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IMPLICATIONS OF DOCTORED SURVEY DATA ON BUSINESS DEVELOPMENT

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Abstract

Doctored survey data is an unethical marketing research practices which decays the entire problem solving process. Most researchers fail to uphold their ethical standards, hence indulge into art that does not guarantee integrity and accuracy of data. This over the years has soiled the relationships which exist between the academic and industrial sector, since they cannot rely on most data generated by academic scholars. Ethical values and norms should be inculcated into the employees and marketing research personnel's since they are the one that shoulders the responsibilities of generating survey data which is used for key business decisions.

Keywords: Norms, Values, Marketing Research, Survey Data.

Introduction

The way in which organizations across the globe make business decisions is evolving. Consumers are increasingly sophisticated, technology is rapidly evolving, and competition continues to become more global. As the tectonic plates underlying our business world shift, it becomes increasingly important for business leaders to rapidly make robust decisions, all while minimizing risk. Against this rapidly changing backdrop, it's no longer enough to use intuition – which ultimately is rooted in one's prior experience – as a basis for making decisions. As collecting data about consumer behavior becomes easier, decisions can and should incorporate wider experiences and ethical behaviors.

It's been said that information is power. This simple cliché underscores the market control and business success that information yields. Marketing research is about collecting information. While it applies to a wide range of situations, marketing research gives decision-makers the information they need to find solutions to business problems (Agbonifoh, Ogwo, Nnolim, & Nkamnebe, 2007), such as the following

- How satisfied are customers with your product and service offering?
- How will customers react to a decision to change a price or product?
- What are service representatives hearing from customers?
- What responses to competition will bring you success in a given market?

Simply put, the solution to most business problems can be found through marketing research. While the foundations of research have existed for thousands of years, technological advances during the last century have made a wider range of studies possible and have also made the users or data more vulnerable because of the unethical practices that are being indulged by data specialists. Despite the systematic nature of research, in most cases, survey data are being doctored in the process of generating and gathering them, information gotten from such data are falsified and thus transforms to marketing

error and in the long run limits the attainment of the business goals and objectives. A survey data is information gotten from the field or directly from the market so as to guide the organization in understanding an existing problem in the market, with the aim of proffering solution to such problem. And a survey is said to be doctored when the data is not accurate, biased or being manipulated to favor a particular course.

Successful entrepreneurs must adapt to an ever-changing business environment. In addition to the everyday aspects of running a business, a company has to consider materials, energy shortages, inflation, economic recessions, unemployment, and technological changes. A profitable company must also respond to the market with its products and advertising. A critical tool for measuring the market and keeping competitive is effective marketing research.

Marketing research focuses on understanding the *customer*, the *company*, and the *competition*. These relationships are at the core of marketing research. Companies must understand and respond to what customers want from their products. However, this relationship is always influenced by *competitors* and how their products are received by your market. Thus, you must clearly identify the customer, company, and competition before developing a research project. Data are used in almost all the activities of companies and constitute the basis for decisions on operational and strategic levels. Doctored survey data can, therefore, have significantly negative impacts on the efficiency of an organization, while high quality data are often crucial to a company's success (Madnick, Wang, & Xian, 2004; Haug, Pedersen & Arlbjorn, 2009; Batini, Cappiello, Francalanci & Maurino, 2009; Even & Shankaranarayanan, 2009). However, several industry expert surveys indicate that data quality is an area, to which many companies seem not to give sufficient attention or know how to deal with efficiently (Marsh, 2005; Piprani & Ernst, 2008; Jing-hua, Kong & Xiao-wei, 2009).

The survey is defined as the collection of data for the purpose of scholarly inquiry by use of a standardized questionnaire administered by specially trained interviewers (in person or over the phone) or distributed (predominantly by mail) to a (randomly) selected sample of respondents for self-completion (Polland, 2005). The power of the survey method rests on the assumption that a clear and precise question is administered in a controlled fashion to a sample of individuals randomly drawn for a target population. This is rarely achieved in practice, however, and even less so in developing and transitioning countries. It is also plausible that certain questions or the manner in which the survey is administered can go against local norms, affecting how local residents accept the survey (Piprani & Ernst, 2008). A doctored survey data is a data which was unethically generated and as such is biased, misleading and unreliable (Kurtz, 2008).

Statement of the Problem

The technological developments have implied that companies store increasingly more data. However, data quality maintenance work is often neglected, and poor quality business data constitute a significant cost factor for many companies. In our contemporary society most survey data are doctored so as to suit a predetermined goal and this practice have really affected the quality of marketing research report that uses such data and also leads to making wrong marketing decisions which on the long run wastes the organization’s limited resources. Over the years, this unethical practice has been prevalent in Nigeria where researchers always complain about scarcity of resources to conduct a comprehensive survey data generation process. These and other problems that are associated with doctored survey data made this study a necessity.

Objective of the Study

This paper argues that perfect survey data quality should not be the goal, but instead the data quality should be improved to only a certain level. The paper focuses on how to identify the optimal survey data quality level and to identify the effect of doctored survey data in marketing research.

Overview of Marketing Ethics

Ethics are moral principles and values that governor the actions and decisions of an individual or groups (Berkowitz, Kerin, Hartley & Rudelius, 1997). They serve as guidelines on how to act rightly and justly when faced with moral dilemmas. Ethics are moral principles or standards that guide the ways in which individuals treat their fellow human beings in situations where they can cause actual or potential harm, whether economic, physical or mental. Ethics in marketing research are concerned with professional standards of conduct and with the use of techniques in ways that avoid harm to

respondents, to clients or to other parties. Ethical standards are important in a research context so that those involved in the research appreciate what is and what is not acceptable behavior.

Market researchers depend for the effective practice of their profession on the goodwill and participation by the public. At the same time members of society are becoming increasingly aware of their rights and sensitive about invasions of their privacy. Any individual, company or agency that violates the implicit trust of participants in a study makes it more difficult and more costly for *all* market researchers to approach and recruit survey respondents or participants to group discussions. Good ethical standards are good business. Considering ethical underpins, data and report integrity is of utmost importance, Integrity includes both the technical and administrative integrity of the research so that the results are not "doctored" or "massaged" in any way or tied up in jargon just to baffle the client(Kent, 2007). Lack of integrity shades into misrepresentation in which research results are presented in a way likely to mislead readers or Users. This might include deliberately withholding information, misusing statistics or ignoring relevant data. Schneider (1977) enumerated three general areas of ethical concern: deceptive practices, invasion of privacy, and lack of consideration. An additional concern too frequent interviewing of the respondent.

Deceptive or fraudulent practices include the following:

- ✓ Unrealized promise of anonymity
- ✓ Use of disguised questionnaires and interviews
- ✓ Faked sponsor identification
- ✓ Implication of required response
- ✓ Lying about research procedure
- ✓ Faked testing in experimental research
- ✓ Promise of undelivered compensation
- ✓ Sales solicitation disguised as research

Invasions of privacy

includes the following examples:

- ✓ Observation without informed consent
- ✓ Questions concerning people other than the subject
- ✓ Projective techniques
- ✓ Personal classification data
- ✓ Full disclosure and use of "optional" participation

Lack of consideration for subjects or respondents is exhibited in all of the following practices:

- ✓ Overuse of public (i.e., unreasonable demands on the time and energy of respondents)
- ✓ Research in subject areas with a depressing effect on respondents
- ✓ Subjects of no immediate interest to respondents
- ✓ Poor interviewers
- ✓ Contacts at inconvenient times
- ✓ No mention of procedural aspects
- ✓ Failure to debrief
- ✓ Failure to present subject with option to discard results upon completion (Smith & Albaum, 2010).

Subjects' rights are an important consideration in the ethical treatment of research participants. Respondents have rights that should not be ignored or violated. Research should not be deceptive or coerced. The researcher is often in a position of authority and as such should assure that the participant does not feel forced to comply, has the ability to choose and make informed choices, is safe from stress, psychological and physical harm, providing information detrimental to their self-interest, and have the right to be informed of the purpose of the research. Furthermore, promises of anonymity must be kept.

What do surveys of people measure?

Ultimately, researchers wish to know how people act and think in many common situations. The best way to do that is to observe them repeatedly and directly over time. For example, if we want to know how often people go to food stores, we could follow them every time they leave their house. If we wanted to know what they eat for breakfast, we could sit at their table in the morning and record what they ate. However, as you may have guessed, we rarely have the chance to watch people and their behavior all the time. We cannot be like "flies on the wall" and record their every move. Even if we could do that, there are kinds of human behavior that are we cannot see directly —such as attitudes, beliefs and opinions. So, what are researchers to do?

One solution is to use surveys. Surveys (also called "questionnaires") are a systematic way of asking people to volunteer information about their attitudes, behaviors, opinions and beliefs. The success of survey research rests on how closely the answers that people give to survey questions matches reality – that is, how people really think and act. The first problem that a survey researcher has to tackle is how to design the survey so that it gets the right information. Is this survey necessary? Is the purpose of the survey to evaluate people or programs? Can the data be obtained by other means? What level of detail is required? The second problem is how accurate does the survey have to be? Is this a onetime survey or can the researcher repeat the survey on different occasions and in different settings? How will the results be used? How easy is it to do the survey?

The survey is an appropriate means of gathering information under three conditions: when the goals of the research call for quantitative and qualitative data, when the information sought is specific and familiar to the respondents and the researcher has prior knowledge of the responses likely to emerge.

Descriptive research

Surveys can be used to describe phenomena and summarize them. The goal of using surveys for descriptive research is to get a precise measurement of certain things such as political preference.

Causal explanation

Surveys often measure associations between things such as school grades and self-esteem. The data from surveys can provide a causal explanation to phenomena such as why teens become pregnant or why teens do drugs.

Evaluation

Surveys are useful for determining the degree to which a desired objective is attained as a result of a planned program.

Prediction

Survey data can be used to forecast future events.

There are six basic types of data that you might collect:

1. attitudes—what people say they want
2. opinions—what people think might be true
3. beliefs—what people know is true
4. behavior—what people actually do
5. attributes—what people are (demographic characteristics)
6. preferences—what people would choose

Data Quality

To understand the concept of 'data quality', to begin with a distinction between data, information and knowledge may be appropriate. Popular definitions of such terms have been made by Davenport and Prusak (1998), who define data as "discrete, objective facts about events" and information as data transformed by the value-adding processes of

contextualization, categorization, calculation, correction and condensation. Similar definitions are provided by Newell *et al.* (2002), who define data as "providing a record of signs and observations collected from various sources" and information as when "data are presented in a particular way in relation to a particular context of action". In contrast to 'data' and 'information', the meaning of 'knowledge' is much more debatable, which is a discussion often relating to whether knowledge is perceived as being of an impersonal and static nature or being personal and related to action (Newell *et al.*, 2002). However, a deeper discussion about the meaning of the meaning of 'knowledge' is beyond the scope of this paper, which, as mentioned, focuses on data quality.

Data quality is often defined as 'fitness for use', i.e. an evaluation of to which extent some data serve the purposes of the user (e.g. Lederman et al., 2003; Tayi & Ballou, 1998; Watts & Shankaranarayanan, 2009). Another way to understand the concept of data quality is by dividing it into subcategories and dimensions. An often cited definition is provided by Ballou and Pazer (1985), who divide data quality into four dimensions: accuracy, timeliness, completeness, and consistency. They argue that the accuracy dimension is the easiest to evaluate as it is merely a matter of analysing the difference between the correct value and the actual value used. They also argue that the evaluation of timeliness can be carried out in a similar unproblematic manner. As for the evaluation of the completeness of some data, this can also be done relatively straight forward, as long as the focus is on whether the data are complete or not in contrast to defining the level of completeness, e.g. the percentage of data completeness. On the other hand, an evaluation of consistency is a little more complex, since this requires two or more representation schemes in order to be able to make a comparison.

Impacts of Doctored Survey and Poor Quality Data

Doctored Survey or Poor quality data can imply a multitude of negative consequences in a company. To start with, poor quality data that is not identified and corrected can have significantly negative economic and social impacts on an organization (Ballou *et al.*, 2004; Wang & Strong, 1996). The implications of poor quality data carry negative effects to business users through: less customer satisfaction increased running costs, inefficient decision-making processes, lower performance and lowered employee job satisfaction (Kahn *et al.*, 2003; Leo et al., 2002; Redman, 1998). Poor data quality also increases operational costs since time and other resources are spent detecting and correcting errors. Since data are created and used in all daily operations, data are critical inputs to almost all decisions and data implicitly define common terms in an enterprise, data constitute a significant contributor to organizational culture. Thus, poor data quality can have negative effects on the organizational culture (Levitin & Redman, 1998; Ryu *et al.*, 2006). Poor data quality also means that it becomes difficult to build trust in the company data, which may imply a lack of user acceptance of any initiatives based on such data.

When focusing on clarifying the effects of doctored survey data, it is clear that many companies experience significant costs as a result of poor quality data, although the exact extent of such costs is difficult to estimate. According to Redman (1998), studies to produce estimates of the total cost of doctored have proven difficult to perform. Additionally, data quality research has not yet advanced to the point of having standard measurement methods for any of these issues. On the other hand, Redman (1998) claims that many case studies feature accuracy measures, but he does not provide references or mentions if these are academic studies. According to Redman (1998), measured at the field level, the reported error rates are in the interval of 0.5–30%. Furthermore, Redman (1998) claims that at least three proprietary studies have yielded estimates in the 8-12% of revenue range, but informally 40-60% of the expense of the service organization may be consumed as a result of poor data. Much indicates that the economic effect of even small data inaccuracies can be very significant. Häkkinen and Hilmola (2008) argue that marginal data inaccuracies (e.g. 1-5%) may not necessarily represent a major problem in manufacturing, but that such inaccuracies will have direct effects in terms of lost sales and operational disruptions in the after-sales organizations.

In contrast to the apparent lack of large studies of data quality in academic journal papers (Eppler & Helfert, 2004; Kim & Choi, 2003), many industry experts provide such studies. These industry experts include Gartner Group, Price Waterhouse Coopers and The Data Warehousing Institute, which claim to identify a crisis in data quality management and a reluctance among senior decision-makers to do enough about it (Marsh, 2005). Marsh (2005) summarizes the findings from such surveys into the following bullet-points (quoted from: Marsh, 2005):

- "88 per cent of all data integration projects either fail completely or significantly over-run their budgets"
- "75 per cent of organisations have identified costs stemming from dirty data"
- "33 per cent of organisations have delayed or cancelled new IT systems because of poor data"
- "$611bn per year is lost in the US in poorly targeted mailings and staff overheads alone"
- "According to Gartner, bad data is the number one cause of CRM system failure"
- "Less than 50 per cent of companies claim to be very confident in the quality of their data"
- "Business intelligence (BI) projects often fail due to dirty data, so it is imperative that BI-based business decisions are based on clean data"
- "Only 15 per cent of companies are very confident in the quality of external data supplied to them
- "Customer data typically degenerates at 2 per cent per month or 25 per cent annually"
- "Organisations typically overestimate the quality of their data and underestimate the cost of errors"
- "Business processes, customer expectations, source systems and compliance rules are constantly changing. Data quality management systems must reflect this"
- "Vast amounts of time and money are spent on custom coding and traditional methods - usually fire-fighting to dampen an immediate crisis rather than dealing with the long-term problem"

Doctored survey data has the following characteristics and they include as follows;
The information is not based on fact
The information is of doubtful credibility
The information presents an impartial view
The information is irrelevant to the work
The information consists of inconsistent meanings
The information is incomplete
The information is Misleading
The information is biased

When survey data are doctored, companies focus on wrong customer segments, poor overall production planning, poor price policies, long lead times, data being registered multiple times, employee dissatisfaction, manufacturing errors, wrong deliveries, payment errors, few sales, low efficiency, problems in keeping delivery times,

Effects of Doctored Survey Data on Strategic Decisions.

The two dimensions of direct costs versus hidden costs and operational data versus strategic data, four types of costs incurred by poor data quality can be operationalized. In the figure, examples of each type of these costs are given. When the cost can be classified as a direct cost with an operational view on data, costs can for example be associated with poor order processing data. Shipping the wrong product in the wrong quantity at the wrong time to the wrong customer at the wrong price are examples of mistakes that will eventually incur costs for the company. Another classical example is the direct cost associated with poor production quality, where it is obvious that faulty data produces products that are not assembled properly, for example. Contrarily, when the cost can be categorized as a hidden cost, but still with an operational use of data, the company will incur costs on a day-to-day level of which they are in fact aware. Costs associated with this are for example long lead times. A company that has been producing products with the same lead time for a long period of time runs the risk of taking this for granted, not realizing that the lead times could actually be shorter if the data were corrected. Such data pertain to for example poor data input to Material Requirements Planning (MPR) systems.

When costs are direct but are instead considered from a strategic data perspective, costs incurred stem from operations, which the company knows are inefficient and have a big impact on the strategic direction in which the company is currently heading. An example of this could be the awareness of having lost sales in recent periods due to decision-making based on unreliable data. Not running the newly placed strategic inventory location properly could be an example of costs incurred due to data not being sufficiently cleaned and organized. Lastly, when costs are not visible to management and data are regarded as being strategic, management knows that some data are faulty, but does not realize that this has consequences for the company's overall profit potential. In this case, an example would be a wrong allocation of costs (typically fixed costs) regarding calculating individual product profitability. Not tracking and allocating costs properly would lead to wrong

decision-making such as pricing policies and a focus on the wrong customer segments due to products appearing profitable while others appear unprofitable, even though they might in fact be profitable.

In a more general view, the implications of doctored survey data could be summarized in the form below;

i. **Inaccuracy of Information**: When survey data are being manipulated, the users of such research report makes decisions that are highly inaccurate and most times it impedes the objectives and the goals of the organization.
ii. **Bias Result:** Application of any data that was doctored into any systematic process, introduces biasness into the system. And this results to misleading and unreliable information or database. Any decision taken based on the reports from such data is capable of derailing the company's focus and target.
iii. **Breeds Marketing Error:** This true because any decision or forecast made based of the finding of a study that made use of doctored survey data transforms to total marketing error. For instance a doctored data about the population or purchase intentions of a particular market segment will result to the company channeling their marketing effort to a segment where actual markets for their offerings does not exist.
iv. **Wrong Marketing Investments:** The cost implication of doctored survey data to business operations is that if investment decision are made relying on such survey data, losses and poor returns on investments (ROI) is preeminent (Kurtx, 2008).

Frequently Doctored Marketing Information

Information need tend to differ from company to company and from industry to industry because different companies and industries have different types of customers. Most times, the information are being manipulated and doctored so as to save cost or achieve pre-determined goals. Also, they are affected by different kinds and levels of competition. Even companies in the same line of business may differ in their need for information because of differences in internal factors and mode of operation (Agbonifoh, *et al., 2007*). They include but not limited to;

- **Falsified Sales Data** for the company as well as its competitors. Sales analysis on the basis of distributors, territories and customer groups are important in sales forecasting. Breakdowns by product lines, months or quarters and by brands are also useful. Sales reports enable the company measure its market share, market position and to determine its sales potential for the future. And in our contemporary society, survey data on sales are most times faked in order to deceive people. Research report that come from such survey data, if adopted by the company in their decision making transforms to marketing error.
- **Faked Cost data**: This is also needed for planning and control. Profit margins cannot be measured without cost data, which include both production and marketing cost. In our modern business settings, survey data on cost which is vital for planning and control is often faked and thereby endangering the operations of the company to high risk and uncertainty.
- **Manipulated Market Data:** Market information such as competitors' actions, consumer's complaints, product performance, market share information and demand and supply situations are important. So also are market responses to price, product and promotional changes.
- **Falsified Customer Behavior Data:** Consumer behavior is a major concern of every business organization. Every organization want to know whom his present and potential customers are, why, when, what and how often they buy as well as their buying intention. Also the distribution of its customers by age, social class, occupation, sex, marital status, life style, and usage rate is extremely useful.

Reliability and validity

In order for information to be useful, it has to be consistent, dependable, accurate and, most of all, true. Too often, we are presented with information that fails on one or more of these criteria. In research, these criteria are represented by the concepts of reliability and validity. When we say that information is reliable, we mean that we can expect to obtain the same information time after time. The concept of reliability can be applied to sampling. If we repeatedly draw random samples of equal size from a population, we can expect to get the same sample values each time (plus or minus a certain amount due to sampling error).

When we say that information is valid, we mean that it is presented or used in the way for which it was intended. An IQ test is valid only if it is used to measure intelligence—it is not valid if it used to assign individuals to groups. A psychological test that is a valid measure of anxiety is not a valid measure of stress.

Empirical Review

In spite of the importance of having correct and adequate data in a company, there seems to be a general agreement in literature that poor quality data is a problem in many companies. In fact, much academic literature claims that poor quality business data constitute a significant cost factor for many companies, which is supported by findings from several surveys from industrial experts (Marsh, 2005). On the other hand, Eppler and Helfert (2004) argue that although there is much literature that claims that the costs of poor data quality are significant in many companies, only very few studies demonstrate how to identify, categorize and measure such costs (i.e. how to establish the causal links between poor data quality and monetary effects). This is supported by Kim and Choi (2003) who state: "There have been limited efforts to systematically understand the effects of low quality data. The efforts have been directed to investigating the effects of data errors on computer-based models such as neural networks, linear regression models, rule-based systems, etc." and "In practice, low quality data can bring monetary damages to an organization in a variety of ways". According to Kim (2002), the types of damage that low quality data can cause depend on the nature of data, the nature of the use of data, the types of responses (by the customers or citizens) to the damages, etc.

Summary and Conclusion

The idea of data creating business value is not new; however, the effective use of data is becoming the basis of competition. There are a number of ethical considerations that arise both in conducting marketing research projects and in marketing related activities in general. And as such the management should put necessary machineries in place to ensure that data with which they work it are accurate and unbiased. Business has always wanted to derive insights from information in order to make better, smarter, real time, fact-based decisions: it is this demand for depth of knowledge that has fueled the growth of ethical practices in survey data tools and platforms. But currently in developing countries, the rate at which survey data is being manipulated is very high and there is urgent need to enlighten data analysts more on ethical behaviors in data generation and management. It therefore concluded that survey data should be collected with consideration with the laid down ethical marketing research standards and it is seen that most breakdown in the original business goals is as a result of doctored survey data.

Recommendation

Management of various firms should focus more on the integrity of their survey data in order not to create a misleading master data. Master data is data that is shared across systems (such as lists or hierarchies of customers, suppliers, accounts, or organizational units) and is used to classify and define transactional data. Ethical values and norms should be inculcated into the employees and marketing research personnel's since they are the one that shoulders the responsibilities of generating survey data which is used for key business decisions.

Effective and efficient data mining and warehousing is the product of ethical survey data generation and as such professional should be in engaged in the process since the organization can achieve sustainable competitive advantage through making informed decisions. Business performance management (BPM) reporting (e.g. variance from profit or revenue plan by product, customer, and account) is also a function of sound survey data. Since these reports are based on information from multiple systems, the survey data must be consistent, true and up-to-date for the reporting to be accurate.

Survey Data should be checkmated to ensure the integrity of the data as this will help to make them reliable and unbiased.

Limitations/Suggestion for Further Studies

The limitation of this study revolves around the nature of the study which is purely a theoretical paper. Hence future studies are encouraged to collect testable data so as to carry out an empirical study.

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