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Estimating the Extent of Human Trafficking from Ukraine: Final Report

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Estimating the Extent of
Human Trafficking from Ukraine

Final Report

commissioned by the International Organization for Migration, with financial support from the United States Agency for International Development (USAID)

Kiev, Ukraine

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INTRODUCTION

This report summarizes the results of three studies done to estimate the extent of human trafficking from Ukraine.[1] The studies were designed and reported by Dr. Ronald Hampton, principal investigator, Dr. Dwayne Ball, and (for one study) Ms. Julie Pennington, all of the University of Nebraska-Lincoln College of Business Administration Marketing Department.

Our intent in doing multiple survey studies was to attempt to converge on an estimate. Each method used has different and inevitable threats to validity, and there is no perfect method for estimating the extent of such a rare, hidden, and sometimes shameful event. Therefore, by using methods with different threats, we hoped to counter the inevitable criticism of the validity of a single method, and make any estimates at which we arrived much more credible.

THE PROBLEM OF ESTIMATING
HUMAN TRAFFICKING[2]

Expert estimates of the extent of human trafficking vary dramatically. According to UNESCO (2004), there have been wide-ranging estimates reported by various organizations over the years. For example, the 2000 U.S. Trafficking Victims Protection Act (U.S. Congress 2000, section 102) states that 50,000 people are trafficked into the U.S. every year. This estimate was later reduced to 17,500 annually upon review of the method. The Washington Post (Markon 2007) noted the early estimate was based on a CIA analysis of foreign newspaper clippings. The United States Agency for International Development (USAID) and the United Nations (UN) stated that four million people were trafficked worldwide in 2003, while the United States Department of State asserted that one million people worldwide were trafficked (UNESCO 2004).

Kangaspunta (2003) reports estimates of 147 countries being recorded at least once as a country of origin for a trafficked individual. However, the number of victims worldwide is unknown, and experts agree that finding reliable statistics is virtually impossible (Guinn and Steglich 2003; Piper 2005; Wijers and Lap-Chew 1997). Reconciling the estimates that do exist is impossible, because often no information is available on how the data was collected or calculated (Pharoah 2006). Many papers make general statements that are not supported with scientific research, which often leads to contradictory findings. Most of the information that is presented is either based on individual cases or is prepared for advocacy purposes (Kangaspunta 2003). According to Piper (2005, 216) this is due to four main factors, including (1) research that is geographically limited to one village or community, (2) research that is typologically limited by only looking at one sub-population of trafficked persons, for example children or women, (3) periodical timing by research only being conducted during one specific and short time period (no longitudinal or life course

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[1] The research estimates only the number of persons who were trafficked abroad and does not consider the number of victims of internal trafficking (those who were trafficked within Ukraine).

[2] This section was previously published by the authors in Pennington, Ball, Hampton, and Soulakova (2009) "The Cross-National Market in Human Beings," *Journal of Macromarketing*, (June)

analysis), and (4) research that is discipline-limited with no existing multi-method, interdisciplinary research.

Human trafficking research is difficult, with the most challenging factor being that the populations in question (traffickers, victims/survivors, illegal migrants) are hidden populations (Tyldum and Brunovskis 2005).

"'Hidden populations' have two characteristics: first, no sampling frame exists, so the size and boundaries of the population are unknown; and second, there exist strong privacy concerns, because membership involves stigmatized or illegal behavior, leading individuals to refuse to cooperate, or give unreliable answers to protect their privacy" (Heckathorn 1997).

Research in trafficking poses several unique dilemmas, including access to traffickers, access to vulnerable victims (including cultural unwillingness to talk about sex (especially with strangers), stigmas associated with prostitution, fear of retribution (to self or family members), un-conducive contexts for research (individuals are constrained and influenced by the context such as interviewing at the border or in custody), and personal safety of researchers (involvement of organized crime, question of involvement in trafficking by key informants). Most information on trafficking comes from victims who have very limited knowledge about the victimizers, organizations, and systems that victimized them, and how the systems work (Kelly 2002).

The most reliable numbers that do exist are for the numbers of victims that self-identify to NGO's or government organizations. These are generally trafficking victims asking for help putting their lives back together after returning home. There is considerable shame associated with being trafficked and individuals may hesitate to come forward and self-identify. Thus, the numbers representing self-identified individuals should probably be considered only a small percentage of the total number of trafficked individuals. The question that remains unanswered is: how big is the problem of human trafficking? This is the problem that we set out to answer for a group of select countries. We considered a number of methods.

Given these difficulties for estimating the size of trafficking, it is clear that there is no one perfect method. We will review the methods currently used or suggested, and then move to our suggested method, which we believe offers some advantages.

Expert Opinion: The most commonly-used method is to ask opinions of people who work in the anti-trafficking field, such as police officers, customs officials, NGOs and clergy that care for victims. Usually, they are asked to estimate, based on their own experience, how many trafficked individuals exist in their jurisdictions, and then these estimates are scaled up to the size of countries. This method is subject to serious biases: the experts may be using news sources (Markon 2007), may lack detailed knowledge, and may see only a tiny, non-random fraction of victims in their jurisdictions. Finally, current victims often have strong incentives to not identify themselves to local government officials. Most of the estimates cited in above sections are expert opinion, and one can see that they vary enormously.

Capture-recapture: This method has been suggested for estimating the size of hidden populations, and specifically trafficking victims (Tyldum and Brunovskis 2005). Originating in the biological sciences, the method is suitable for populations contained within a geographical area that are relatively homogenously spread over that area, are easily observed when sought out, and in which the individuals move about frequently. For example, one might estimate the number of street prostitutes in a downtown area by repeatedly observing (over several waves of surveying) the prostitutes on random street corners and noting which had been previously observed. With some mathematical manipulations and assumptions, the size of the population can be estimated. However, other than currently-trafficked street prostitutes who are willing to admit their victim status, victims of trafficking do not fit the assumptions of the capture-recapture model. In addition, if a researcher identified a trafficking victim by this method, he or she would probably feel under a moral obligation to remove them from the situation rather than leave them to be re-identified, further violating the assumptions of the model.

Surveys of current victims: One could, in theory, attempt to find trafficking victims through traditional random survey means, by telephone, internet, mail, door-to-door surveying, or store or street intercept. However, current victims will not be allowed to answer surveys, or to be truthful if they do answer them, without great fear of retribution. Thus, current victim surveys would be severely biased.

Surveys of returned victims: An alternative is to interview returned victims. In some sense, returned victims are already surveyed by NGOs and government officials who intend to help them. However, all such sources of aid are quite forthright in saying that they know they see only a small and unknown fraction of victims, returned or not. Most returned victims do not come forward due to fear of retribution, shame, or disbelief that they can be helped. Further, some victims never return, due to alternative employment, death, or shame. Finally, a random survey of the population, seeking returned victims, is likely be impractical, requiring sample sizes in the hundreds of thousands, and encountering severe bias due to the reluctance of victims to acknowledge their victimhood to a stranger.

Surveys of households or families: A random sampling of household or families in the country of origin of the victims might serve as a flawed, but best sampling frame for estimating human trafficking. In such a survey, one would estimate the number of victims out of the total family or household members encountered. Household or family members might or might not always know that a member has been trafficked, but they are the most likely persons to know, other than the victim. Further, if they are not pressed for additional information about the victim, then the victim is unidentified, except as a member of the household or family, and thus retains anonymity. The method is obviously downwardly biased somewhat, due to some reticence to admit trafficking on the part of family members, some lack of knowledge of family members, and the fact some of the persons most vulnerable to trafficking are orphans. However, of all the methods above, it seems most likely to yield the least bias.

A similar household survey approach was used twice to attempt to estimate the additional number of deaths in Iraq due to the violent aftermath of the second Gulf War of 2003 (Burnham, et al. 2006, Roberts et al. 2004). In these cases, cluster samples, using randomly-selected locations and

nearby households, were used. Since the death of a household member is not shameful, the researchers asked for death certificates at the end of the interview, and received them in 92% of cases. The method appears to have produced valid and reproducible results (Burnham et al. 2007), although surrounded by some controversy due to the fact that the estimates of additional deaths were far higher than those estimated by government sources (Guha-Sapir et al. 2007, Van Schreeb et al. 2007).

Our approach used three types of surveys: *families*, *households*, and *key informants*. The key informant survey technique, as we applied it, appears to be unique in this type of problem.

BRIEF SUMMARY OF METHODS AND RESULTS

The results from the three studies lead us to conclude that in the past three–five years, **at least 22,000 Ukrainian citizens per year, and perhaps more than 36,000 per year**, have gone abroad to work and have been enslaved in one form or another. The total number enslaved appears to be probably well in excess of 110,000.

We believe the three survey methods are probably biased so as to produce somewhat smaller numbers of victims than the actual numbers, but are nonetheless the best that can be achieved. Hence we say, "Well in excess of."

The methods and results of the three studies are tabulated below. The methodology and results are further discussed in subsequent chapters on each study. One critical point to mention here is that we used a common conceptual definition of human trafficking in all three studies: a resident left his or her home country and was forced to work in a foreign country for little or no pay. This definition allows us to encompass not only forms of slavery that exist in the popular imagination, such as brothel slavery or certain kinds of factory and agricultural slavery, but also "wage slavery" or "debt bondage," in which slaves are nominally paid, but usually never enough to buy their way out of a forced work environment.

The first study was a survey of close families done in five Eastern European countries, including Ukraine. This study was relatively small given the fact that finding human trafficking victims is like finding needles in a haystack (1,345 close families in Ukraine were surveyed). In addition, when a member of each close family was asked to specify how many members of that family had been trafficked, no time frame was specified, although it would be reasonable to assume that most answers were relevant to the past five–ten years. This study estimated that about 110,000 Ukrainians had been trafficked abroad. For reasons discussed in the study report, we believe this estimate is low.

The second study was a survey of "key informants." This is quite different from surveying close families or households. In the surveys of close families and households (Studies 2 and 3), someone potentially close to a trafficking victim was asked if someone in the family or household had been trafficked. There may be a natural reluctance to answer such a question positively, even if someone close has been victimized. Thus, estimates are probably biased downward. In Study 2,

however, the person asked was someone not of the household or family of a potential victim, but a knowledgeable person in the neighborhood or a head teacher from a child's school. Thus, the reluctance to answer positively would probably be much lessened on the part of the informant. However, the knowledge of someone's victim status might be lessened as well, due to social distance. Thus, we replaced one probable major source of bias with another. In the case of the key informant study, our best estimate of **known** trafficking victims in Ukraine was about 110,000 over five years. However, when we asked about **strongly suspected** victims, we estimated that there were another 110,000. Thus, we feel quite certain the number of victims over the past five years has exceeded 22,000 per year, and may possibly be 44,000 per year or higher.

The third study yielded the most accurate estimates in terms of low sampling error, since it was a survey of over 13,000 households. Heads of households were interviewed and asked if anyone in the household had been trafficked over the past three years. From this survey, we obtained an estimate of about 111,000 persons trafficked over the past three years, or about 37,000 per year. This study has the same form of bias as the first study. That is, we are asking someone in a family or household to reveal that someone close to him or her was a trafficking victim. Thus, there is some unknown bias, almost certainly downward.

So, looking across studies, we conclude that we can be fairly confident that at least 22,000 Ukrainians per year have been enslaved abroad over the past 3 to 5 years, possibly close to double that number. Most – perhaps no more than five or ten per cent, ever get help from the rehabilitation experts at NGOs.

Subsequent to the Table below, each study will be discussed in turn with results first, and then an extensive discussion of methodology.

SUMMARY TABLE:
Results of Three Studies on the Extent of Human Trafficking from Ukraine

	1. Estimating the Extent of Human Trafficking from 5 Eastern European Countries	2. Key Informant Survey on Human Trafficking in Ukraine	3. Estimating the Extent of Human Trafficking from Ukraine using DHS 2007 Survey Results
Name of study			
Type of study	Survey	Survey	Survey
Dates of field work	Autumn, 2006	October, 2007	July-Sept. 2007
Date of report	January, 2007	April, 2008	January, 2009
Form of data	Number of persons per close family trafficked abroad, according to family member	Number of persons trafficked as estimated by a key informant who had intimate knowledge of a neighborhood or families of students	Number of persons per household trafficked abroad, according to head of household
Unit of analysis	close family	"neighborhood" (or families of students)	household
Sample size	1345 close families	242 "babushkas" and 221 head teachers	13,379 heads of household
Analysis method	estimate of mean rate of trafficked persons per close family	estimate of mean rate of trafficked persons per unit of analysis known to key informant	estimate of mean rate of trafficked persons per household
Period over which trafficking is estimated	before Autumn, 2006: indefinite time-frame	5 years prior to October 2007	3 years prior to July-September, 2007
Point estimate of number of Ukrainians trafficked over that period	96,975 trafficked persons	about 110,000 trafficked persons (based on what informants claimed to know, not just suspect)	110,884 trafficked persons
Lower bound of 95% confidence interval of number of persons trafficked	37,747	about 72,000	84,225
Upper bound of 95% confidence interval of number of persons trafficked	156,204	about 148,000	137,544
Point estimate of number of persons trafficked per year	N/A	about 22,000 per year or more, possibly double	36,961 per year
Lower bound of 95% confidence interval of number of persons trafficked per year	N/A	about 14,400 per year or more, possibly double	28,075 per year

| Upper bound of 95% confidence interval of number of persons trafficked per year | N/A | about 29,600 per year or more, possibly double | 45,848 per year |

Study 1:
Survey of Families to Estimate the Extent of Human Trafficking from Five Eastern European Countries

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Originally reported January 31, 2007; modified.

INTRODUCTION

This report analyzes two questions that we asked to be inserted in an omnibus survey of five countries sponsored by the International Organization for Migration. The study, which included many more questions on human trafficking than the two we suggested, was executed in the autumn of 2006 by GfK Ukraine, in Belarus, Moldova, Ukraine, Romania, and Bulgaria.

The two questions we asked were, essentially, "How many people are there in your close family (defined as self, parents, spouse, children, and siblings)?" and "Of those, how many have been trafficked abroad (defined in three separate types)?" The exact wording of the questions is discussed below.

Our approach with the resulting data, outlined below, was to use these answers to estimate the extent of human trafficking from each of the five countries in the survey.

RESULTS

First, we will provide the estimates of the number of trafficked persons, then we will discuss the methodology and confidence intervals.

Here are our estimates of the number of trafficked persons from each country:

Table 1:
Point Estimates of the Number of Trafficked Persons

Ukraine	**96,975**
Moldova	**40,065**
Bulgaria	**21,463**
Romania	**19,988**
Belarus	**8,532**

Please note that each of these estimates has two types of uncertainty associated with it: random sampling error and bias. Any estimates obtained from any survey on any topic would have such uncertainties. Thus, as with any set of survey results, an informed interpretation is called for. We will discuss these uncertainties in the Method section below, and the interpretation in the Discussion section.

METHOD[3]

<u>Sample</u>

In the autumn of 2006, a cluster sample survey was performed in each country, with over 1,000 respondents in each country. The sampling and interviewing were performed by a professional research organization (GfK), and procedures were reviewed by the authors. Each country was divided into administrative regions with a proportionate number of respondents coming from each region. For example, there were six regions in Ukraine. Each region was divided into "settlements," which consist of rural areas, towns of less than 50,000 inhabitants, towns of 50,000 to 100,000 inhabitants, cities of 100,000 to 500,000 inhabitants, and larger cities. The cities larger than 500,000 inhabitants were divided into administrative districts, each of which was considered a "settlement." A random set of settlements was selected from each region. The number of subjects proportionate to the size of each selected settlement was determined. Within each chosen settlement, a "random route" method was used, in which streets and roads are randomly selected from an alphabetical list, and random household (including apartment) addresses on those routes are chosen for the survey. When a household agreed to the survey, the

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[3] Parts of this section were previously published by the authors in Pennington, Ball, Hampton, and Soulakova (2009) "The Cross-National Market in Human Beings," *Journal of Macromarketing*, 29 (2) 119-134

household member over 15 years of age with the most recent birthday was selected as the respondent. If that person was unavailable, at least two return visits were paid before another household was selected.

Questionnaire Administration and Items

Respondents were administered a face-to-face, interviewer-recorded questionnaire, which covered a large number of topics dealing with working abroad of interest to the sponsoring organization. There were two questions of interest for our purposes. These two were, essentially, "How many people are there in your close family (defined as self, parents, spouse, children, and siblings)?" and "Of those, how many have been trafficked abroad (defined in three separate types of trafficking)?" The exact wording of the questions is presented in Table 2. The first question was asked in the middle of the interview, as it was a non-threatening question. The last question was asked in three parts toward the end of the interview, after non-threatening questions about knowledge of human trafficking, perceived reasons why people are trafficked, and awareness of anyone among friends or acquaintances, as well as family, who had been trafficked. By asking these more sensitive questions near the end of the survey, it was hoped that enough rapport had been built by that point to minimize socially desirable responding by family members.

TABLE 2:
QUESTIONS ASKED

Number in family: "What is the total number of your close family members including you, your parents, children, husband/wife, brothers and sisters (Please include all those who were alive any time during the last past year, it does not matter whether you live together)?"

Number trafficked 1: "How many members of your close family traveled abroad because they were offered a domestic or nursing job, but upon arrival were locked and forced to work for no pay?"

Number trafficked 2: "How many members of your close family traveled abroad because they were offered a job, but upon arrival they were locked and forced to work at an enterprise/ on construction/ in the agricultural field for no or little pay?"

Number trafficked 3: "How many members of your close family traveled abroad because they were offered employment, but upon arrival to a country of destination their passport was taken away and they were forced to work in a sex business?"

The three categories of trafficking comprised those that local experts in human trafficking believed to be the ways in which nearly all citizens who were trafficked were lured abroad. We asked about the number of family members who had been trafficked abroad in each of these

three ways. Interviewers were instructed to make certain that the same person was not counted more than once as trafficked.

While we are aware that the shamefulness of having been trafficked may still prevent some respondents from admitting that a close family member was trafficked, and hence, the estimate for the number of trafficked persons in the population based on such data will underestimate the true number, we expect the bias to be much less than if we asked specifically about the trafficked individual himself or herself. Furthermore, by limiting the question about trafficked persons to the close family (as opposed to a much larger extended family or neighborhood of unrelated persons), we believe there is a good chance that the respondent would know whether or not a family member had, indeed, been trafficked when he or she went abroad.

No time limit for human trafficking (such as "How many of your family members have been trafficked abroad in the past three years?") was placed on the questions we asked. Thus, our estimates of the number of trafficked persons are estimates of the total number of living people from each country that have ever been trafficked abroad. Naturally, some of the family members trafficked abroad may still be abroad.

Data cleaning

Data corresponding to subjects with no answer to at least one of our questions were excluded from our analysis. The total number of excluded observations was small: 30 (2.8%) in Belarus, 52 (5.2%) in Bulgaria, 4 (1.4%) in Moldova, 16 (1.4%) in Romania, and none in Ukraine.

In a few cases, where respondents appeared to misinterpret the question about family size, and gave an unreasonably large number, the family size was truncated to 20. Interviewers indicated that there is some ambiguity in the languages used regarding brothers-in-law and sisters-in-law; in some cases, they can be considered brothers or sisters. Our interviewers attempted to make the distinction clear, but it appears in a few instances, the terms used were occasionally misunderstood. Table 3 shows how many families were truncated to 20. The figure 20 was chosen, based on the view of experts in those countries, as the most reasonable number for the maximum close family size. As Table 3 shows, the effect on the final estimates of truncating family size to 20 was small.

Table 3:
Average Close Family Size Before/After Adjustment

Country	Number of Respondents With Valid Answers	Average Close Family Size before Adjustment	Number of Close Families Declared to be > 20 and Adjusted to 20	Average Close Family Size After Adjustment
Ukraine	1345	7.71	33	7.47
Moldova	1069	6.35	16	6.25
Bulgaria	955	8.42	26	7.91
Romania	1092	9.15	0	9.15
Belarus	1045	9.25	35	8.93

The unit of analysis in this survey is the "close family" as defined above. Thus, we had about 1,000 survey units per country. The relevant statistic that was used to project our results to the population was the average number of trafficked persons per close family.

Estimation method and confidence intervals

Estimation of the number of trafficked persons from this point followed these steps for each country:

1. The total number of trafficked persons was divided by the total number of respondents (i.e., close families) in the sample providing the mean number of trafficked persons per close family in the sample. This resulted in a mean number of less than one to more than five one-hundredths of a person per family that had been trafficked; i.e., about one trafficked person in about every 20 to 100 families, depending on the country.

2. In order to project this mean to the population, we required an estimate of the number of close families (by our definition) in the country. To obtain this, we divided the population of the country[4] by the average family size from our sample.

3. Now having the mean number of trafficked persons per close family, and the number of close families in the country, a point estimate of the number of trafficked persons in the country (see Table 1) was provided by simply multiplying the two together.

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[4] The population of the country was the most recent estimate we could find.

4. After searching alternative ways of calculating a confidence interval around the mean number trafficked per family, we determined that the normal-theory based approach was most reasonable; even though the parent distribution was highly skewed, the large sample size made the normal theory approach a good approximation.   Thus, we placed a 95% confidence interval around the mean number trafficked per close family, which gave us upper and lower bounds on the mean.

5. To calculate the confidence interval around the point estimates of the total number of trafficked persons, we simply multiplied the lower bound of the mean by the estimated number of families (lower bound of the number of trafficked persons), and the upper bound of the mean by the estimated number of families (upper bound of the number of trafficked persons).

The calculations are recapitulated in Table 4. We have not included the lower and upper bound of the mean number of trafficked persons per family, but these can be calculated from the table or provided upon request.

IMPROVEMENTS TO METHOD

In retrospect, we would have:

1. Not divided the human trafficking question into three parts, but made a careful definition of all types of human trafficking to the respondent, and then asked only one question.
2. Carefully defined "close family" so as to definitively exclude brothers-in-law and sisters-in-law, or definitively include them. We now understand it is customary in parts of Eastern Europe to consider such persons by definition "brothers" or "sisters," and this caused some confusion.
3. Used a much larger sample size (such as in Study 3).
4. Pre-tested the instrument more closely in each country (with the help of translators) in order to identify problems such as (1) and (2).

Table 4:
Calculations of the Point Estimates and Confidence Intervals for the Number of Trafficked Persons

	Country Population	Estimated Mean Family Size	Estimated Number of Families	Number of Trafficked Persons in Sample	Number of Close Families (respondents) in Sample	Sample Mean Number of Trafficked Persons per Close Family	Mean Estimate of the Number of Trafficked People	95% Confidence Interval Bounds Lower	Upper
Bulgaria	7,385,367	7.91	933,191	22	955	0.0230	21,463	4,600	38,327
Ukraine	46,710,816	7.47	6,256,471	21	1345	0.0155	96,975	37,747	156,204
Moldova	4,466,706	6.25	714,170	60	1069	0.0561	40,065	28,013	52,117
Romania	22,303,552	9.15	2,437,547	9	1092	0.0082	19,988	5,512	34,464
Belarus	10,293,011	8.93	1,152,917	8	1045	0.0074	8,532	623	16,441
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Total	91,159,452		11,494,296	--	--	--	187,023	--	

DISCUSSION

As we mentioned before, any estimates derived from a survey sample are limited in certain respects. The first limitation comes from random sampling error, the second from bias.

In this survey, despite the sample sizes of approximately 1,000 per country, the random sampling error is considerable, relative to the mean or number of trafficked persons. This is due to the low frequency of trafficked persons. When nearly everyone in the sample admits to no trafficked persons per family, the mean number of trafficked persons per close family will be a very small number. Further, in another random sample of 1,000, there might be just a few more or just a few less respondents admitting to trafficked family members, and the resulting estimates might be quite different. This is normal with rare events. Thus, the confidence interval around such a sample mean will be large relative to the mean itself. For example, in Belarus, we estimate between 623 and 16,441 trafficked persons in the country, with 95% confidence.

There is no solution to this very wide confidence interval but to take much larger samples, which would have been impractically expensive. For example, given the same mean number of trafficked persons in Belarus, but a sample of 16,000 instead of 1,000, the estimate would have been 6,555 to 10,509 trafficked persons, a much more satisfying interval. However, the field cost would have been 16 times as large in order to shrink the interval to that extent.

The second type of uncertainty about survey estimates lies in the phenomenon of bias arising from sample design or from measurement bias. Bias implies that the estimates obtained from the sample may be either too high or too low, one or the other, due to sample design or measurement. We believe bias from sample design is minimal in this study. However, we believe that measurement bias, despite our method, may still have produced low estimates.

The particular type of measurement bias in this survey is the tendency for a family member either to not know, or to not admit, that another close family member was trafficked. We believe, based on our experience of doing surveys, that it is easier for a person to admit that an undefined "someone" close to him or her – even himself – was trafficked, than it is to admit that he or she personally was trafficked. Therefore, we believe that while some downward bias still exists in our estimates, it is much less than it would be if we had asked if the respondent was trafficked.

So, how does one interpret these numbers? We think an appropriate way to interpret them would be to say, for example, "Our best estimate of the number of trafficked persons in Ukraine is about 100,000. Probably, it is more than this, although it might be less. It could be as low as 40,000, or somewhat more than 150,000, but our best estimate from survey work is in the 100,000 range."

STUDY 2:
Key Informant Survey, Ukraine

Dr. Ronald Hampton and Dr. Dwayne Ball
Originally reported April 8, 2008; modified.

INTRODUCTION

This reports the results of a procedure to estimate the number of Ukrainian citizens that have been trafficked abroad in the five years previous to October, 2007.

The method used here is a unique method in which we searched for a set of "key informants" who would each have sufficiently intimate knowledge about a group of people (called his or her "neighborhood") that he or she could tell us 1) how many such people there were in his or her "neighborhood," and 2) how many of those had been trafficked. After considering a number of potential types of key informants, such as police officers, priests, and so forth (covered in the method section), we settled on older ladies who have intimate knowledge of their neighborhoods or apartment buildings ("babushkas") and head teachers of several years' duration at public schools. Because of special interest in orphans, considered a high-risk population, we also selected a sample of orphanage administrators. However, we found their knowledge of their former residents so incomplete that we have not included their results.

In addition to estimates of the number of trafficking victims from Ukraine, we also provide preliminary estimates of the likelihood that a Ukrainian citizen going to work abroad would be trafficked, and the likelihood of a trafficked person identifying themselves to government or an NGO.

RESULTS

We will make two separate estimates of the number of Ukrainian citizens trafficked abroad, one from babushkas and one from head teachers. Then, we will combine the two and make a third estimate.

"Babushkas"

The average babushka had spent 38 years in her apartment building or neighborhood, and had a total of 337 people defined as within that sphere, or neighborhood (average of minimum and maximum, if she had to estimate). Of the 242 babushkas interviewed, 51 claimed knowledge of at least one person out of her neighborhood as definitely being trafficked, by the trafficked person's own admission or the admission of others close to that person. Most of those 51 claimed knowledge of one person, but one claimed knowledge of five persons. When calculated

as "persons per thousand trafficked," the 242 babushkas had an average of 1.91 persons per thousand trafficked.

At a rate of 1.91 persons trafficked per thousand in apartments and neighborhoods, given a Ukrainian population of 47 million, the estimate from babushkas of the total number of Ukrainian citizens trafficked abroad in the past five years is:

89,770 persons trafficked abroad as estimated from babushkas

The confidence interval around this estimate (a normal-theory confidence interval) is plus or minus approximately 31 thousand persons. It is a rather wide confidence interval because of the relatively small sample size (242) and the relatively high variability in responses (a standard deviation of 5.25 persons). Thus, the 95% confidence interval for the number of persons trafficked abroad, based on babushka's estimates, is about 60,000 to 120,000 Ukrainian citizens in the past 5 years. As stated previously, we believe this is probably a low estimate because of lack of perfect knowledge on the part of the babushkas.

Head teachers

The 221 head teachers had all been in their roles between five and seven years, and supervised, on the average, 24 students (minimum of five and maximum of 37). The total number of family members of all their students was between 19 and 211, with an average of 83. This total number of family members formed the "neighborhood" about which they judged the extent of trafficking.

When calculated as "persons per thousand trafficked," the 221 teachers had an average of 2.78 persons per thousand trafficked. Assuming that these families of students are representative of the Ukrainian population as a whole, and given an estimated Ukrainian population of 47 million, the estimated total number of Ukrainian citizens trafficked abroad is:

130,660 persons trafficked abroad estimated from teachers

The confidence interval around this estimate is about 70,000 persons, again because of the small sample size and large variability between teachers. This means that we have a 95% confidence interval of about 60,000 to 200,000 persons trafficked, based on estimates of head teachers.

Combined estimate of Ukrainians trafficked abroad

It would be reasonable to use either estimate above rather than to combine them. For example, one could argue that the babushka estimate should be used, because apartment buildings and neighborhoods contain a more representative sample of the Ukrainian population than do the families of school students. The families of school students would contain a higher proportion of working-age people, and thus would have a higher proportion at risk of being trafficked.

Nonetheless, we will combine the two estimates, weighted by the number of participants in each group, and will find and estimate of 2.33 persons per thousand trafficked abroad, or

109,290 persons trafficked abroad as a combined estimate

With a 95% confidence interval of plus or minus about 37,000 persons, or between 72,000 and 146,000 persons trafficked abroad in the past five years.

Suspected, but not known trafficked persons

In the survey, we asked the key informants to not only give us the number of members of their neighborhood that were known to have been trafficked, but also the additional number that they strongly suspected. Across both teachers and babushkas, the mean number per thousand suspected, but not known as trafficked was 2.34, almost identical to the 2.33 known to the informants as trafficked. Given a population of 47 million in Ukraine, this leads us to an estimate of

An additional 109,980 persons suspected to have been trafficked abroad

The confidence interval around this estimate is plus or minus 27,000 people, leading us to estimate that an additional between 83,000 and 137,000 Ukrainians fit the profile of someone who has been trafficked, but have not admitted to having been trafficked in such a way that a key informant would be certain of it. Undoubtedly, some of these persons actually were trafficked, and this lends credence to the notion that the actual incidence of trafficking is much higher than even our informants can tell us.

Probability of being trafficked if working abroad

We asked the key informants how many persons in their neighborhood were known to them to have traveled abroad for work. Across teachers and babushkas, an average of 39.1 persons per thousand (almost 4%) of those in the informants' neighborhoods, had traveled abroad to work. In a country of 47 million persons, this would be 1.84 million Ukrainians traveling abroad for work in the past five years. This is far higher than the 233,000 cited in government statistics as official emigrants from Ukraine in 2003-2007 (source: IOM). However, most of those going abroad for work are not official "emigrants" as far as government statistics are concerned.

Given that the rate of trafficking known to our informants was 2.33 per thousand, this implies that the probability of being trafficked if one goes abroad to work is 2.33/39.1, or about 6%.

Estimated probability of being trafficked if going abroad for work: 6%

Of course, we suspect, based on the above numbers of suspected trafficking victims, that the actual amount of trafficking is even higher than 2.33 per thousand, and thus we suspect that the actual probability of being trafficked if going abroad for work is closer to 9% or 10%.

Likelihood of a trafficked person self-identifying to government or NGOs

A question that has often arisen in studying human trafficking is the fraction of those persons trafficked who seek help from government or NGOs such as those partnering with IOM. As of this writing, several thousand Ukrainians have come forward to ask for rehabilitative help from governmental and non-governmental agencies. Knowledgeable people in the field of human trafficking universally agree that those who seek help are just the tip of the iceberg of victims. But, what can be deduced from the number of victims coming forward?

Our teacher and babushka informants estimated that approximately 0.387 persons per thousand in their neighborhoods reported themselves as trafficked. Yet, the known number of trafficking victims was 2.33 per thousand, and the actual number of victims was probably higher.

Thus, we can estimate that the maximum probability of a trafficking victim coming forward would be 0.387/2.33, or about 16.6%. This means that, for every person reporting themselves as a trafficking victim, there are probably at least five more victims not reporting and probably closer to nine or ten, if some of the suspected victims are added in.

Probability of a victim reporting him- or her-self as trafficked: No more than one out of six, probably much less.

Thus, we can argue that the victims seen in government and NGO offices represent only a small fraction of Ukrainians that have been victimized.

METHOD

The method used here is a survey of key informants. Key informants are people who have special and more complete knowledge of a topic than those in the general population. Therefore, when truly knowledgeable informants make estimates of the extent of a phenomenon like human trafficking, their estimates are likely to be more accurate than those of other members of the population.

In addition, when properly selected, key informants do not have reasons to dissemble or distort numbers. That makes properly-chosen key informants a good check on household survey results, in which household members may feel an incentive to withhold information about trafficked household members, out of shame, fear, or denial.

The groundwork for this key informant survey was laid in 2005 through the summer of 2007, when the authors conducted interviews across Ukraine, not only with formerly trafficked persons, but with all sorts of potential key informants. We interviewed police officers and government officials, village headmen, NGO workers that helped trafficked persons, family doctors, teachers, Ukrainian and Russian Orthodox priests, Protestant ministers, and

"babushkas," or middle-aged and elderly women who were likely to know everyone in their neighborhoods or apartment buildings.

In conducting these interviews, we were seeking informants who satisfied several criteria. First, they needed to be quite familiar with the individual lives of people in a "sphere of knowledge," or "neighborhood." Such a neighborhood, for doctors, for example, would be their regular patients and their families. For a priest or minister, it would be his congregation. For a village head, it would be his or her village.

The second criterion was that the neighborhood for a key informant be a rough cross-section of the Ukrainian population, not over-representing or under-representing any large segment of the population that might be more or less likely to fall victim to trafficking.

The third criterion was that the key informants chosen be likely to know if someone within their neighborhood was trafficked or not. So, the structured interviews we conducted with different types of potential key informants focused on these considerations.

Priests and ministers were ruled out, because over one third of all Ukrainians are not "churched."[5] In addition, churched populations were likely to be relatively stable and, we believe, less likely to be trafficked than the general population, even though the clergy were likely to know if one of their parishioners had been trafficked.

Police chiefs and village heads, by their own admission, usually were responsible for far too many people to have good knowledge of who had been trafficked, and were thus ruled out.

Family doctors and doctors at clinics told us that they were simply unlikely to know if a patient had been trafficked, in too many cases, and thus they were ruled out.

So, after considering our interview results and information, we concluded that the two best types of informants were head teachers of long tenure, and babushkas. In Ukraine, "head teachers" supervise a class of several dozen children for as long as five years or more, and thus become familiar with their families. Babushkas are widely suspected to, and will forthrightly claim, intimate knowledge of the lives of their neighbors.

The natural bias in estimates made by even teachers and babushkas, our best key informants, however, arises from the lack of complete knowledge. In our case, this means that a key informant may not know if someone within his or her neighborhood was trafficked. Thus, we not only asked for the number of persons within the neighborhood (including a minimum and maximum estimate), the number of those known to have gone abroad for work, and the number of those known to the key informant to have been trafficked (either by self-admission to the key informant or admission of close family members to the key informant) in the past five years, but also the additional number strongly suspected to have been trafficked abroad but not known so

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[5] E.g. see Paraschevin M. Religion and Religiousness in Ukraine. Institute for Politics. Institute for Sociology of the National Academy of Science. Kyiv, 2009

for certain to the key informant. We must consider our estimates of the number of known trafficked persons to be biased downwards, but a good estimate under the circumstances of this kind of research. The data collection form is in the Appendix.

The selection and interviewing of key informants was carried out by a sociology class at the National University of Kyiv-Mohyla Academy under the direction of Dr. Iuliia Martynova. Fifty students participated, each one performing between five and 29 interviews over his or her Fall break, for a total of 522 interviews: 242 babushkas, 221 head teachers, and 59 orphanage administrators (we did not use the orphanage administrator data, finding it unreliable upon analysis). The sampling plan was a cluster sample of the entire Ukraine, with the students traveling to each of the Ukrainian oblasts, and selecting cities or towns of various sizes according to a plan that made certain that a good sample of towns of varying sizes were chosen. Then, random individuals were chosen within each community that fit the definition of our key informant population.

Students then interviewed these key informants in person and completed the data collection form in the Appendix.

IMPROVEMENTS TO METHOD

In retrospect, we would have first spent more time researching the suitability of each type of key informant, using secondary data where possible. Budgetary constraints prevented this. A key informant needs to have no reason to over- or under-estimate the number of trafficked persons, solid knowledge of the number of persons in his or her neighborhood and the number trafficked, and needs to be intimately informed about a neighborhood that is a good representative cross-section of the population of interest. It was impossible with our resources to confirm for certain that all these things were true. However, we suspect that the greater bias comes from head teachers, whose neighborhoods are not entirely a good cross-section of the Ukrainian population. Second, we would have used larger sample sizes of key informants and spent some time independently verifying their counts of the sizes of their neighborhoods. Again, budgetary constraints made this impossible – the actual cost of this research was very small, since we used students working on projects. Finally, although we had confidence in the professor and students employed, we would have spot-checked interviews in person for quality control; again, this was impossible due to budgetary constraints.

DISCUSSION

It is heartening that our estimates, based on small samples and an extremely sensitive subject, seem to agree reasonably closely, both with each other and with earlier estimates based on a small (approximately 1,000) household survey done earlier and reported elsewhere. In that earlier survey, there was no time limit (although certainly most of those trafficked were in the

past decade), and the estimate of the number of Ukrainian citizens trafficked abroad was about 100,000. Now we have an estimate within a five-year time frame that gives a reasonable check.

We are confident that the minimum number of Ukrainian citizens trafficked abroad in the past five years exceeds 60,000, and think it probable that it exceeds 100,000.

We suspect that another 50,000 to 100,000 Ukrainians beyond these figures have been trafficked, but have managed to keep that fact from the sort of people we have used as key informants. Thus, a figure of 150,000 or more Ukrainians trafficked abroad in the past five years is probably closer to the truth.

A Ukrainian going abroad to work has at least a 6% chance of being a trafficking victim.

Probably no more than one out of ten of these victims ever seek any kind of help from governmental or non-governmental agencies.

Study 3:
Using the Demographic and Health Survey 2007 Results
Ukraine

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INTRODUCTION

This report analyzes questions regarding human trafficking that we asked to be inserted in the 2007 Demographic and Health Survey (DHS) for Ukraine commissioned by the United States Agency for International Development.[6] The results of the DHS study, which included many questions on household status on many variables other than the ones we suggested, were reported in September of 2008. The field research was conducted in July through September of 2007. We received the data in December of 2008.

The two most critical questions asked were about the number of household members, and then, of those, how many had been trafficked abroad in the past three years. There were other questions of interest that we will discuss, but those were the critical ones. The exact wording of the questions is discussed below under Method.

Our approach with the resulting data, outlined below, was to use these answers to estimate the extent of human trafficking from Ukraine.

RESULTS

First, we will provide the estimates of the number of trafficked persons, then we will discuss the methodology and confidence intervals.

<u>Point estimate of the number of trafficked persons from Ukraine in the three years prior to the survey:</u>

110,884

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[6] The report providing comprehensive results of the DHS survey is titled "Demographic and Health Survey Ukraine 2007" and is available from Ukrainian Center for Social Reforms, 26, Panasa Myrnogo Street, Kyiv, 01011, Ukraine, or from the State Statistical Committee of Ukraine, 3, Shota Rustavely Street, Kyiv-23, 01023, Ukraine.

It is important to note that this estimate has two types of uncertainty associated with it: random sampling error and bias. Any estimates obtained from any survey on any topic would have such uncertainties. Thus, as with any set of survey results, an informed interpretation is called for. We will discuss these uncertainties in the Method section below, and the interpretation in the Discussion section.

METHOD

The survey methodology (sampling frame, sampling procedure, interview method, etc.) has been dealt with in the full DHS report, and therefore many issues of methodology will not be dealt with here. We are satisfied that the sampling frame, sampling procedure, interview method, and so forth, meet acceptable survey research standards, based on information contained in the DHS report. The points of methodology we wish to discuss here are directly relevant to our estimate above.

Questions asked

The first question was a standard DHS question asked of the head of household on the enumeration of household members. A household member is defined as anyone who usually lives in the household. The survey asked for each person's name, age, sex, and a number of other pieces of information.

The second critical question, and one that we added to the DHS survey, asked the respondent to give a count of the number of household members who had been trafficked abroad. But first, human trafficking was defined by asking:

> "Have you ever heard of people who traveled abroad because they were offered a job, and when they arrived they were not allowed to leave or were forced to work for little or no pay, or even forced to work at a different job than the one they were promised?"

All heads of household who answered "yes" to this question were then asked if they personally knew anyone to whom this had happened. Then, those who answered "yes" to *that* question were asked if any members of their household had been trafficked (including themselves). Finally, those who answered "yes" to *that* question were asked:

> "How many of the usual members of this household, including you has this happened to in the past three years? I do not want to know who, just how many people this happened to."

The unit of analysis in this survey is the household as defined above. The DHS survey had a total of 13,379 households, averaging 2.55 persons per household. The relevant statistic that was used to project our results to the population was the number of trafficked persons per household.

Basic data

There were 82 heads of household (respondents) who said that someone in their household had been trafficked in the past three years. When asked how many,

One respondent said three members had been trafficked,
Four respondents said two members had been trafficked,
67 respondents said that one member had been trafficked, and
Ten respondents said "none."

We will ignore the ten respondents who said none, for the sake of conservatism. We do not know why they gave conflicting answers, and we believe it is better to assume no trafficked persons were in those households in this case.

These data give us a total of 78 household members trafficked out of 13,379 households.

This is an estimated rate of 0.00583 trafficked persons per household (78/13,379).

If the average Ukrainian household contains 2.55 persons, and there are 48,500,000 persons in Ukraine, then there are 19,019,608 households in Ukraine.

If the estimated average number of trafficked persons per household is 0.00583, then the estimated total number of trafficked persons over the past three years in Ukraine is

$$0.00583 \times 19,019,608 \text{ or } \mathbf{110,884} \text{ persons.}$$

This number, however, is a point estimate. Because of the uncertainty that arises from sampling error, we must put a confidence interval around it.

Confidence interval

A normal-theory confidence interval is adequate for this problem, because of the very large sample size. The confidence interval is placed around the estimated average number of trafficked persons per household. The 95% confidence interval around 0.00583 is plus or minus 0.001402.

So, the 95% confidence interval around the average number of trafficked persons per household is 0.004428 to 0.007232.

When multiplied by the number of households in Ukraine, this gives a 95% confidence interval of:

84,225 to 137,544
persons trafficked from Ukraine in the past three years.

The calculations for this confidence interval may be obtained from the authors upon request.

This is a large confidence interval, but quite reasonable, given that we were trying to estimate a very small average number. It gives us considerable confidence that the number of trafficked persons over the past three years is a large number. There is, of course, the question of biases (systematic errors) that may be present.

Bias (systematic errors)

In addition to random sampling error, accounted for by the confidence interval above, there also may be systematic error in this estimate, introduced by one or more sources of bias. Biases are inherent in surveys, since human beings answering questions can give answers that are not always accurate.

It is not possible to enumerate all possible sources of bias, since every respondent may have unique sources of bias. However, the larger sources of bias in this survey are likely to be:

1. Reluctance to admit that someone in the household has been trafficked: even though considerable care was taken to gently "lead into" the question about members of the household that had been trafficked, there were probably some respondents who simply refused to acknowledge trafficked persons in their households, out of shame or a desire for privacy.

2. Lack of knowledge: some heads of household may have been unaware that a son, daughter, spouse, or other household member had been trafficked, because that person hid the fact of their trafficked status from the head of household.

3. The use of households as the sampling frame may be slightly flawed, in that persons who live outside of normal households (homeless persons, for example) may be under-represented in the survey, and yet may be more vulnerable to trafficking than average.

All of these sources of bias argue that our estimates may be low. How low, however, would be impossible to say.

IMPROVEMENTS TO METHOD

In retrospect, there are few improvements to this method that we can suggest, given the inevitable limitations of the survey method itself, mentioned above. A much larger sample size would reduce the random sampling error, but sample sizes of 50,000 or more are usually infeasible. The inevitable limitations of the survey method can be ameliorated, but not eliminated, by using different survey methods, such as the key informant approach, to provide additional estimates.

ADDITIONAL RESULTS: SEX RATIOS

Of the 78 household members trafficked, 53, or 68%, were male, and 25, or 32% were female.

A test of the hypothesis that the sex ratio of trafficked persons is 50/50 male/female can be rejected at the .01 level of statistical certainty. Thus, these data seem to indicate that male victims of trafficking outnumber women in Ukraine, at least when one uses household surveys to ascertain the frequency of victims.

DISCUSSION

The results herein are consistent with those of our previous work described in other reports: a five-country survey of about 1,000 families per country including Ukraine, and a survey of key informants.

It appears to us that one cannot escape the conclusion that the extent of human trafficking from Ukraine is substantial, likely to be over 20,000 persons per year and more likely in the 40,000 per-year range.

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APPENDIX:

Key Informant Survey Data Collection Form

Note: The key informant survey included not only babushkas and head teachers, but also a smaller sample of orphanage administrators. We found the data from the orphanage administrators unreliable, so no results from those informants were reported.

KEY INFORMANT Data Collection Form

INTERVIEWER NAME: _____

Contact information

- Informant's full name: _____

- Informant's address: _____

  6 [ ] city of more than 1 000 000 people
  5 [ ] city of 500 000 to 1 000 000 people
  4 [ ] city of 100 000 to 500 000 people
  3 [ ] city of 50 000 to 100 000 people
  2 [ ] city of 10 000 to 50 000 people
  1 [ ] town of less than 10 000 people

- Informant's telephone number: _____

Role in the community

  1 [ ] Neighborhood or apartment building babushka
  2 [ ] Teacher
  3 [ ] Administrator of orphanage

  _____ Number of years in role (one number only, must be 5 or more)

- <u>Human trafficking is defined as:</u> a person being taken or lured away from his or her home and forced to work for little or no pay as labor or as a prostitute. They are unable to leave or change jobs at their own will.

- ## For Teachers:

  How many students are in your class?   _____ (one number only)

  Altogether, what is the total number of family members
  of these students, including the students?

  _____ (minimum)

  _____ (maximum)

  INTERVIEWER: Try to get numbers that are exact (i.e., the minimum and maximum are equal). If not, try to get the minimum and maximum within 10% of each other.

- ## For Babushkas:

  How do you define your neighborhood (i.e., the place where you know everybody and would know about major events in their lives?). Check ONE.

       1 [ ] Apartment building   2 [ ] Neighborhood

  Altogether, how many people live in this [apartment building, neighborhood]

  _____ (minimum)

  _____ (maximum)

  INTERVIEWER: Try to get numbers that are exact (i.e., the minimum and maximum are equal). If not, try to get the minimum and maximum within 10% of each other.

- ## For Orphanage Administrators:

  How many children and youth is your orphanage responsible for? _____

  Altogether, how many children and youth have left the orphanage in the past five years?

  _____ (minimum)

  _____ (maximum)

  INTERVIEWER: Try to get numbers that are exact (i.e., the minimum and maximum are equal). If not, try to get the minimum and maximum within 10% of each other.

FOR ALL INFORMANTS:

- Approximately how many of these from the previous question have traveled abroad to work in the past five years?

  _____ (One number only)

- How many of these do you know, by their admission or the admission of others close to them, have been victims of human trafficking in the past five years?

  _____ (One number only)

- How many do you strongly suspect have been victims in the past five years, by the definition and description we provided, but were not included in the question above?

  _____ (One number only)

- How many of these victims do you think have identified themselves to the government or an NGO and asked for help?

  _____ (One number only)

INTERVIEWER: Please thank the informant very much. Tell the informant that someone may be calling them from the National University of Kyiv-Mohyla Academy to confirm this interview.