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Using 'Work, Attitudes and Spending' surveys as an 'early warning' system

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ABSTRACT

This document demonstrates how a household survey can be used to identify 'trouble spots', which a national government or non-governmental organisation may find useful. Potentially, household surveys can contain information of relevance to policy-makers and decision-makers; but there can sometimes be practical problems with extracting relevant information from a complicated dataset. This document uses the 'Work, Attitudes and Spending' (WAS) series of surveys, as a case study to illustrate the potential benefits of such information. It focuses on three examples: unemployment, hunger, and domestic violence.

INTRODUCTION

This document outlines use of household survey data as an early warning system, to allow researchers to spot problems which might benefit from national or international intervention. For example, is a local drought producing hunger, or a recession causing unemployment? This document gives examples from the WAS series of household surveys (www.was-survey.org); but other survey datasets undoubtedly contain information which could improve the efficiency of local, national, and international agencies.

There already exist organisations which aim to disseminate information about problems. For example, the United Nations' ReliefWeb system (www.reliefweb.int/resources/ewarn.html); or in USA, the 'Department of Homelands Security' (www.dhs.gov). There are numerous academics in the world; some of them may come across some information which agencies such as the 'World Food Program' or 'Disasters Emergency Committee' might find helpful. However, it is not clear who should be warned, if a researcher becomes aware of some urgent information. It is in the nature of such warnings that we cannot prevent the risk of a false alarm.

There is not yet a clear system in which researchers with up-to-date information can warn agencies of potential problems. Perhaps existing systems could be integrated more successfully, to avoid helpful information falling between the cracks between institutions. If an academic discovers evidence there is likely to be an imminent crisis, who should s/he contact?

At the time of the Nigeria 2005 survey (February), the Niger crisis was not yet widely publicised (Wikipedia, 2010); but warning signs were there. Simister & Chanda (2006) were able to see evidence from northern Nigeria which seemed to be indirect effects of the Niger food crisis: this could be seen in food prices in prices of some foods in northern Nigeria, and also in the number of respondents unable to afford sufficient food in some northern Nigerian states (Ranabir Chanda and I considered sending the findings to an academic journal – but felt that even if published, the paper would be too late to be of much help to the relevant agencies: it is common for academic journals to take more than a year to publish a paper).

OVERVIEW OF 'WAS' SURVEYS

At the time of writing, the 'Work, Attitudes and Spending' series of surveys has carried out fieldwork in nine countries (see website www.was-survey.org for details). WAS surveys were carried out by commercial market research firms (except Indonesia and Egypt, which were arranged by the University of Indonesia and the University of Cairo). Collaborating with this author, WAS surveys in each country were arranged by the research firm/university; the research organisation planned each sample, hired interviewers, and entered the resulting data into computer files. The questionnaire varied between WAS surveys, but several of the questions remain common to all WAS surveys. Each WAS sample is intended to give a representative sample of that country's population, limited by the available budget.

This paper focuses on more recent information; hence, if a country is surveyed by WAS more than once, only the most recent WAS survey is used (hence the inclusion of the word "later" in the title of Table 1 below). The 1994 Brazil survey is excluded, because it is not recent data. The effective sample sizes in WAS surveys to date are indicated in Table 1 below; some, but not all, of the WAS surveys include a sample of rural households.

TABLE 1: sample sizes in (later) WAS surveys, by urban/rural location of household.

Household survey	urban	rural
2000 South Africa	2000	
2002 Indonesia	1000	
2004 Kenya	3091	
2005 Nigeria	2671	2340
2005-6 Egypt	2122	2985
2007 India	2475	
2008 Chad	1938	649
2009 Cameroon	2100	1400

Note that earlier WAS surveys (such as Nigeria, in 2003) are excluded from Table 1, and from this paper in general. The remainder of this paper reports some examples of how WAS survey data (and hence, presumably, results from other household surveys) could give warnings of potential problems. The first such example is unemployment.

UNEMPLOYMENT

WAS surveys ask about the job situation of each household member, which can be used to assess unemployment (in recent WAS surveys, this includes detail of whether or not the unemployed person is seeking a job). For Table 2, this document divides respondents into male and female; note, however, that many women respondents and wives of male respondents are described as 'housewives', a separate category which is excluded from Table 2.

Table 2: unemployment (%), by country and gender of respondent & spouse

Country & year of the survey	Unemployment among women	Unemployment among men
1994 Brazil	0.6	2.3
2000 S. Africa	26.3	26.9
2002 Indonesia	1.0	3.0
2004 Kenya	8.5	5.0
2005 Nigeria	7.5	5.8
2005-6 Egypt	0.4	2.2
2007 India	0.4	0.1
2008 Chad	4.8	4.1
2009 Cameroon	7.2	6.1

Table 2 indicates a high level of unemployment in South Africa in the year 2000, among both men and women; the problem of high unemployment in South Africa is well-known among academics (Standing et al, 1996). Unemployment may be relatively easy to measure among developed countries which have a social 'safety net', because unemployed people need to 'sign on' if they wish to receive unemployment benefits, in government offices such as job centres. However, many poor countries lack such state benefits, so their government may not have reliable up-to-date information on how many people are unemployed at any one time, or which regions of the country have the highest unemployment rate. Where unemployment is high, this can lead to poverty and to further problems such as depression, alcoholism, and domestic violence (Gwagwa, 1998).

In principle, we could use household survey data such as that in WAS to try to shed light on the cause(s) of problems such as unemployment: for example, is unemployment high in rural areas, perhaps suggesting a drought? However, it is often difficult to assess causality: for example, conventional Keynesian economic theory tells us that if a country or region has high unemployment, it is likely to have high unemployment; but unemployment tends to reduce wage income for households, which can be a cause of unemployment. Economists often consider unemployment and poverty to be a 'vicious circle'.

HUNGER

One of the questions asked in WAS surveys is related to whether or not the family has been going without food in the year prior to the interview:

> *In the last 12 months, how often did you or anyone in your household cut the size of meals or skip meals because there wasn't enough money for food?*
> *Almost every month*
> *Some months but not every month*
> *Only one or two months*
> *Never*
> *Don't know/no answer*

Answers to this question are reported in Table 3 below. If we focus on the right-hand column, where households went without sufficient food "almost every month", then the countries which cause most concern are Cameroon and Egypt; but perhaps we should also be concerned about respondents who said they were hungry 'some months' or '2 or 2 months'.

Table 3: adequacy of access to food, by country

survey	*Frequency of cutting meals in the last year*				
	never	**only 1 or 2 months**	**some months, but not every month**	**almost every month**	**total**
2000 S. Africa	82%	5%	9%	4%	100%
2002 Indonesia	85%	5%	5%	5%	100%
2004 Kenya	63%	7%	21%	8%	100%
2005 Nigeria	63%	12%	17%	8%	100%
2005-6 Egypt	56%	6%	20%	17%	100%
2007 India	89%	3%	5%	3%	100%
2008 Chad	54%	13%	23%	10%	100%
2009 Cameroon	46%	13%	24%	17%	100%

Table 3 indicates hunger in all of the eight countries studied in this paper, and warns us that there seems to have been an especially big problem in Cameroon in 2009 (note that Cameroon has a fairly high unemployment rate, according to evidence in Table 2; but Cameroon is far from the highest unemployment rate, so the evidence of so much hunger in Cameroon in Table 3 seems surprising).

We can use the 2009 WAS survey to investigate this problem of hunger in Cameroon in more detail: for example, which parts of Cameroon have the most serious problems? This question is investigated in Table 4 below, which focuses on different regions of Cameroon.

Table 4: access to sufficient food in Cameroon, by region

Region	*Frequency of cutting meals in the last year*				
	never	**only 1 or 2 months**	**some months, but not every month**	**almost every month**	**total**
Adamaoua	60%	10%	15%	16%	100% (166 cases)
Centre	40%	17%	27%	17%	100% (791 cases)
East	62%	19%	13%	6%	100% (124 cases)
Extreme-north	75%	14%	10%	2%	100% (170 cases)
Littoral	43%	16%	20%	21%	100% (851 cases)
North	83%	7%	7%	4%	100% (254 cases)
North-West	55%	7%	31%	6%	100% (232 cases)
South	26%	18%	32%	24%	100% (112 cases)
South-West	34%	6%	43%	17%	100% (474 cases)
West	28%	14%	18%	40%	100% (245 cases)

Table 4 indicates that within Cameroon (in 2009), the biggest problem of hunger seems to have occurred in West Cameroon. We need to be aware that if we focus on a smaller area, our sample size will fall – reducing the reliability of our estimates. West Cameroon has 245 cases; we could, in principle, divide these cases into subgroups, such as urban and rural; but on this occasion, I consider this inappropriate because small samples can give misleading results. Table 5 is a much simpler table, in which Cameroon as a whole is divided into urban and rural.

Table 5: hunger in Cameroon (2009), by rural/urban location

Frequency of cutting meals in the last year	**Household is urban or rural**	
	urban	**rural**
Never	49%	41%
only 1 or 2 months	15%	10%
some months, but not every month	22%	27%
almost every month	14%	21%
Total	100%	100%

Table 5 indicates that for Cameroon in general, there is slightly more of a problem in rural than in urban areas: for example, 21% of rural households went hungry 'almost every month', compared with 14% of urban households.

DOMESTIC VIOLENCE

This section considers domestic violence as a social problem. Most WAS surveys have asked about domestic violence between husband and wife (but not all: it was not included in the South Africa WAS survey). There are complications: as discussed in Simister (2010), it is not clear what is meant by the term 'domestic violence' – it is likely that the definition of violence varies between cultures, and between languages. For example, some people use the term 'domestic violence' to include a husband humiliating his wife in public; others would not consider this to be violence (presumably in every culture, some - but not all - people would agree that it is unacceptable). For prevalence figures in Table 5, WAS surveys use responses to this question (asked of married/cohabiting respondents only):

	Have you ever had an argument with your spouse?	*(yes/no)*
[IF YES]	*During these arguments, have you beaten your partner?*	*(yes/no)*
	During these arguments, have you been beaten by your partner?	*(yes/no)*

The above information, combined with the respondent's gender, was analysed by the author to produce the information shown in the following Table 5.

Table 5: prevalence of domestic violence, by country

survey	Female respondent (or partner of male respondent) experienced violence	Male respondent (or partner of female respondent) experienced violence
2002 Indonesia	6 %	9 %
2004 Kenya	34 %	26 %
2005 Nigeria	8 %	3 %
2005-6 Egypt	20 %	3 %
2007 India	7 %	5 %
2008 Chad	28 %	18 %
2009 Cameroon	26 %	13 %

Table 5 reports domestic violence prevalence in seven countries. Of these countries, Kenya has the highest reported prevalence of domestic violence. Perhaps it would be appropriate for more surveys to follow the lead of the 'Demographic and Health Surveys', and ask about more specific types of violence, such as a slap or a kick – that should improve comparability of definitions between different countries & cultures.

CONCLUSIONS

This research paper has attempted to show how household survey data can be used to warn agencies such as the UN's 'World Food Program' of impending problems, so they can react quickly. This paper uses data from some of the 'Work, Attitudes and Spending' surveys, to present three cases studies: unemployment, hunger, and domestic violence.

For survey data to be helpful for such purposes, it is essential that the data and/or findings be processed as quickly as possible, and made available to the scholars (and to the general public). It is encouraging that more organisations which collect survey data are making their data available free to users. However, it is regrettable that for many large-scale surveys (such as the World Bank 'Living Standards Measurement Study'), the data are provided in a way which makes it hard to analyse – for example, LSMS South Africa (1993/4) was provided in dozens of separate files, which researchers may need to link together; it is often difficult to do so, because some files are person-level data, other files refer to the households as a whole, and other files to the local community. If possible, it would be desirable for survey data to be made available as a single 'flat file', with one row for each household surveyed – as is done, for example, by the WAS surveys.

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