

FIELD NOTES ON ADMINISTERING SHOCK MODULES¹

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ABSTRACT

Increasingly panel household questionnaires in developing countries will include a shock module to collect information on past shocks experienced by the household. Still, very little information is available on what one needs to take into consideration when designing these modules. This note discusses field experiences gained from piloting a shock module in the Kagera Region of Tanzania. Pilots were conducted with two fundamentally different designs of shock modules. We discuss the advantages and disadvantages of using a *structural form* shock module, which walks the respondent through a list of shocks, and compare it to using a *reduced form* one, which probes for welfare changes over time.

Keywords: questionnaire design, shock module, risk, shocks, economic mobility

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1 Introduction

This note discusses the design of a shock module: ways in which information on shocks can be obtained through household surveys. While we define risk as ‘uncertainty about future states of the world’, we define a shock as ‘the manifestation of risk’. Thus while risk is a person’s perception of a probability distribution of possible events, a shock is an actual occurrence. This definition still leaves many events in which we are not interested categorised as shocks. Let us therefore agree that we are interested in capturing information on shocks as defined above, but only if they result in either a change of welfare for at least a subset of the population and/or a behavioural response for at least a subset of the population. It follows naturally from this definition that the shocks we are interested in can be identified in at least three different ways: by probing for the shock itself; by probing for the behavioural response that may be indicative of a shock, or by probing for the welfare change. The latter two would, in a second step, relate the behavioural or welfare change back to a shock that caused it.

In the course of about 14 days of field work in the Kagera Region of Tanzania, we experimented with these three approaches to obtain information on shocks that occurred in the past 10 years.² We soon decided to drop the approach probing for behavioural changes indicative of shocks, because it was hard to administer. Initially, we had hoped this method may have been useful to capture shocks which the household had managed to cope with successfully. However, common coping mechanisms like selling livestock

² We did not experiment with shorter recall periods. Shortening the recall period may have significant effects on how well certain modules and questions work.

occur too frequently and often only a fraction of them are related to shocks. It is possible that with shorter recall periods of, say, a few months or less this method may yield interesting results.

This left us with two fundamentally different ways to probe for shocks. We will label them as the structural form and reduced form modules, respectively.

1. In the structural form module one goes through a list of shocks and ask directly whether the respondent has ever experienced them or not. No attempt is made to look at multiple or interacting shocks. Welfare effects are typically probed for on a shock by shock basis.
2. The reduced form module leaves the respondent to interpret the effects and interplay between different shocks. The interviewer probes for important changes in the welfare of the household and in a second step relates this back to which shock(s) may underlie this change.

In Section 2 the paper presents a discussion of experiences on the field of administering the shock module in structural form. It then contrasts this with experiences in administering the reduced form, in Section 3.

2 The Structural Form Shock Module

It is fair to say that nearly all shock modules administered in developing countries use what we would call a structural form: they go through a list of shocks and probe for each one individually. It is up to the researcher to determine later on what interactions have

been at play to determine welfare. Although this approach seems to have become the standard for shock modules, its inherent limitations and problems are seldom acknowledged.

There are essentially two ways in which this type of module can be designed. The first is to go through a list of shocks and ask whether or not they have affected the household.

The second is to go through a list of shocks and determine whether or not they have occurred (irrespective of whether they have affected the household). The added advantage of the second approach is that it yields information on shocks that have occurred, but which the households have successfully coped with. For example one may ask a household whether the rains were on time this year irrespective of whether the household was affected by the timing of the rains.³

Shocks are very zone-specific, so it is impossible to design a single multi-purpose list of shocks that works in all developing countries. In order to populate the list of shocks, a researcher should get an idea of the types of shocks that can be relevant in the area. This can be done by interviewing key informants, having focus group discussions or using secondary data. Except for providing the researcher with a 'list of shocks', these data are useful to get an idea of how respondents are likely to think about, understand and categorise shocks.

³ It is not unlikely that the respondent will have a bias to remember those shocks that had a welfare effect, but not others. The shorter the recall period the less severe this bias is expected to be.

In our pilot interviews on average 20 shocks were listed in such a module. It proved to be too time consuming to assess duration and severity of each of these. We found that a good solution to this was to only probe deeper into the effect of the three main shocks.

One of the main weaknesses of the structural form approach is the amazing diversity in events that shape people's lives. It is impossible to probe for all relevant events in a single list. It is therefore important to have an 'others' category in a shock module.

However, in our experience respondents did not react well to the others category as it was too broadly defined. We therefore experimented with having an others category at the end of each sub-category. Still this did not capture all events. For example one respondent's husband was caught smuggling coffee and was put in prison. In the others category of the crime, court cases, violence section she answered a definite "no". However during the life histories it came out as one of the most important set-backs in her life. Probed for the inconsistency after the two interviews, she said that she did not consider smuggling – a common activity in this village bordering Uganda – to be criminal. Other times the others category gets filled in with outcomes instead of shocks. For example one respondent, when asked whether there was anything else that had set her back in her life mentioned her bad house and the weeds in the banana plantation. The underlying reason, in this case, had already been noted, namely her bad health which prevented any activity. While careful probing could help in these cases, it is unlikely that a researcher would wish the interviewers to go so far in the interpretation of responses.

It is very difficult to get a measure of severity of the shock. One can choose to either keep the question very vague and simply ask “was your household adversely affected”. This is probably the most realistic question to ask, but one has to be aware of its limitation. For example a household in Bukwali, owning 20 cows, reported the death of 2 cows as a major shock. The respondent identified this loss as a serious hardship, because she had seen her wealth going down. Upon further probing the respondent stated that her daily consumption expenditures were not at all affected by the loss, neither was there any other behavioural change. Did the respondent have a shock? We decided to change the questionnaire and probe for two types of effects. First, whether the total wealth of the household declined and second whether or not daily consumption declined as a result of the shock (explained in Swahili as ‘matumizi ya kila siku’). These questions were extremely difficult for respondents and although an answer could always be extracted, its reliability is doubtful. Trying to get any further details on the impact of a shock, by asking the respondents in the form of an open ended question, did not give us any further worthwhile ideas on how to probe for welfare effects.

Assessing the duration of a shock proved to be even more difficult than assessing severity. For example questions on how long consumption was affected by this shock were answered extremely unreliably and only after ‘forcing’ the respondents to come up with a figure. This question is difficult and probably too much to ask a respondent to report with an acceptable degree of reliability. One of the reasons is that there may have been a fundamental change in the wealth composition or consumption basket of the respondent which is difficult to value in money terms and compare with the previous

situation. Probably more importantly, many things may happen during the recovery of a shock. These may hold a respondent back from recovery, so an extended period of consumption downfall may not necessarily be due to only the first shock.

This shock module is not good at dealing with confounding or multiple shocks, for example two negative shocks that follow each other; or a negative and a positive shock that balance each other out. One respondent in Bukwali reported her husband to have died, but afterwards she got a share of his pension which was due. Typically the shock module will only record the husband that died, but not the windfall that followed.

An important advantage of the structural approach is that the researcher is sure whether a specific shock has been explicitly probed for or not.

3 The Reduced Form Shock Module

An alternative to the structural form is to request households to assess their welfare situation over time. The individual is asked to retrospectively assess the welfare of, for example, each year of the past 10 years. If the respondent says the year was exceptionally good or bad, then the reasons for this are probed for. An example of this method can be found in Beegle, De Weerd and Dercon (2003).⁴ We discuss the advantages and disadvantages of this module respectively.

⁴ www.edi-africa.com/research/khds/instruments.htm

It is easy and fast to administer. The module is unlikely to take more than 10 minutes.

Because the interviewer does not go through a long list of tedious and repetitive questions, the interview is less tiresome, which is good for the concentration of the interviewee and does not jeopardise the reliability of responses in subsequent sections.

Compared to the structural form module, it is more likely to capture every type of shock that has had a major impact on welfare. There is no danger of leaving out a shock because the researcher didn't preconceive it, or because of phrasing the respondent didn't quite categorise it in the same way as the interviewer. As long as the shock has had an important welfare impact, it should be picked up in the others category.

This method lets a household define its own poverty dimensions. The respondent defines him or herself when life was good and when life was bad and what that entails. This also holds the possibility that responses will fall outside the realm of economics (e.g. domestic violence). A researcher wanting to filter out these responses needs to make it clear to the respondents that he is probing for economic welfare. It was found that respondents had little difficulty in grasping this concept.

This method will capture all the intricacies of fluctuating household welfare. It is for that reason that we refer to it as the reduced form of the above structural form shock module. All welfare effects of shocks, including interactions between them are evaluated in the aggregate by the respondent. It is therefore important that space is provided in the

questionnaire to record multiple shocks per year. Related, the questionnaire will also capture positive shocks and even positive trends.

Although the main purpose is to collect data on shocks, an interesting by-product of this module is that we get information on self-reported welfare trends in respondent's lives. Households can be categorised according to these trends. For example one could distinguish between the category of people that have gone down, those who have climbed up, those who have received a shock but recovered, those who have had a stable curve, etc...

The main disadvantages of the method are the following. First, no information will be available on shocks that have happened, but that the respondent coped with. In this way the researcher may miss valuable information on who copes and who does not cope with the same shock. One way to circumvent this is to gather information on common shocks in a community questionnaire and study who did not report the effect of this shock.

Secondly, the respondent is forced to provide responses year per year. It may not always be easy for the respondent to remember the exact year. More importantly opposing shocks may have happened in the same year, making it unclear to the respondent whether to categorise the year as good or bad.

Thirdly, in order to successfully interpret the trends that the data suggest, more work is necessary on how to scale the responses of yearly welfare assessments. Many questions

remain unanswered here. For example, could respondents who have become richer or poorer become used to that situation so that they report a good (or bad) year when the change occurs, but normal for the years after that?