Heuristics of Designing Perception Surveys in Social Research

Kamran Ahmad Siddiqui, Muhammad Ather Elahi and Ishtiaq Ahmad Bajwa

College of Business Administration, University of Dammam, Dammam, Kingdom of Saudi Arabia

Abstract: The objective of this study is to share the experience of designing perception surveys in social research. Designing perception surveys is normally considered as a Hallmark in social sciences and always referred as an "Art" rather than "Science". This provides a meta-analysis of previously held perception surveys in various disciplines of social sciences. Studies included in this research are perceptions towards halal foods; mobile phone usage; credit card usage; branded clothing; advertising; female models; music preferences; banking; microfinance; fertilizer brands; Islamic brands.

Key words: Fertilizer brands, heuristics, validity, findings, hallmark, experience

INTRODUCTION

Designing perception survey is normally considered as a 'Hallmark' of a social scientist and always referred as an "Art" rather than "Science". The objective of this study is to share the experience of designing perception surveys in social research. This study supports inexperienced researchers so that they can use perception surveys in their research.

Perception surveys are used to collect opinion about a company, product, program or issue. The primary distinction of a perception survey is that it is intended to discover opinions rather than factual data. Unlike other types of studies that focus on actions and behaviors, a perception survey seeks to uncover what people think. The most common use for a perception survey is to collect consumer opinions about a company or product. Consumer opinions influence consumer behavior, so this type of data is critical to helping businesses grow. Governmental, political and social organizations often conduct such surveys to find out how the general public feels about a proposed law or a current issue. Modern corporations also conduct perception surveys among employees regarding benefits, working conditions or the status of the company.

Literature review: Perception can be defined as a "complex process by which people select organize and interpret sensory stimulation into a meaningful and coherent picture of the world" (Berelson and Steiner, 1964). In the same vein, perception is "about receiving, selecting, acquiring, transforming and organizing the information supplied by our senses" (Barber and Legge, 1976).

Perception surveys measure what respondents believe, think or feel and can produce information about: knowledge (e.g., levels of awareness and understanding of particular issues); experiences (e.g., in regards to service provision); beliefs and values (e.g., norms, beliefs and levels of tolerance of certain behaviors); attitudes and opinions (e.g., views of performance of actors, satisfaction with services) and expectations (e.g., fears and hopes) (Hilker and Kangas, 2011).

Most researchers recognize that perception surveys offer a means of collecting data about issues which are intangible or difficult to measure. For example, citizen views on the legitimacy of the state is a key issue which can support or undermine state building in fragile and conflict affected states (OECD, 2012). Where the evidence base is weak, perception surveys can be useful to test policy assumptions. In some circumstances, this could be an effective tool to deconstruct under-evidenced stereotypes (Parks, 2012).

Depending on the methodology, perception surveys can be a relatively quick, cost-effective and extensive data gathering method for example, compared to focus groups. Short questionnaires with standardized questions and answers can provide a large data set involving large sample groups in a short amount of time. This is particularly important in areas where citizens work long hours and cannot spare a lot of time for interviews. If areas are particularly dangerous, surveys can be carried out remotely (Hilker and Kangas, 2011).

Perception surveys provide a useful way of gathering data about citizen views on issues as opposed to expert or official views. It can also bridge gaps between the international community, the national government, national elites, local communities and individuals

---

Corresponding Author: Kamran Ahmad Siddiqui, College of Business Administration, University of Dammam, Dammam, Kingdom of Saudi Arabia

(Tariq *et al.*, 2012). Two key issues affect the representativeness of the sample for perception surveys: accessibility of survey participants and general inequalities which marginalize the participation of certain groups in surveys.

MATERIALS AND METHODS

Experienced researchers have developed heuristics (rules-of-thumb) for employing various research techniques in social research (Siddiqui, 2013, 2015a, b). In this study, we propose heuristics for designing perception surveys in research social and offer reliable insights for successful and meaningful application of perception surveys in an abridged form.

This provides a meta-analysis of previously held perception surveys in various disciplines of social sciences. Studies included in this research are.

Perceptions towards advertising: Interviewed university students (N = 575) using Polly and Mittal Model of beliefs and attitudes towards advertising. The data was first analyzed using factor analysis and resulted in seven opinion categories, i.e., skeptic; ecstatic; sarcastic; trendy; rationalist; dogmatic and sagacious. Using second order factor analysis these opinions were finally summarized into two schools of thoughts, i.e., sanguine; and antagonist.

Perceptions towards banking: Interviewed university students (N = 100). Data was analyzed using descriptive statistical tools. Found that Bankers in Pakistan are perceived as middle class people doing busy and rewarding job (Siddiqui and Gilal, 2012).

Perceptions towards branded clothing: Interviewed female university students (N = 200). Data was analyzed using Exploratory Factor Analysis (EFA) and four major factors were extracted, status, traditions, quality and values (Khakhan and Siddiqui, 2015).

Perceptions towards credit card usage: Interviewed university students having credit cards (N = 250); data was analyzed using Factor Analysis (EFA) and three factors were extracted Utilitarian, Parsimonious and Affluent (Siddiqui and Anjam, 2013).

Perceptions towards digital marketing: Experienced and qualified marketing professional were interviewed (N = 200). Data was analyzed in many ways, through descriptive statistics summarizing the data using factor analysis. Four major perception groups were emerged from the analysis, i.e., Skeptical; Enthusiast; Utilitarian; and Parsimonious (Khan and Siddiqui, 2013).

Perceptions towards female models: Interviewed university students (N = 191). Data was analyzed using descriptive statistics analyses and found female models needs to be sophisticated and fashionable; found necessary for cosmetics, soaps and foods; found unnecessary for men personal care products, automobiles and motor cycles (Siddiqui and Ahmed, 2013).

Perceptions towards fertilizer brands: Interviewed only male university students with agricultural background (N = 200) in addition to several focus groups. Results show that name and price of fertilizers are the major pillars of fertilizer brands (Siddiqui *et al.*, 2013).

Perceptions towards Halal foods: Interviewed university students (N = 528) and analyzed the data using Confirmatory Factor Analysis (CFA) and correlation matrix (Salman and Siddiqui, 2011).

Perceptions towards Islamic brands: Interviewed only university students (N = 120). Data was analyzed using Confirmatory Factor Analysis (CFA) and co-relationship matrix. Perception emerged as the moderating variable between three attitudes towards Islamic branding (i.e., compliance origin and customer) and muslim believes (Jumani and Siddiqui, 2012).

Perceptions towards microfinance: Interviewed university students (N = 160) and found there is gap between urban and rural people and between men and women about microfinance loan usage (Siddiqui and Gilal, 2012).

Perceptions towards mobile phone usage: Interviewed university students having Mobile Phones (N = 230); data was analyzed using Factor Analysis (EFA) and three factors were extracted trendy, addictive and thrifty (Siddiqui, 2011).

Perceptions towards music preferences: Interviewed university students interested in music (N = 240; 125 Men and 115 women; aged 18-34 years); data was analyzed using Exploratory Factor Analysis (EFA) and six factors were extracted, i.e., Moody; Modern; Manifest; Mild; Milieu; Mingy (Siddiqui and Sibghatullah, 2014).

Perceptions towards unpacked milk: Interviewed general public (N = 201); data was analyzed using descriptive statistics. Main reasons for preferring unpacked milk are taste and freshness (Siddiqui *et al.*, 2013a, b).

RESULTS AND DISCUSSION

This research paper presents findings on seven methodological issues as "Heuristics", i.e., instrument design, sampling design, validity, reliability, data collection, data screening and factor analyses.

Heuristics #1 (instrument design observations): Surveys may be verbal, written or electronic and can range in length and questions can be presented as Dichotomous (Yes/No) or multiple choice or Likert scale or open-ended and routinely included demographic questions. Likert scale questions play a vital for factor analysis and open ended questions for qualitative research. Most of the perceptions surveys that we have conducted so far include university students as the respondents. We found that demographic variables like age, income, native language, native city and education level do not offer much variation so we have not found them useful during analysis. We also support the earlier guidelines for perception surveys, i.e., accessibility of survey participants and general inequalities which marginalize the participation of certain groups in surveys (Tariq *et al.*, 2012).

Heuristics #2 (sampling observations): The sample used in these studies comprised mainly university students enrolled in at least their second year. All three levels of university education, i.e., undergraduate, graduate and doctoral were considered for this study. Although, quotas were not assigned according to age or sex, special considerations were made to ensure as representative a sample as possible. The student component provided a significant proportion of young people, who have excellent command over written and spoken English language as the medium of instruction for higher education in Pakistan is English.

Although, these studies do not use quota sampling all efforts were made to ensure that a good representative sample was obtained in terms of sex and age groups. It is important to note that most of these populations have been selected from larger populations on the basis of both judgment and convenience. Social scientist often select samples based on convenience and many modern day researchers do not consider this practice as any problem.

Heuristics #3 (validity observations): A number of observations are presented on validity issue for both instruments in line with the guidelines available in the literature to test whether or not an indicator (or set of indicators) that is devised to gauge a concept really measures that concept. Various non-statistical validity checks were made prior to the questionnaire's actual implementation.

Firstly, most of these instruments were adopted from different earlier studies providing acceptably reliable and valid measures. Secondly, it was the cultural specific nature of questionnaires. For example, an item from questionnaires inventory: 'I wouldn't enjoy vacationing in Las Vegas'. Unsurprisingly, this item like some other items were not properly understood by some of the students in a developing Muslim country like Pakistan where an average student does not have an idea what 'Las Vegas' is famous for. Such items were replaced or re-phrased with local context.

Thirdly, the questionnaires having 8-10 words per item had low validity as compared to items with only 4-5 easy words per item. This have resulted in lesser dropout rate for individual items during the factor analysis. One of the limitations of questionnaires is that having more words and relatively complicated syntax made it really difficult for participant with linguistic barriers and cultural distance in a non-English speaking country like Pakistan.

Finally and probably most importantly some social scientist use instruments developed during late eighties or nineties without validation. Since, then world has changed a lot but these instruments were not updated. For instance, mobile phones became the most common gadget around the globe. With more 4.77 billion subscribers around the world (www.statista.com), mobile phones have out-diffused virtually every prior technology, whether it be television sets, radios, wrist watches, wallets or the internet and have done so in only 25 years. Mobile Phones could be considered as just one example common manifestation of the latest phase of globalization in the modern age (Kalba, 2007). Other examples of common manifestations of modern world could be social networking websites, sports, events and media. It is imperative for social scientists to check the instrument's validity and take the leverage of modern day manifestations in their instruments while trying to solicit information for one's social life.

Heuristics #4 (reliability observations): All of these studies reported that the scales have good internal consistency and relate strongly to major dimensions of social. In the similar fashion the Cronbach alpha were calculated for all scales and found the acceptable range, i.e., $\alpha = 0.5\text{-}0.8$. In all confirmatory cases scores obtained from the current studies found far lower than the reported in the original studies. This reflects that consistency might be compromised while replicating these instruments in non-English speaking country.

Heuristics #5 (data collection observations): A methodological criticism often directed at social sciences for data collection is that much of the evidence relies on self-report questionnaires so that self-report bias and falsification of responses is impossible to deal with completely. These assessments may be less reliable or objective than behavioral observations, performance indices or the judgments of multiple others (McAdams, 1995).

Most of these studies used the self report formats. A typical questionnaire administration session started with a brief introduction to the researcher which was normally presented by the respective faculty member. Then, the researcher welcomed the students, giving a brief overview of the research, its objectives and the importance of such research for academia in general and Pakistan in particular. After the briefing, the author asked for student consent to participate and invited those students who declined to leave the room; very few students actually left the class rooms. The researcher assured the remaining students that their responses would remain strictly confidential and that data from the survey would be reported only in the aggregate. The questionnaires were then distributed and the author engaged the respondents in the task of completing them in order to reduce the possibility of response sets or random responses to the items. At the end of each session the author thanked the students and respective faculty members for their co-operation.

Heuristics #6 (data screening observations): Due to their exploratory nature perception surveys do not provide any guideline for data screening. We propose data screening guidelines for perception surveys as: for all analyses the questionnaire must not be processed for analysis, if 25% of questionnaire or more responses are missing for a particular respondent; for likert scale questions the questionnaire must not be processed for analysis, if for a particular respondent 2.5% of questionnaire is marked as consecutive items as strongly disagree, disagree, neutral, agree or strongly agree. Based on these guidelines, all the questionnaires must be manually examined and it is more likely that a number of questionnaires might be rejected for further processing as they might fall short of meeting the above criteria.

Heuristics #7 (analysis observations): Normally perception surveys are exploratory in nature so descriptive statistical tools are easier to apply including bivariate statistical techniques. For advanced multivariate statistical techniques caution is advised. Exploratory Factor Analyses (EFA) and cluster analyses gives meaningful results (Siddiqui, 2015a) while other confirmatory tools including Confirmatory Factor Analyses (CFA) and Structural Equation Modeling (SEM) (Siddiqui, 2015b) and conjoint analyses may be difficult to apply on perception survey.

CONCLUSION

This research presents findings on seven methodological issues as "Heuristics", i.e., instrument design, sampling design, validity, reliability, data collection, data screening and analyses. Exposure of reserachers is limited to social sciences.

LIMITATIONS

The questionnaire survey used in this study is subject to a number of limitations. Firstly, the approach may have been ineffective in encouraging and stimulating free expressions concerning the behavior of the respondents. This is because lack of resources cannot permit an in-depth investigation. For instance, if a questionnaire is too long or too detailed, results can be adversely affected. Consequently, this questionnaire could only obtain information concerning certain influences on the consumer's behavior. A few strengths of social research; the universal use of self-reporting questionnaires and use of students in the research process which make the process robust and economically feasible are actually highly criticized in different non-academic quarters.

IMPLICATIONS

The study produces various implications for practicing researchers especially those who would like to use perception surveys in their research or those who would like to develop new instruments to measure respondent's perceptions. Other researchers could conduct a more thorough investigation and examine perceptions from psychological and behavioral points of view. Organizing focus groups or in-depth interviews may be a good way to clarify the differences as well as similarities among different perception survey results.

Originality: This research has demonstrated originality on several levels. One aspect refers to the generalization based on previously held perception surveys rather than comparisons of various theoretical models. The study concludes a number of issues based on the related literature and empirical findings.

REFERENCES

Barber, P.J. and D. Legge, 1976. Perception and Information. Methuen Publisher, London, England, ISBN:9780416820300, Pages:144.

Berelson, B. and G.A. Steiner, 1964. Human Behaviour: An Introductory of Scientific Findings. Harcourt Brace Jovanovich, New York, USA., Pages: 88.

Hilker and Kangas, 2011. DFID's use of surveys and polls on conflict, security and justice: Draft report. Department for International Development, London, England, UK.

Jumani, Z.A. and K. Siddiqui, 2012. Bases of Islamic branding in Pakistan: perceptions or believes. Interdisciplin. J. Contemp. Res. Bus., 3: 840-847.

Kalba, K., 2007. The adoption of mobile phones in emerging markets: Global diffusion and the rural challenge. Proceedings of the 6th Annual Conference on Global Mobility Roundtable, June 1-2, 2007, University of Southern California, Los Angeles, California, pp: 631-661.

Khakhan, M. and K.A. Siddiqui, 2015. Women's perceptions towards branded clothing in Pakistan. Sci. Int., 27: 4661-4665.

Khan, F. and K. Siddiqui, 2013. The importance of digital marketing. An exploratory study to find the perception and effectiveness of digital marketing amongst the marketing professionals in Pakistan. J. Inf. Syst. Oper. Manage., 7: 12-19.

McAdams, D.P., 1995. What do we know when we know a person?. J. Personality, 63: 365-396.

OECD., 2012. Checklist to commission, design and run a perception survey. Organisation for Economic Co-operation and Development, Paris, France.

Parks, T., 2012. Views amidst violence: Can perception surveys improve aid in fragile states?. Overseas Development Institute, London, England. https://www.odi.org/events/2955-views-amidst-viol ence-can-perception-surveys-improve-aid-fragile-st ates.

Salman, F. and K. Siddiqui, 2011. An exploratory study for measuring consumers awareness and perceptions towards Halal food in Pakistan. Interdisciplin. J. Contemp. Res. Bus., 3: 639-652.

Siddiqui, K. and F.G. Gilal, 2012. Perceptions towards microfinance in Pakistan. Asian J. Bus. Manage. Sci., 1: 6-10.

Siddiqui, K. and M. Anjum, 2013. Perceptions towards credit card usage: Factor analytic finding from Pakistan. Int. J. Econ. Bus. Manage. Stud., 2: 128-135.

Siddiqui, K. and R. Ahmed, 2013. Personification of advertising models. Asian J. Res. Market., 2: 80-86.

Siddiqui, K. and R.G. Gilal, 2012. Perceptions towards banking in Pakistan. Asian J. Bus. Manage. Sci., 1: 1-5.

Siddiqui, K., R. Ahmed and D. Choudhry, 2013a. Consumer perception towards unpacked milk. Int. J. Market. Technol., 3: 38-50.

Siddiqui, K., R. Ahmed, A. Manan and D. Choudhry, 2013b. Fertilizer branding in Pakistan. Int. J. Market. Technol., 3: 82-92.

Siddiqui, K., 2011. Personality influences mobile phone usage. Interdisciplin. J. Contemp. Res. Bus., 3: 554-563.

Siddiqui, K., 2013. Heuristics for sample size determination in multivariate statistical techniques. World Applied Sci. J., 27: 285-287.

Siddiqui, K.A. and A. Sibghatullah, 2014. Perceptions towards music preferences in Pakistan. Eur. J. Bus. Manage., 6: 203-208.

Siddiqui, K.A., 2015a. Heuristics of using factor analysis in social research. Sci. Int., 27: 4625-4628.

Siddiqui, K.A., 2015b. Heuristics of using structural equation modeling in social research. Sci. Int., 27: 6381-6384.

Tariq, M.O., F.R. Haqbeen and P. Kakar, 2012. Afghanistan in 2012: A Survey of the Afghan People. The Asia Foundation, Kabul, Afghanistan, Pages: 281.