

FIFTH INTERNATIONAL WORKSHOP ON BUSINESS DATA COLLECTION METHODOLOGY

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EXPLORING RESPONDING BEHAVIOR BEHIND “REMAIN UNCHANGED” ANSWERS

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Abstract: This study observes the responding attitude of Business Tendency Survey (BTS) participants. The main issue is about survey participants' behaviors in Business Surveys' questions, in particular to the question of general business conditions in their industry. The data quality and measurement issues on this question is especially important because this is one of the questions used for business confidence index calculation. Confidence indices formed by using business and consumer surveys data plays a critical role since there is not much data out there measuring their current situation and future expectations. Therefore, those short term statistics are very significant for policy makers. Early signals for business cycles are good to consult as long as qualified data is maintained. The general tendency of perception and attitude change due to economic situation is measured by this question by a three-level Likert scale on a monthly basis with a self-administered survey. The three scale points in this question are “more optimistic; remain unchanged; more pessimistic”. The high percentages of middle alternative responses over time draw our attention to look into this topic in more details from a cognitive point of view. Therefore, the possible options how this answer choice is interpreted by the respondents of BTS is discussed. At first, by implementing an ad hoc interpolation method, how different the balance would be under certain assumptions is studied. Results show that how firms evaluate middle category response choice does not cause any substantial changes in the direction how we interpret economic tendencies. However, the meaning of answering middle category response is still a puzzle. Secondly, we analyzed the general business conditions data by using decision tree models to observe whether we can classify a certain behavior on developing this response choice. These analyses also proved the uncertain respondents in general. As a further investigation, to validate assumptions, underlying factors that are shaping this behavior are to be researched by in-depth interviews with managers, on a visit to the companies. In this workshop, the intention is to share and discuss the results of this qualitative research. This research aims to help developing better questionnaire design tools in business surveys.



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1. Introduction

There exists a wide-spread literature about the effects of responding behaviour on population or household surveys, but less is known about the business surveys. There has been a growing concern among countries in the short-term economic indicators to monitor the economic developments and provide the economic analysts with the early signals of the turning points in the economic activity. Such indicators are used to help both the government and the private sector decision makers check their performance and plan their actions. The surveys on expectations are primarily designed to signal changes in economic activity and widely used in macroeconomic assessments and forecasts. The advantage of using survey results is that they are available promptly before the related quantitative measures covering the same types of economic activity and hence, they are considered as complementary to the official statistics. The main aim of business tendency surveys conducted in various ways is to find out the general tendency of cyclical developments and provide economic decision-makers with the necessary information about future expectations. Therefore, the general belief is that respondents in business surveys approach questions within the scope of businesses carried out in their firms and in the sector group in economy they belong to. The motivation in this research is to hypothesize whether this general belief holds or not, particularly for the respondents who answer “remain unchanged” periodically. Is there a direct influence of economic inconsistencies affecting their sectors on shaping their neutral answers? This curiosity stems from the high amount of responses to “unchanged” category in a given month and over the months consequently. The high percentages of “unchanged” category during the periods start to question about the validity and reliability of the survey in the long run.

The data in this research comes from a business survey of Turkey which is formed in the structure explained above. Business Tendency Survey (BTS) has been conducted by the Central Bank of Turkey (CBRT) since December 1987 to track the trends in business conditions. Real Sector Confidence Index (RSCI) was constructed in 2005 by using all the series. A comprehensive revision in BTS was made in line with the “Joint Harmonised Business and Consumer Surveys Program” of the EU Commission in 2007. According to statistical criteria and economic theory, the most appropriate index is formed and its performance in tracking the cyclical features of industrial production index is tested (Ece, et al., 2005). The survey has been

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prepared with the aim of discovering the opinions of the senior managers of the major private sector firms about

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the recent past and the future, on production, demand, investment, sales, employment, capacity utilization of their company and their inflation expectations. It is generally difficult to follow all the questions in a survey. Nilssons (2000) stated “The reason why a group of indicators combined into a composite indicator should be more reliable over a period of time than any of its individual components is related to the nature and causes of business cycles”. Thus, the responses given to different questions are evaluated collectively by summing them up into a single indicator. The aggregated indicator which is a function of respondents’ current and past evaluations, and future expectations is called “confidence indicator”. At this point, in relation to the focus of this study, the question is how those responses are formed. Particularly, what is the response behaviour behind so many frequent neutral responses of those business managers?

Response behaviour is the outcome of the evaluations in one’s individual brain algorithm. What factors drive this behaviour? How does it form and find shape in understanding? As literature in survey research formulates, the survey response model for individuals consisting of four cognitive steps can be implemented as comprehension, retrieval, judgement, and communication (Tourangeau, 1984). It is assumed that, in formulating an answer for a survey question, the respondent has the knowledge, belief or attitude required to provide a valid response. Comprehension corresponds to understanding the meaning of a question. While responding to questions concerning conditions or behaviours, the respondent attempts to retrieve the required information from memory. Once information has been gathered, the respondent decides how to respond appropriately, taking into account risk, benefit, available answer choices and so on, which is a judgement to make. Finally, in communication phase, the respondent replies to the question by selecting the response category, entering the data into the data collection instrument or communicating to the interviewer.

The focus in this study is to evaluate the responding behaviour at the judgement level using responses to a question regarding general economic situation expectations. The question is “general tendency about current situation in respondent’s own sector compared to previous month”. This qualitative question’s response alternatives are “more optimistic,” “unchanged,” and “more pessimistic.” It is observed that there is a high likelihood of responding “remain

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unchanged” throughout the periods. What happens when people are asked their ideas about general economic situation which leads them to respond “remain unchanged?” How do they judge? What factors drive this answer choice? At the end, the answering behaviour influences

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the survey results and their calculation for a good enough basically representative indicator. That would be the concern of economic policy makers whether those indicators calculated by using those questions are sufficiently reflecting the ideas of businesses in different sectors in population.

The data is collected monthly as a self-administered paper or email survey from approximately 3000 firms which are relatively leading businesses in their sectors. All questions are interpreted on a balance which is called diffusion index (percent of positive answers-present of negative answers). Those balances are used in data analyses for inflation reports, monetary policy reports and any other reports required by the management at the CBRT. There are twenty eight questions and of those, eight are used to calculate a RSCI for Turkey. The average of those eight questions’ balances form the RSCI. One of those eight questions is the general economic situation question which is used in this research. As mentioned above, those diffusion indices and RSCI play a crucial role for economic policy makers. Therefore, the meaningful interpretation is especially significant to implement the right policies for the country as a whole.

Accordingly to give some background information, the next section summarizes the related literature. The third section presents the theoretical framework of this study.

2. Related Literature

Due to the fact that diffusion indices are the percentage difference of positive and negative thinkers of the questions in the survey, almost half of the responses lost in middle response category cause similar results as in a questionnaire with a high item nonresponse rate. Participating the survey and not responding to certain questions leads one to think first about the questionnaire design. In particular, nonresponses can cause significant biases when nonresponse occurs in relation to the question researched. The missing at random (MAR) hypothesis, which assumes that the average distribution of responding business is representative of non-respondents, is commonly used (Rubin, 1976). From an interpretivist approach, this would be a strong assumption. The individual respondent behaviour is

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unpredictable. The way respondents act can be related to their mood, period or anything else which is hard to guess and impossible to categorize. Nevertheless, under a relatively positivist approach, in this study, this methodological idea of MAR is used for middle category choices, to phrase it whether they are neutral at random or not. Virtually in all quantitative macroeconomic

policy discussions, the assumptions are categorizing individuals in definite groups and thus, hypotheses would like to be tested under that frame.

As discussed in the literature, some of those neutral responses can be a hidden don't know. Hidden don't know in this survey represents unclear minds due to the recent economic situation in a given period. Respondents might be unwilling to indicate any idea about economic activity simply because of not being sure about the answer. Those situations exist usually during those times when there is an economic crisis/downturn globally or domestically, sluggish economy, election, political turbulence or critical foreign relations, namely the factors causing instability in the economy. Indecisive or uncertain attitude is the result of one's feeling about the economy during the given period. It is more of a result of a feeling towards the economy after self-interpretations of situation unconsciously. In other words, it is difficult to constantly assess the improving/worsening economic conditions with better/worse over time since the questions are about "developments/changes" (Bovi, 2009). When respondents have limited information to do judgemental operation in evaluating likelihood of uncertain outlook, they may prefer not to evaluate their own economic situation, indicate neutral answer choices representing a hidden don't know. Continuously responding "unchanged" does not show any positive/negative surprise effect between $t-1$ and t . Updating information frequently for periodic surveys takes more time for respondents because of the difficulty to analyse the developments in large firms. When the question is about the general economic condition, respondents will use their own perception if they are familiar to developments from the daily routine, but if they are not familiar, learning takes time (Kahneman and Tversky, 1974). As the respondents become more comfortable with the survey and want to minimize their burden, they also tend to tick the "unchanged" category (Das et al., 2011), which in other words, a "satisficing" behaviour (Krosnick, 1991).

There has been some split ballot design studies in which respondents are assigned to conditions which offer or omit a middle response category to see the influence of offering this

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alternative. For instance, in Sturgis, et al. (2014)'s study, follow up probes are administered to respondents who initially select neutral to determine whether they selected this alternative in order to indicate opinion neutrality or to tell that they do not have an opinion. They find that the attitude of vast majority is to avoid social embarrassment that they should have an opinion on important issues, called faces saving do not know. This can be interpreted more as a cultural

approach. In some cultures “do not know” is an embarrassing answer for any question directed to an individual. Individuals are forced to have an opinion about anything no matter how it is. Interpretation is in the nature of human, any issue can be discussed anyways. On the other hand, they can also evaluate their own economic situation better than general business outlook and the future better than the past, or judge over-pessimistically the past and forecast over-optimistically the future (Kahneman and Tversky, 1974). As experimented, it is difficult to distinguish between respondent behaviours.

As explained before, responding to a question often involves understanding the question, retrieving relevant information from the memory, making some sort of judgement, and then formulating the judgement in a way that is consistent with the question's demands. Respondents are viewed as pragmatists – at times, as opportunists – in their approach to these mental steps (Tourangeau, Rips, et al., 2000).

In the literature, there have been some observed reasons to tick the “unchanged” category frequently. Some uninformed interviewees do not want to answer and provide more neutral answer with the category “unchanged”. Respondents may also keep their perception status unchanged in the short run until they get enough information for updating. Highly neutral responses may also point to respondents, who could not process available information (Giovannini and Uysal, 2006). This is a realistic approach. If they accept that they don't know about that, it is no interest to them, simply they might choose to respond middle category.

Respondents may be conservative to change their ideas or bored of long periodic surveys. Even though some scholars suggest that middle alternatives offer “easy outs” to respondents who want to avoid taking sides on an issue, it is found that offering a middle alternative reduces the amount of random measurement error in the responses, thus increasing reliability (Muircheartaigh et al., 2000). In a postmodernist thought, respondents

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might know and have idea but would prefer to get out of survey as soon as possible, then try to make silly choice by not indicating idea either positive or negative. In their mind, this gives a chance to end the survey soon.

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3. Theoretical Framework

While there are many theories in cognitive literature, my stand point for this research is supporting more rationalistic theory. The rational expectations theory is an economic idea that the people make choices based on their rational outlook, available information and past experiences. The theory suggests that the current expectations in the economy are equivalent to what people think the future state of the economy will become. Although there is a dilemma with the belief that government policies affect individuals' decisions, pragmatic approach claims that this exists most of the time as explained. Following this theory, rational choice theory has emerged. It assumes that all people try to actively maximize their advantage in any situation and therefore consistently try to minimize their losses. This theory says that people base their decisions on rational evaluations, act with this logic once there is need to choose something, and target to increase either pleasure or profit, that is utility maximization. All the social fact are directed by the human actions. Therefore, to be able to explain any action and change in the economy, rational decisions of the individuals that make up the whole are observed.

At the beginning I wanted to approach this topic in a more interpretivist point of view. Nevertheless, I thought it will be a better and long lasting research if I try to understand and see if my hypothesis of respondents' being influenced by economic instabilities while giving answers is valid or not. Are they rationalists? Are they hidden don't knows while responding middle category? Therefore, this experimental research is followed to analyse my hypothesis which is that individuals are rationally affected from economic uncertainties while forming their ideas on general economic situation. Additionally in the long run, with an interpretivist approach, a research with certain theories as explained in related literature is planned to be studied. Regarding that as one tool I have prepared an in-depth interview and started

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meetings with some firms' respondents. So far, using method such as in-depth interview has been a significant contribution to this study.

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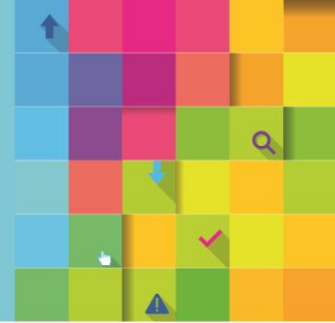
Although people perceive that there is no change in their situation or in general conditions, the "unchanged" category may represent a few possible interpretations. If the number of respondents in this category systematically remains high and persistent over very long time, such as more than seven months (unchanged state), the validity of responses could be questioned. Although the cyclical pattern of the sentiment indices expressed with Likert scale is a good indicator for the long-term path, the upturn and downturn states of cycle become typically longer when answers accumulate at the "unchanged" category (Bovi, 2009). On the

other hand, this responding behaviour might be affected by optimal questionnaire design, follow ups and probing questionnaire. However, in this study, design issues will not be discussed in details.

Overall the respondent behaviour to answer "unchanged" category so many times in a row and high percentage of "unchanged" answer in a given period to a BTS question is investigated. Accumulation of responses dominantly at the "unchanged" category arouses interest to question what if responses of this category are actually a mix of other categories' answers or "do not have an opinion". Responding "unchanged" indicates a neutral state which can actually hide some information. Under the theoretical framework of this study, how the "unchanged" response can be interpreted is summarized as follows. Firstly, it can be evaluated as "same as before", i.e., arithmetically null. Second, this response can mean "same change as before (increase or decrease)", i.e., arithmetically previous month's expectation/answer. The third possibility is "not informative, do not know (DK)", i.e., arithmetically null. Basically by understanding the behavioural reasons behind the "unchanged" response, we question whether a reliable and qualified data is maintained or not. It is found that high percentage of the "unchanged" response does not change the current interpretation of the survey results and its information content.

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