0.494	-.4438524	.9200396
_cons	-4.224614	.6661593	-6.34	0.000	-5.530262	-2.918966
/athrho	-14.25196	4427.542	-0.00	0.997	-8692.075	8663.571
rho	-1	7.40e-09			-1	1

LR test of indep. eqns. (rho = 0): chi2(1) = 0.85 Prob > chi2 = 0.3578

Probit model with sample selection

Number of obs	17694
Censored obs	15079
Uncensored obs	2615
Wald chi2(11)	43.43
Prob > chi2	0.0000

Log likelihood = -276.0009

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cm_child						
_Iprob_job_1	.5824697	.1387024	4.20	0.000	.3106181	.8543213
_Iprob_hea~1	.5004462	.1320301	3.79	0.000	.2416719	.7592204
_Iprob_vio~1	.0777274	.1328269	0.59	0.558	-.1826086	.3380633
_Iprob_oth~1	.2621504	.1710638	1.53	0.125	-.0731284	.5974293
_Ipoor_1	-.0559721	.1682386	-0.33	0.739	-.3857137	.2737695
_Iurban_1	.2493938	.1628186	1.53	0.126	-.0697248	.5685124
hhedu	-.3171775	.2723883	-1.16	0.244	-.8510487	.2166937
hsize	.0336863	.0165558	2.03	0.042	.0012376	.066135
_Ihhwagejo~1	.3129002	.152115	2.06	0.040	.0147602	.6110401
agehhead	.0003587	.0044471	0.08	0.936	-.0083575	.0090749
_Iheadfem_1	.2549708	.159489	1.60	0.110	-.0576219	.5675635
_cons	-3.236769	.3350352	-9.66	0.000	-3.893426	-2.580112
select						
problem	6.868898	.329321	20.86	0.000	6.223441	7.514355
_Ipoor_1	-.1837262	.3585078	-0.51	0.608	-.8863886	.5189362
_Iurban_1	.2076865	.2815931	0.74	0.461	-.3442259	.7595989
hhedu	-.550064	.5657635	-0.97	0.331	-1.65894	.558812
hsize	-.0077746	.035828	-0.22	0.828	-.0779962	.062447
_Ihhwagejo~1	.2137528	.2851319	0.75	0.453	-.3450955	.772601
agehhead	.0136802	.0083545	1.64	0.102	-.0026943	.0300547
_Iheadfem_1	-.1767303	.3401024	-0.52	0.603	-.8433187	.4898582
_Iregion_2	.3851463	.3513047	1.10	0.273	-.3033983	1.073691
_Iregion_3	.3505086	.3924811	0.89	0.372	-.4187403	1.119758
_cons	-4.428847	.7124429	-6.22	0.000	-5.82521	-3.032485
/athrho	-6.680569	216.4944	-0.03	0.975	-431.0019	417.6407
rho	-.9999968	.0013641			-1	1

LR test of indep. eqns. (rho = 0): chi2(1) = 0.87 Prob > chi2 = 0.3507

Probit model with sample selection

Number of obs	17653
Censored obs	15040
Uncensored obs	2613
Wald chi2(14)	29.67
Prob > chi2	0.0085

Log likelihood = -137.8708

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
cm_marry						
_lprob_job_1	.6224751	.2099624	2.96	0.003	.2109563	1.033994
_lprob_hea~1	.5757619	.1946958	2.96	0.003	.194165	.9573587
_lprob_vio~1	.3985872	.1944161	2.05	0.040	.0175386	.7796358
_lprob_oth~1	.4124048	.2357676	1.75	0.080	-.0496911	.8745008
_lpoor_1	.0883784	.2416388	0.33	0.739	-.3932092	.553966
_leduachmo~2	-3.542653	9555.524	-0.00	1.000	-18732.83	18724.94
_leduachmo~3	.0519883	.2336066	0.22	0.824	-.4058723	.5098488
_leduachmo~4	-.1910895	.3348179	-0.57	0.568	-.8473206	.4651416
_leduachmo~5	-.2403571	.3924596	-0.61	0.540	-1.009564	.5288497
_leduachmo~6	-2.723821	8432.267	-0.00	1.000	-16529.66	16524.22
_leduachmo~7	-.1160484	.458188	-0.25	0.800	-1.01408	.7819837
hsize	.0269088	.0231072	1.16	0.244	-.0183885	.072198
_lhhwagejo~1	.1989431	.2369916	0.84	0.401	-.2655518	.6634381
agehhead	.0114485	.0076088	1.50	0.132	-.0034644	.0263615
_cons	-4.094092	.5529644	-7.40	0.000	-5.177882	-3.010301
select						
problem	7.152381	.4526632	15.80	0.000	6.265177	8.039584
_lpoor_1	-.1610328	.3973744	-0.41	0.685	-.9398723	.6178066
_lurban_1	.2136383	.3061758	0.70	0.485	-.3864632	.8137239
_leduachmo~2	-.1309711	.4947372	-0.26	0.791	-1.100638	.8386959
_leduachmo~3	.1777231	.3844462	0.46	0.644	-.5757776	.9312238
_leduachmo~4	-.2191799	.6277415	-0.35	0.727	-1.449531	1.011171
_leduachmo~5	.3987459	.4399068	0.91	0.365	-.4634556	1.260947
_leduachmo~6	-.2194083	.6841839	-0.32	0.748	-1.560384	1.121568
_leduachmo~7	-.9919809	.6288557	-1.58	0.115	-2.224516	.2405537
hsize	-.0058886	.0349472	-0.17	0.866	-.0743759	.0626147
_lhhwagejo~1	.1530368	.2971509	0.52	0.607	-.4293683	.7354419
agehhead	.0169082	.0099661	1.70	0.090	-.0026251	.0364414
_lheadfem_1	-.1598824	.413199	-0.39	0.699	-.9696576	.6500528
_lregion_2	.2910792	.3462829	0.84	0.401	-.3876229	.9697813
_lregion_3	.292552	.3823437	0.77	0.444	-.4568278	1.041932
_cons	-4.837179	.8386982	-5.77	0.000	-6.480997	-3.19336
/athrho	-8.127511	1086.284	-0.01	0.994	-2137.205	2120.95
rho	-.9999998	.0003789			-1	1

LR test of indep. eqns. (rho = 0): chi2(1) = 0.89 Prob > chi2 = 0.3459

Probit model with sample selection

Number of obs	17653
Censored obs	15039
Uncensored obs	2614
Wald chi2(16)	29.19
Prob > chi2	0.0227

Log likelihood = -300.6977

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ca_other						
_lprob_job_1	-.3732761	.1383832	-2.70	0.007	-.6443454	-.1022067
_lprob_hea~1	.0046577	.1509659	0.03	0.975	-.29123	.3005455
_lprob_vio~1	.0994471	.1320856	0.75	0.451	-.1592791	.3581734
_lprob_oth~1	.2854864	.1442344	1.98	0.048	.0027923	.5681806
_lpoor_1	-.3887617	.229995	-1.69	0.091	-.8395437	.0620203
_lurban_1	.2528497	.1504917	1.68	0.093	-.0421085	.5478079
_leduachmo~2	-.4176482	.2384244	-1.81	0.070	-.8692718	.0339753
_leduachmo~3	-.1834705	.1738309	-1.06	0.291	-.5241728	.1572319
_leduachmo~4	-.3101792	.2214293	-1.40	0.161	-.7441726	.1238142
_leduachmo~5	-.2832236	.228361	-1.24	0.215	-.7308029	.1643557
_leduachmo~6	-.0849962	.2362738	-0.36	0.719	-.5480843	.3780919
_leduachmo~7	-.4584703	.2742955	-1.67	0.095	-.9960796	.079139
hsize	-.0097045	.0197383	-0.49	0.623	-.0483909	.0289819
_lhhwagejo~1	-.0365348	.1291151	-0.28	0.777	-.2895958	.2165263
agehhead	-.0012688	.0045749	-0.28	0.782	-.0102353	.0076978
_lheadfem_1	-.1878838	.1933244	-0.97	0.331	-.5667926	.191025
_cons	-1.776222	.3179851	-5.59	0.000	-2.399461	-1.152982
select						
problem	7.095827	.4087378	17.36	0.000	6.294715	7.896938
_lpoor_1	-.2388911	.3931234	-0.59	0.557	-1.001399	.5396167
_lurban_1	.2332539	.2895768	0.81	0.421	-.3343863	.8008141
_leduachmo~2	-.2011851	.4885487	-0.42	0.675	-1.143043	.7406731
_leduachmo~3	.0979006	.3724954	0.26	0.793	-.6321769	.8279781
_leduachmo~4	-.1746582	.5585485	-0.31	0.755	-1.269377	.9200611
_leduachmo~5	.5255775	.381049	1.38	0.168	-.2212648	1.27242
_leduachmo~6	-.2619872	.6603234	-0.40	0.692	-1.556197	1.032223
_leduachmo~7	-.9609672	.5764957	-1.67	0.096	-2.090878	.1689435
hsize	.0019772	.032031	0.06	0.951	-.0608824	.0647567
_lhhwagejo~1	.0085696	.259785	0.03	0.974	-.5005997	.5177389
agehhead	.0139867	.0089269	1.57	0.117	-.0035097	.0314831
_lheadfem_1	-.2973566	.4252345	-0.70	0.484	-1.130801	.5360877
_lregion_2	.0327039	.2846621	0.11	0.909	-.5252234	.5906313
_lregion_3	.0372336	.3234135	0.12	0.908	-.5966451	.6711124
_cons	-4.359713	.7089736	-6.15	0.000	-5.749276	-2.97015
/athrho	.3346784	.224527	1.49	0.136	-.1053865	.7747432
rho	.3227182	.2011432			-.1049981	.6496791

LR test of indep. eqns. (rho = 0): chi2(1) = 2.18 Prob > chi2 = 0.1395

Probit model with sample selection

Number of obs	17653
Censored obs	15035
Uncensored obs	2618
Wald chi2(16)	176.05
Prob > chi2	0.0000

Log likelihood = -787.4336

	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
ca_nothing						
_lprob_job_1	-1.10166	.1098258	-10.03	0.000	-1.316914	-.886405
_lprob_hea~1	-.4852955	.1173776	-4.13	0.000	-.7153514	-.2552395
_lprob_vio~1	-.3643995	.1056142	-3.45	0.001	-.5713995	-.1573994
_lprob_oth~1	-.3109975	.1185144	-2.62	0.009	-.5432814	-.0787136
_lpoor_1	-.5753416	.1354222	-4.25	0.000	-.8407642	-.309919
_lurban_1	.2261419	.0916095	2.47	0.014	.0465906	.4056932
_leduachmo~2	-.1093081	.1362421	-0.80	0.422	-.3763376	.1577215
_leduachmo~3	-.2036378	.1246004	-1.63	0.102	-.4478501	.0405745
_leduachmo~4	.0105579	.1438085	0.07	0.941	-.2713016	.2924175
_leduachmo~5	.1065486	.1456437	0.73	0.464	-.1789077	.392005
_leduachmo~6	.1366294	.1586713	0.86	0.389	-.1743606	.4476194
_leduachmo~7	.4153394	.1447653	2.87	0.004	.1316047	.6990741
hsize	.0402338	.0112847	3.57	0.000	.0181163	.0623514
_lhhwagejo~1	.1667792	.0875651	1.90	0.057	-.0048453	.3384037
agehhead	.0026505	.003001	0.88	0.377	-.0032314	.0085324
_lheadfem_1	-.1904547	.1305611	-1.46	0.145	-.4463498	.0654403
_cons	-1.186294	.2212292	-5.36	0.000	-1.619895	-.7526923
select						
problem	6.770588	.3485242	19.43	0.000	6.087494	7.453683
_lpoor_1	.0880408	.2510887	0.35	0.726	-.404084	.5801655
_lurban_1	.1181491	.2106254	0.56	0.575	-.2946692	.5309673
_leduachmo~2	.1826256	.2875404	0.64	0.525	-.3809431	.7461943
_leduachmo~3	.0258407	.2914525	0.09	0.929	-.5453958	.5970771
_leduachmo~4	.0809048	.3562537	0.23	0.820	-.6173397	.7791493
_leduachmo~5	.107784	.3607532	0.30	0.765	-.5992793	.8148474
_leduachmo~6	-.3647615	.5464383	-0.67	0.504	-1.435745	.7062221
_leduachmo~7	-.9096185	.5176468	-1.76	0.079	-1.924188	.1049585
hsize	-.0103889	.026692	-0.39	0.697	-.0627043	.0419265
_lhhwagejo~1	-.088378	.1962367	-0.41	0.682	-.4649949	.3042389
agehhead	.0096428	.0067217	1.43	0.151	-.0035315	.0228171
_lheadfem_1	-.4123423	.3752008	-1.10	0.272	-1.147722	.3230377
_lregion_2	.2129196	.243743	0.87	0.382	-.2648079	.690647
_lregion_3	.1152896	.2766131	0.42	0.677	-.426862	.6574413
_cons	-3.815677	.5217172	-7.31	0.000	-4.838224	-2.79313
/athrho	-.028004	.1386999	-0.20	0.840	-.2998508	.2438428
rho	-.0279967	.1385912			-.2911761	.2391221

LR test of indep. eqns. (rho = 0): chi2(1) = 0.04 Prob > chi2 = 0.8396

10. Probit regressions on coping mechanisms

Determinants of coping mechanism choices

Variable	Consumption	Savings	Loans	Transfers	SellAssets	Migration
Job related problem	1.1492531***	.432154***	.39116937***	.46115879***	.19281854***	-.19644338**
Health related problem	.27521312***	.24349827***	.43119045***	.59018796***	.34638439***	-.07838494
Violence related problem	.69593875***	.84824084***	-.19853888***	.20984059***	.09523512	1.0977667***
Other problem	.40718902***	.37398462***	.34838144***	.23999233***	.32847118***	-.41909853***
Poor	.56433636***	-.10746046	.22209074***	.18723401**	.11127742	.35337883***
Urban	-.21098868***	-.24587815***	.01390006	-.10444056	.10882777	-.04732022
Incomplete primary	.08665479	.13834388	-.02276547	.06375414	-.01515627	.04698153
Primary	.02221509	.28995635***	-.10113329	.06235746	-.03305366	.19207227
Intermediate	.00745192	.3372557***	-.05334761	-.02335843	.04637925	.00130333
Secondary	-.0524886	.36445417***	-.15431384	.18307179	.03736578	.0608559
Diploma	-.21118356*	.27985337**	-.27332835**	-.0724367	.21236216	-.02494856
University	-.30185282**	.20807381*	-.4736306***	-.02103839	-.02883261	.38337543**
household size	-.06886667***	-.01839164**	.01003731	-.03401528***	.00947332	-.03226256**
wage worker in hh	-.07584611	-.17283947***	-.00093058	-.21542709***	-.12878185**	.1511593
age of the head of hou^d	.00030581	.00621295***	-.00775261***	-.00242708	-.00426793*	-.00679167*
female head of household	.14583954	.12668793	-.1204694	.37645722***	.02610686	.09007698
Constant	.233535	-1.0465383***	-.08186171	-1.0758695***	-1.1798598***	-1.7285533***
N	2613	2613	2613	2613	2613	2613

legend: * p<.1; ** p<.05; *** p<.01

Variable	JoinMilitary	ChildLabor	Marriage	Other	Nothing
Job related problem	.45744953***	.60909336***	.64037964***	-.39848526***	-1.0975486***
Health related problem	.43373814***	.5213811***	.57292234***	-.02341792	-.48078763***
Violence related problem	.09783853	.09181612	.34545887*	.07639564	-.36050179***
Other problem	.78632651***	.2493298	.51860587**	.26315364*	-.3072266***
Poor	-.38592083*	-.04577791	.1182498	-.39946572*	-.57523253***
Urban	.32705301	.25454683		.25712819*	.22616504**
Incomplete primary	.29329444	-.15349985		-.42681169*	-.1095968
Primary	.36181153*	-.03378566	.15136915	-.18664977	-.28337249
Intermediate	.22240407	.06260042	-.08049365	-.31802913	.0104883
Secondary	-.34087914	-.25426588	-.11312582	-.25926619	.10643463
Diploma		-.58879314		-.09409173	.13747911
University	-.44288698		-.14640152	-.46720784*	.41588672***
household size	.04789735***	.03856569*	.04995774*	-.00858888	.04022289***
wage worker in hh	.49599452**	.3297288**	.27481929	-.04101095	.16662236*
age of the head of hou^d	.00745189	.00119252	.00957869	-.0011367	.0026379
female head of household	-.2259629	.19245956	.57534914**	-.18588495	-.19038797
Constant	-4.2695477***	-3.3760542***	-4.3901562***	-1.7480116***	-1.1911296***
N	2431	2489	1508	2614	2618

legend: * p<.1; ** p<.05; *** p<.01

11. Marginal Effects of Household Characteristics on Risk Coping Mechanism Choices

Probit regression, reporting marginal effects — Number of obs = 2613
LR chi2(16) = 453.92
Prob > chi2 = 0.0000
Log likelihood = -1356.3986 — Pseudo R2 = 0.1433

cm_conso	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.3669204	.0215755	15.58	0.000	.52545	.324633	.409208
_Ip~al_1*	.0855995	.0231608	3.50	0.000	.283199	.040205	.130994
_Ip~ol_1*	.2098949	.0196244	9.61	0.000	.368159	.171432	.248358
_Ipr~e_1*	.1193903	.0226233	4.65	0.000	.161883	.07505	.163731
_Ipoor_1*	.1586851	.020254	6.56	0.000	.167241	.118988	.198382
_Iurba~1*	-.0661793	.0200553	-3.18	0.001	.729812	-.105487	-.026872
_Iedua~2*	.0275354	.0308308	0.87	0.382	.146192	-.032892	.087963
_Iedua~3*	.0071798	.0286751	0.25	0.803	.262533	-.049022	.063382
_Iedua~4*	.0024123	.0348348	0.07	0.945	.126674	-.065863	.070687
_Iedua~5*	-.0172459	.0370372	-0.47	0.637	.10486	-.089837	.055346
_Iedua~6*	-.0722201	.0439698	-1.72	0.085	.069652	-.158399	.013959
_Iedua~7*	-.1051027	.0441406	-2.52	0.012	.078071	-.191617	-.018589
hsize	-.0223335	.0028327	-7.87	0.000	7.11022	-.027885	-.016782
_Ihhwa~1*	-.0243495	.0199917	-1.21	0.228	.701875	-.063532	.014833
agehhead	.0000992	.0007328	0.14	0.892	45.3196	-.001337	.001535
_Ihead~1*	.0456	.0276113	1.59	0.112	.131267	-.008517	.099717
obs. P	.7057023						
pred. P	.7401012	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects — Number of obs = 2613
LR chi2(16) = 310.40
Prob > chi2 = 0.0000
Log likelihood = -1584.367 — Pseudo R2 = 0.0892

cm_sav~s	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.1622418	.0223393	7.14	0.000	.52545	.118458	.206026
_Ip~al_1*	.0935916	.0260054	3.63	0.000	.283199	.042622	.144561
_Ip~ol_1*	.3220689	.0216486	14.36	0.000	.368159	.279638	.364499
_Ipr~e_1*	.1456921	.0302567	4.88	0.000	.161883	.08639	.204994
_Ipoor_1*	-.0402658	.0278056	-1.43	0.153	.167241	-.094764	.014232
_Iurba~1*	-.0945938	.0238658	-4.00	0.000	.729812	-.14137	-.047818
_Iedua~2*	.050092	.0356963	1.42	0.156	.146192	-.019871	.120055
_Iedua~3*	.1117977	.0324567	3.48	0.001	.262533	.048184	.175412
_Iedua~4*	.1315075	.0388314	3.44	0.001	.126674	.055399	.207616
_Iedua~5*	.1424686	.0414317	3.49	0.000	.10486	.061264	.223673
_Iedua~6*	.109164	.0469155	2.37	0.018	.069652	.017211	.201117
_Iedua~7*	.0807171	.0454758	1.80	0.071	.078071	-.008414	.169848
hsize	-.0069774	.0031631	-2.21	0.027	7.11022	-.013177	-.000778
_Ihhwa~1*	-.066185	.0221276	-3.01	0.003	.701875	-.109554	-.022816
agehhead	.0023571	.0008055	2.92	0.003	45.3196	.000778	.003936
_Ihead~1*	.0486966	.0320386	1.54	0.124	.131267	-.014098	.111491
obs. P	.3834673						
pred. P	.3755762	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects

Number of obs = 2613
LR chi2(16) = 191.29
Prob > chi2 = 0.0000
Pseudo R2 = 0.0531

Log likelihood = -1704.4183

cm_loans	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.1536573	.0229643	6.60	0.000	.52545	.108648	.198667
_Ip~al_1*	.1706082	.0253718	6.64	0.000	.283199	.12088	.220336
_Ip~ol_1*	-.0750403	.0224316	-3.32	0.001	.368159	-.119005	-.031075
_Ipr~e_1*	.1382799	.0289339	4.74	0.000	.161883	.08157	.194989
_Ipoor_1*	.0883004	.028395	3.11	0.002	.167241	.032647	.143954
_Iurba~1*	.0054992	.0234241	0.23	0.814	.729812	-.040411	.05141
_Iedua~2*	-.0090007	.0343929	-0.26	0.794	.146192	-.076409	.058408
_Iedua~3*	-.0398786	.0309605	-1.28	0.200	.262533	-.10056	.020803
_Iedua~4*	-.021055	.0372456	-0.56	0.573	.126674	-.094055	.051945
_Iedua~5*	-.0604382	.0390515	-1.53	0.127	.10486	-.136978	.016101
_Iedua~6*	-.1055459	.0431214	-2.36	0.018	.069652	-.190062	-.021029
_Iedua~7*	-.1776992	.0403866	-4.04	0.000	.078071	-.256856	-.098543
hsize	.0039727	.0031528	1.26	0.208	7.11022	-.002207	.010152
_Ihhwa~1*	-.0003683	.0222309	-0.02	0.987	.701875	-.04394	.043203
agehhead	-.0030684	.0008079	-3.80	0.000	45.3196	-.004652	-.001485
_Ihead~1*	-.0473401	.0312188	-1.50	0.133	.131267	-.108528	.013848
obs. P	.4538844						
pred. P	.4498856	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects

Number of obs = 2613
LR chi2(16) = 154.86
Prob > chi2 = 0.0000
Pseudo R2 = 0.0651

Log likelihood = -1111.8814

cm_tra~s	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.1088029	.0157802	6.79	0.000	.52545	.077874	.139732
_Ip~al_1*	.1585556	.0213789	8.11	0.000	.283199	.116654	.200458
_Ip~ol_1*	.0514861	.0169291	3.12	0.002	.368159	.018306	.084667
_Ipr~e_1*	.0619673	.023909	2.79	0.005	.161883	.015106	.108828
_Ipoor_1*	.0475028	.0225308	2.23	0.026	.167241	.003343	.091662
_Iurba~1*	-.0255339	.0175277	-1.49	0.136	.729812	-.059888	.00882
_Iedua~2*	.0155646	.025563	0.62	0.534	.146192	-.034538	.065667
_Iedua~3*	.0151067	.0231506	0.66	0.508	.262533	-.030268	.060481
_Iedua~4*	-.0055259	.0268953	-0.20	0.839	.126674	-.05824	.047188
_Iedua~5*	.046889	.0323376	1.55	0.122	.10486	-.016491	.110269
_Iedua~6*	-.0167435	.0324107	-0.50	0.617	.069652	-.080267	.04678
_Iedua~7*	-.0049743	.0333636	-0.15	0.883	.078071	-.070366	.060417
hsize	-.0081187	.0023584	-3.43	0.001	7.11022	-.012741	-.003496
_Ihhwa~1*	-.0536778	.0168121	-3.32	0.001	.701875	-.086629	-.020727
agehhead	-.0005793	.0005861	-0.99	0.323	45.3196	-.001728	.000569
_Ihead~1*	.102292	.0266513	4.28	0.000	.131267	.050056	.154528
obs. P	.1695369						
pred. P	.1553841	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects

Number of obs	= 2613
LR chi2(16)	= 47.76
Prob > chi2	= 0.0001
Pseudo R2	= 0.0205

Log likelihood = -1142.9144

cm_sale	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.0466252	.0161613	2.87	0.004	.52545	.01495	.078301
_Ip~al_1*	.0903802	.0201323	4.77	0.000	.283199	.050922	.129839
_Ip~ol_1*	.0234308	.0165291	1.44	0.151	.368159	-.008966	.055827
_Ipr~e_1*	.0885156	.0242413	3.99	0.000	.161883	.041003	.136028
_Ipoor_1*	.0280352	.0215923	1.34	0.179	.167241	-.014285	.070355
_Iurba~1*	.0257867	.0164042	1.53	0.126	.729812	-.006365	.057938
_Iedua~2*	-.0036632	.0248054	-0.15	0.883	.146192	-.052281	.044954
_Iedua~3*	-.0079691	.0223315	-0.35	0.723	.262533	-.051738	.0358
_Iedua~4*	.0114642	.0277927	0.42	0.675	.126674	-.043008	.065937
_Iedua~5*	.0092132	.0296832	0.31	0.753	.10486	-.048965	.067391
_Iedua~6*	.0562646	.0372445	1.63	0.102	.069652	-.016733	.129263
_Iedua~7*	-.0069213	.0322122	-0.21	0.832	.078071	-.070056	.056213
hsize	.002302	.0022549	1.02	0.307	7.11022	-.002118	.006721
_Ihhwa~1*	-.032102	.016647	-1.98	0.048	.701875	-.06473	.000526
agehhead	-.0010371	.0005896	-1.76	0.079	45.3196	-.002193	.000118
_Ihead~1*	.0064047	.0230832	0.28	0.779	.131267	-.038838	.051647
obs. P	.1641791						
pred. P	.1596826	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects

Number of obs	= 2613
LR chi2(16)	= 232.71
Prob > chi2	= 0.0000
Pseudo R2	= 0.1866

Log likelihood = -507.16399

cm_mig~n	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	-.0151408	.0074595	-2.10	0.036	.52545	-.029761	-.00052
_Ip~al_1*	-.0057858	.0086531	-0.65	0.515	.283199	-.022746	.011174
_Ip~ol_1*	.1168721	.0131078	10.21	0.000	.368159	.091181	.142563
_Ipr~e_1*	-.024901	.0063002	-3.19	0.001	.161883	-.037249	-.012553
_Ipoor_1*	.0334053	.0133757	3.02	0.003	.167241	.007189	.059621
_Iurba~1*	-.0036735	.0080572	-0.47	0.642	.729812	-.019465	.012118
_Iedua~2*	.0036852	.0140107	0.27	0.786	.146192	-.023775	.031146
_Iedua~3*	.0159172	.0134333	1.29	0.199	.262533	-.010412	.042246
_Iedua~4*	.0000993	.0135697	0.01	0.994	.126674	-.026497	.026695
_Iedua~5*	.0048384	.0157393	0.32	0.748	.10486	-.02601	.035687
_Iedua~6*	-.0018618	.0153457	-0.12	0.905	.069652	-.031939	.028215
_Iedua~7*	.0390652	.0233987	2.15	0.032	.078071	-.006795	.084926
hsize	-.0024551	.0011766	-2.10	0.036	7.11022	-.004761	-.000149
_Ihhwa~1*	.0109012	.0067748	1.53	0.126	.701875	-.002377	.02418
agehhead	-.0005168	.000287	-1.79	0.073	45.3196	-.001079	.000046
_Ihead~1*	.0072832	.0121847	0.63	0.526	.131267	-.016598	.031165
obs. P	.0642939						
pred. P	.0343539	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects — Number of obs = 2431
LR chi2(15) = 67.00
Prob > chi2 = 0.0000
Log likelihood = -166.35122 — Pseudo R2 = 0.1676

cm_mil~y	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.008813	.0034699	2.92	0.004	.526944	.002012	.015614
_Ip~al_1*	.010662	.0050353	2.86	0.004	.289181	.000793	.020531
_Ip~ol_1*	.0019263	.0031495	0.64	0.520	.361991	-.004247	.008099
_Ipr~e_1*	.0303668	.0107704	4.65	0.000	.165364	.009257	.051476
_Ipoor_1*	-.0055231	.0026358	-1.68	0.093	.173591	-.010689	-.000357
_Iurba~1*	.0052933	.0028449	1.63	0.103	.725627	-.000283	.010869
_Iedua~2*	.0072258	.0074791	1.22	0.222	.157137	-.007433	.021884
_Iedua~3*	.0085409	.0064033	1.66	0.097	.282188	-.004009	.021091
_Iedua~4*	.0051943	.0072959	0.87	0.386	.136158	-.009105	.019494
_Iedua~5*	-.0047668	.0039017	-0.87	0.383	.112711	-.012414	.00288
_Iedua~7*	-.0055064	.0035635	-0.94	0.347	.083916	-.012491	.001478
hsize	.0009104	.0003786	2.66	0.008	7.15467	.000168	.001652
_Ihhwa~1*	.0077813	.0028933	2.34	0.019	.698478	.002111	.013452
agehhead	.0001416	.0001059	1.36	0.175	45.4373	-.000066	.000349
_Ihead~1*	-.0035354	.0032811	-0.89	0.374	.136158	-.009966	.002895
obs. P	.0160428						
pred. P	.0068051	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects — Number of obs = 2409
LR chi2(15) = 50.93
Prob > chi2 = 0.0000
Log likelihood = -221.60562 — Pseudo R2 = 0.1031

cm_child	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.0212567	.0052767	4.17	0.000	.534247	.010915	.031599
_Ip~al_1*	.0234905	.0077556	3.84	0.000	.295143	.00829	.038691
_Ip~ol_1*	.0032643	.0051358	0.67	0.505	.349108	-.006802	.01333
_Ipr~e_1*	.0103934	.0090008	1.38	0.169	.163968	-.007248	.028035
_Ipoor_1*	-.0015261	.0055363	-0.27	0.789	.177252	-.012377	.009325
_Iurba~1*	.0078209	.0045233	1.52	0.127	.719386	-.001045	.016686
_Iedua~2*	-.0047196	.0056448	-0.74	0.457	.158572	-.015783	.006344
_Iedua~3*	-.0011451	.005967	-0.19	0.850	.284765	-.01284	.01055
_Iedua~4*	.0022676	.0078254	0.30	0.761	.137401	-.01307	.017605
_Iedua~5*	-.0070933	.0059131	-0.96	0.337	.11374	-.018683	.004496
_Iedua~6*	-.0111748	.0049391	-1.33	0.183	.07555	-.020855	-.001494
hsize	.0010526	.0005949	1.79	0.073	7.1594	-.000113	.002219
_Ihhwa~1*	.0100368	.0043116	2.07	0.039	.691988	.001586	.018487
agehhead	.0000411	.0001671	0.25	0.806	45.3483	-.000286	.000369
_Ihead~1*	.0077493	.0080073	1.12	0.263	.140307	-.007945	.023443
obs. P	.0211706						
pred. P	.0134328	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects

Number of obs = 1508
LR chi2(13) = 38.52
Prob > chi2 = 0.0002
Log likelihood = -82.729757
Pseudo R2 = 0.1888

cm_marry	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	.0093439	.004065	2.73	0.006	.557029	.001377	.017311
_Ip~al_1*	.0123932	.0066527	2.72	0.006	.27122	-.000646	.025432
_Ip~ol_1*	.0057337	.0042545	1.68	0.094	.383289	-.002605	.014072
_Ipr~e_1*	.0122559	.0089564	2.05	0.041	.165782	-.005298	.02981
_Ipoor_1*	.0019339	.0049412	0.44	0.662	.129973	-.007751	.011618
_Iedua~3*	.0023811	.0045083	0.57	0.570	.317639	-.006455	.011217
_Iedua~4*	-.0010973	.0047066	-0.22	0.827	.169098	-.010322	.008128
_Iedua~5*	-.0014955	.0050891	-0.27	0.790	.155172	-.01147	.008479
_Iedua~7*	-.0018537	.0052086	-0.31	0.760	.115385	-.012062	.008355
hsize	.0007285	.0004275	1.89	0.059	6.94496	-.000109	.001566
_Ihhwa~1*	.0034593	.0030238	1.02	0.306	.731432	-.002467	.009386
agehhead	.0001397	.0001249	1.11	0.265	46.1943	-.000105	.000384
_Ihead~1*	.0148532	.0099153	2.34	0.019	.141247	-.00458	.034287
obs. P	.0125995						
pred. P	.0050473	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects

Number of obs = 2614
LR chi2(16) = 33.57
Prob > chi2 = 0.0062
Log likelihood = -246.1535
Pseudo R2 = 0.0638

cm_other	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	-.0161427	.0057736	-2.88	0.004	.525249	-.027459	-.004827
_Ip~al_1*	-.0008968	.0057157	-0.16	0.877	.283091	-.012099	.010306
_Ip~ol_1*	.0030253	.0053227	0.58	0.561	.368018	-.007407	.013458
_Ipr~e_1*	.012415	.0081706	1.83	0.068	.161821	-.003599	.028429
_Ipoor_1*	-.0118285	.0049713	-1.74	0.082	.167177	-.021572	-.002085
_Iurba~1*	.0088407	.0045628	1.71	0.087	.729916	-.000102	.017784
_Iedua~2*	-.0121777	.0047374	-1.85	0.064	.146136	-.021463	-.002893
_Iedua~3*	-.0065965	.0056213	-1.07	0.283	.262433	-.017614	.004421
_Iedua~4*	-.0096273	.0051615	-1.44	0.151	.126626	-.019744	.000489
_Iedua~5*	-.0080969	.0055793	-1.15	0.250	.105203	-.019032	.002838
_Iedua~6*	-.0033397	.0076416	-0.40	0.690	.069625	-.018317	.011638
_Iedua~7*	-.0120688	.0045497	-1.70	0.088	.078041	-.020986	-.003152
hsize	-.0003325	.0007625	-0.44	0.663	7.11018	-.001827	.001162
_Ihhwa~1*	-.0016167	.0051578	-0.32	0.750	.701607	-.011726	.008492
agehhead	-.000044	.0001769	-0.25	0.804	45.3156	-.000391	.000303
_Ihead~1*	-.0062039	.0055752	-0.96	0.338	.131217	-.017131	.004723
obs. P	.020658						
pred. P	.0153903	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

Probit regression, reporting marginal effects

Number of obs = **2618**
LR chi2(**16**) = **221.88**
Prob > chi2 = **0.0000**
Pseudo R2 = **0.1367**

Log likelihood = **-700.32974**

cm_not~g	dF/dx	Std. Err.	z	P>|z|	x-bar	[95% C.I.]	
_Ipr~b_1*	-.149093	.0147254	-10.19	0.000	.524446	-.177954	-.120232
_Ip~al_1*	-.0509336	.0103177	-4.18	0.000	.282659	-.071156	-.030711
_Ip~ol_1*	-.0415133	.0109276	-3.48	0.001	.367456	-.062931	-.020096
_Ipr~e_1*	-.0322713	.0102256	-2.63	0.009	.161574	-.052313	-.01223
_Ipoor_1*	-.053237	.0091103	-4.25	0.000	.167685	-.071093	-.035381
_Iurba~1*	.0257491	.0096865	2.47	0.014	.729565	.006764	.044734
_Iedua~2*	-.0127089	.0148628	-0.80	0.421	.146677	-.041839	.016422
_Iedua~3*	-.0232718	.0132557	-1.63	0.103	.262414	-.049253	.002709
_Iedua~4*	.0012984	.0179082	0.07	0.942	.126814	-.033801	.036398
_Iedua~5*	.0139664	.0203145	0.73	0.465	.10466	-.025849	.053782
_Iedua~6*	.01851	.0232448	0.87	0.386	.069519	-.027049	.064069
_Iedua~7*	.0663463	.0288101	2.87	0.004	.077922	.00988	.122813
hsize	.0049497	.0013887	3.56	0.000	7.11077	.002228	.007672
_Ihhwa~1*	.0194979	.0097263	1.90	0.057	.701299	.000435	.038561
agehhead	.0003246	.0003687	0.88	0.379	45.3239	-.000398	.001047
_Ihead~1*	-.0210336	.0128423	-1.46	0.145	.131016	-.046204	.004137
obs. P	.0932009						
pred. P	.0625481	(at x-bar)					

(*) dF/dx is for discrete change of dummy variable from 0 to 1
z and P>|z| correspond to the test of the underlying coefficient being 0

12. Crowding out regressions

12.1 Formal insurance

Probit regressions testing if formal insurance produces crowding out

Variable	Conso	Savings	Loans	Transfers	SellAssets	Migration
Formal insurance	-.35539278***	-.13252426**	-.06886818	-.3184738***	-.18369686**	.02768612
poor	.44267885***	-.12246878	.1651655**	.14045058	.00786109	.37587791***
urban	-.13454201*	-.15059389**	-.00230863	-.09556423	.09231983	-.02139609
Incomplete primary	.12983036	.1347342	-.06051364	.03512603	.08351581	.09131194
Primary	.08231668	.39459583***	-.2089566**	.07198457	-.10879143	.32997268**
Intermediate	.17247739	.51086768***	-.26264429**	-.06386382	.09884851	.05507779
Secondary	.18079496	.53799392***	-.30963671**	.25275889*	-.00234786	.14060687
Diploma	-.07853442	.29834315**	-.48985485***	-.11411745	.30880252**	.25201661
University	-.13609384	.34142414**	-.66637174***	.08888631	-.01234681	.63932283***
household size	-.05816817***	-.02766816***	.01665467*	-.0122223	.01225337	-.04783404***
age of the head of hou~d	.00226625	.00945517***	-.00737157***	-.0000545	-.00236402	.00020083
female head of household	.04791797	.20948429**	-.18691474*	.21508565*	.04513783	.1349185
Constant	.99359128***	-.70974944***	.34285133**	-.84090581***	-1.009551***	-1.4717926***
N	1834	1834	1834	1834	1834	1834
ll	-1075.6466	-1169.6434	-1228.538	-743.23602	-782.35856	-438.82181
chi2	117.09756	53.698008	69.976962	35.641468	16.319927	35.121545
r2_p	.05162142	.02243976	.02769113	.02341578	.01032229	.03847818

legend: * p<.1; ** p<.05; *** p<.01

Variable	JoinMilitary	ChildLabor	Marriage	Other	Nothing
Formal insurance	.70707734***	-.24774525*	.25755341	-.21936834	.26943089***
poor	-.27415137	-.18224336	.00628299	-.74210187**	-.45938313***
urban	.27518779	.19533632		.02473783	.15295975
Incomplete primary	.17707043	-.08979936		-.65339043*	-.24063343
Primary	.27853191	-.023587	-.04031172	.07698534	-.27445172**
Intermediate	.09499727	.14775515	-.16774801	-.40463298	-.05754684
Secondary	-.6289748	-.59175262	-.34671761	-.04318367	-.07825073
Diploma				.20955709	.07729346
University	-.67248775		-.35799076	-.09882541	.36312234**
household size	.03810434**	.03199353*	.05279698**	-.03092223	.03812356***
age of the head of hou~d	.00713838	.00302843	.00762181	.01124778**	-.00170461
female head of household	-.15993214	.26298769	.44431854	-.15917637	-.02841262
Constant	-3.3628566***	-2.3314193***	-3.1200769***	-2.129867***	-1.6318154***
N	1698	1531	1103	1834	1836
ll	-148.4726	-187.38029	-76.039071	-168.93321	-574.17674
chi2	44.058427	17.253212	15.151043	24.22898	73.238385
r2_p	.12928222	.04401175	.09860047	.06691325	.05994702

legend: * p<.1; ** p<.05; *** p<.01

12.2 Does retirement insurance crowd out informal coping mechanisms?

Probit regressions testing if retirement insurance produces crowding out

Variable	Conso	Savings	Loans	Transfers	SellAssets	Migration
Retirement insurance	-.31459515***	-.1573631**	-.05434885	-.28797761***	-.1996744**	.03117873
poor	.45310479***	-.12577452	.16865455**	.14894097	.00759487	.37669752***
urban	-.13586117*	-.15128048**	-.00284627	-.09747154	.09056824	-.02129984
Incomplete primary	.11597681	.13381624	-.06331829	.02650479	.07966278	.09179552
Primary	.07394931	.39587097***	-.21096149**	.06660416	-.10878341	.33004968**
Intermediate	.16029736	.51164654***	-.26585639**	-.07457546	.09818706	.05509833
Secondary	.1653754	.54827592***	-.31506531***	.2417501*	.00420248	.13925654
Diploma	-.09981847	.31109658**	-.49747634***	-.13522563	.3143586**	.25023664
University	-.15434762	.35643274***	-.67382597***	.06627386	-.00162096	.63725669***
household size	-.05839626***	-.02750886***	.01650557*	-.01244799	.01227836	-.04790652***
age of the head of hou^d	.00186052	.0095254***	-.00747711***	-.00034524	-.00237263	.00019713
female head of household	.05441992	.21255366**	-.18571703*	.22012123*	.04931382	.1343183
Constant	.99403357***	-.70776767***	.34312663**	-.83776932***	-1.0061816***	-1.4721718***
N	1834	1834	1834	1834	1834	1834
ll	-1078.4612	-1168.8453	-1228.7474	-744.65702	-781.87165	-438.81223
chi2	111.46852	55.294127	69.558072	32.799469	17.293756	35.140693
r2_p	.04913991	.02310676	.02752537	.02154864	.01093824	.03849916

legend: * p<.1; ** p<.05; *** p<.01

Variable	JoinMilitary	ChildLabor	Marriage	Other	Nothing
Retirement insurance	.67354485***	-.20219444	.28917145	-.29191254*	.25567797***
poor	-.25872018	-.17091367	.00988169	-.75231916**	-.46609129***
urban	.28599639	.19421273		.02685797	.15399967
Incomplete primary	.19590735	-.09964498		-.6500954*	-.23158802
Primary	.28851585	-.02882613	-.04368884	.07992566	-.2658025**
Intermediate	.10512923	.1361229	-.17233005	-.40237316	-.05120125
Secondary	-.62692301	-.6069382	-.36176089	-.0127959	-.07136238
Diploma				.2386091	.08445844
University	-.67222761		-.37612098	-.05599827	.3685138**
household size	.03781058**	.03116825*	.05259777**	-.0308355	.03834816***
age of the head of hou^d	.00712906	.00274059	.00747753	.01154743**	-.00149359
female head of household	-.17366452	.26559406	.44388336	-.1526489	-.0327135
Constant	-3.3345423***	-2.3266712***	-3.1216088***	-2.1311535***	-1.6351701***
N	1698	1531	1103	1834	1836
ll	-148.95191	-187.86886	-75.866179	-168.18676	-574.54862
chi2	43.09981	16.277662	15.496827	25.721878	72.502543
r2_p	.12639106	.04152319	.0926682	.07103619	.05935126

legend: * p<.1; ** p<.05; *** p<.01

12.3 Does health insurance crowd out informal coping mechanisms?

Probit regressions testing if health insurance produces crowding out

Variable	Conso	Savings	Loans	Transfers	SellAssets	Migration
Health insurance	-.09261471	-.17818836***	-.11073866*	-.14238192*	-.12225966	-.01562982
poor	.5005674***	-.11727974	.16552128**	.18960724*	.02963862	.36738411***
urban	-.13688828*	-.15294971**	-.00309237	-.09382402	.09365485	-.02150141
Incomplete primary	.10229843	.13501197	-.05932122	.01079416	.07364872	.09511529
Primary	.05114594	.39448837***	-.20982455**	.04734697	-.12237241	.33377107**
Intermediate	.12880412	.51809626***	-.25722258**	-.09286342	.08644658	.06199467
Secondary	.0663681	.53633121***	-.3864074**	.16759898	-.0391357	.15444438
Diploma	-.22680713*	.28704985**	-.49002865***	-.24391849	.24959741*	.27145986
University	-.28938827**	.33643851**	-.66446819***	-.04251795	-.07078447	.659783***
household size	-.0599269***	-.02782219***	.01659289*	-.01420043	.01112687	-.04741262***
age of the head of hou~d	.0005456	.00935975***	-.0074011***	-.00146236	-.00296705	.00043858
female head of household	.05145947	.21536749**	-.18488625*	.22126581*	.0485219	.13488047
Constant	.97148643***	-.71574898***	.34387631**	-.83933497***	-1.0123311***	-1.4728652***
N	1834	1834	1834	1834	1834	1834
ll	-1087.9561	-1168.2292	-1227.7337	-749.49744	-783.95701	-438.84592
chi2	92.478619	56.526381	71.58549	23.118625	13.123834	35.073325
r2_p	.04076838	.02362171	.02832766	.0151885	.00830027	.03842536

legend: * p<.1; ** p<.05; *** p<.01

Variable	JoinMilitary	ChildLabor	Marriage	Other	Nothing
Health insurance	.67285381***	-.19773831	.48591945**	-.27684627	.17084102*
poor	-.29338804	-.15924566	.01865581	-.72678208**	-.49240779***
urban	.25412003	.2049213		.02373141	.15594287
Incomplete primary	.18105096	-.10151283		-.67139449*	-.22701143
Primary	.29242993	-.03175123	-.0380751	.07474599	-.2529336*
Intermediate	.05663755	.13756828	-.2451113	-.39793111	-.03668096
Secondary	-.54078451	-.63226566*	-.40923461	-.07688686	-.02458834
Diploma				.17306979	.15990251
University	-.64439243		-.42408888	-.12254793	.43962642***
household size	.03992101**	.03886749*	.05172356**	-.02997142	.03949431***
age of the head of hou~d	.00879371	.00214625	.00888542	.01056745*	-.00078961
female head of household	-.19939732	.27495216	.39730437	-.14573617	-.03414194
Constant	-3.2841656***	-2.3345355***	-3.1648925***	-2.1281697***	-1.6182326***
N	1698	1531	1103	1834	1836
ll	-148.06876	-188.11455	-74.388474	-168.50411	-576.56947
chi2	44.866122	15.784683	18.612236	25.087169	68.444838
r2_p	.1315708	.04026563	.11129778	.06928332	.05602959

legend: * p<.1; ** p<.05; *** p<.01

12.4 The Marginal Effects of Crowding Out (%)

Coping mechanism	Consumption	Savings	Loans	Transfers	Sell Assets	Join Military	Child Labor	Child Marriage	Other	Nothing
Formal insurance	-12.28	-4.93	Not sig	-7.11	-4.34	2.28	-1.32	Not sig	Not sig	4.39
Retirement insurance	-10.92	-5.85	Not sig	-6.41	-4.69	2.28	Not sig	Not sig	-1.01	4.20
Health insurance	Not sig	-6.54	-4.37	-3.11	Not sig	2.89	Not sig	1.45	Not sig	2.93