

## **Who is winning the paradigm war? The futility of paradigm inflexibility in Administrative Sciences Research**

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**Abstract:** *There has been a long time controversy about which is the most appropriate research methodology in administrative sciences research. This has resulted into two polar research views: Quantitative and Qualitative methods. This study explores the philosophical underpinnings of research methodology using two research projects (one quantitative and another qualitative). It analysed the two research papers in the light of the chosen research design and methods. Pros and cons of the quantitative and qualitative research with respect to the chosen research topics were discussed. It defined the triangulation approach and explained conditions under which a triangulated research can be used. It also, based on the research papers analysed, drew out the pros and cons of the triangulation method. This paper therefore concludes that no one method is the best but the best method depends on the research topic and the circumstantial exigencies surrounding the study.*

**Keywords:** *Quantitative, Qualitative, Philosophical, Triangulation, Administrative Sciences*

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### **I. Introduction**

The best research approach has been a thorny issue among management sciences scholars especially in the developing economies [1]. It is believed that the philosophical leaning of a researcher dictates the researcher's methodological approach [2]; [3]. General research approach is delineated into ontology and epistemology[4]. Ontology, according to [4], is concerned with what constitutes reality and is further divided into objectivism and constructionism. [5]opine that objectivism holds that social process and their meanings are different from social actors while constructionism holds that social process is determined by people rather than external factors. On the same vein, epistemology, according to [4], probes into the theory of knowledge; what is regarded as acceptable knowledge and is further divided into positivism and interpretivism. Positivism, according to [6] holds that logical reasoning is applied to research so that precision, objectivity and rigour replaces, hunches, experience and intuition as a means of investigating research problems. [4]sees interpretivism as upholding the distinctiveness of human behaviour from the natural sciences: meanings are ascribed through interpretation of the social world.

From the above, [7] point out two major research strategies: Quantitative and Qualitative methods. While quantitative research formulates hypothesis through which variables are tested to reject or accept a theory, the qualitative approach uses interviews and observations to understand phenomenon and human behaviour [4]. On the research theory of deduction, there are two approaches: the deductive and inductive approaches [6]. The deductive approach aligns with the quantitative method in which a hypothesis is generated to test a theory, data collected upon which findings are made which can either confirm or reject the hypothesis [3]. But the inductive takes the converse. Here, observation and findings generate a theory [7]. Grouping these concepts on the basis of their relationships signify that the quantitative method is related to objectivism, positivism and they are deductive while qualitative method is related to constructionism, interpretivism and they are inductive. Having established the two distinct research approaches, this paper shall consider the pros and cons of the quantitative and qualitative research methods. It will explore the triangulation approach using two different research projects (one quantitative and another qualitative). From the chosen research projects, it will first draw out the pros and cons of the triangulation approach, explaining the conditions under which the triangulation approach can be used. It will juxtapose the advantages and disadvantages of the mixed methods drawn from the chosen research projects.

### **II. Comparative analysis of quantitative and qualitative studies**

[8]did a quantitative study of the effect of product packaging on consumers' buying choice in Calabar Municipality, Cross River State, Nigeria. It was a cross-sectional research design with purposive sampling method. Data were administered and retrieved on the spot from 400 consumers who come for shopping at market places, supermarkets and high traffic points across the metropolis. Piloting, which is the small-scale study carried out before the main survey, [9], was also carried out. Validity, according to [1], implies that the instrument actually measures what it was supposed to measure and reliability which implies the consistency of measurement, [10], were all ascertained by the instrument design of the study through the use of the Cronbach's

alpha test to measure each of the scale used. The findings of the study indicate that 79% and 81% of consumers' decision to buy a particular product as well as impulse buying was accounted for by the packaging style of the product and that attractive packaging influenced consumers' buying choice and impulse buying.

On the qualitative article, [11] studied female consumers' decision-making in brand-driven retail. The research design was both phenomenological and longitudinal. Phenomenological research, according to [12], identifies phenomena via the perception of the actors in a situation. Sampling method used was the convenience sampling. Responses were obtained through the ease of access and through some statistical frame as in a quantitative study. Data gathering was through face-to-face interview with the respondents. The interview was broken into three stages. Stage one was used to obtain respondents' life history in relation to the retail brand. Stage two was used to focus more particularly on the participants' shopping experience and, finally, stage three, the participants were asked to reflect on their retail experience to see if they could identify any change since the last interview was conducted with them (this is where the longitudinal approach was used). On the concepts of validity, reliability, piloting and then generalizability, this paper did not notice their obvious application since it is a qualitative research [13], but add that the rich text generated in a qualitative study such as this can lead to conceptual validity [14].

### **1.1. Strengths and weaknesses of quantitative and qualitative study**

One advantage of the quantitative research is validity [15]. [15] explain that validity can be used in three broad areas: external validity, internal validity and measurement validity. They explain that external validity refers to how generalizable research findings are while internal validity applies to experimental or quasi-experimental research and deals with the authenticity of causality. Measurement validity is said to be when an instrument actually measures what it purposes to measure and therefore meaningful inference can be drawn [16]. All these help to lend credibility to the research process [7]. The quantitative research under review, [8], upholds these concepts and that accounts for the introduction of the Cronbach's alpha to scale the measurements. However, it is argued that human behaviour cannot be measured and that humans react to different situations in different ways [17]. This accounts for the stiff criticisms that greeted the rational approach to consumer behaviour which holds that humans can react in a predictable manner [16]. If human behaviour cannot be measured as upheld by [17], it therefore means that the conclusion drawn by [8] by merely codifying participants' responses may yield a different result with a qualitative approach and therefore makes his conclusion questionable.

Another advantage of the quantitative studies is that in a bid to establish relationships, variables are operationalized, that is, quantified. This makes measurement easy upon which generalisation is made and replication is made possible [18]. Conversely, this is another thorny issue on the quantitative method. According to [4], the quantitative methods see humans and institutions as objects rather than social institutions. By distancing himself from the research process, the quantitative researcher alienates himself from the process and findings made are not likely to reflect the study, thus, codification of the responses are not enough and it is possible that if an interview with the same sample is conducted, it may yield a different result.

The proponents of quantitative method tenaciously and unyieldingly opine that because there is a distance between the researcher and the process, the result is without bias and therefore credible [19]. But this standpoint was punctured by [16], who argues that humans respond to situations according to their level of knowledge and prevailing circumstance at the time and that by probing further, the participant is able to reveal things not mentioned earlier that will aid the research process. Furthermore, the quantitative research sees humans and social institutions from the spectrum of physical sciences and therefore creates a static and robotic view to social life [3]; [6]. A recent research published in the BBC counters this belief. According to the research, [20], children are more generous at tender age to share what they have but the child learns to be selfish as he or she grows older. This is to say that environment and circumstance play a vital role in the character moulding of an individual.

[4] notes that one foremost strength of the qualitative research is that one-on-one interaction with respondents yields rich data. In the qualitative research under review, [11], the researchers' attempt to have a facial interaction with the respondents makes the data being collected richer. Again, through interaction, the researcher can probe further [7]. The opportunity to probe can answer some questions and provide more insights to the research process [19]. But [21] countered this assertion. He notes that the inability of a qualitative researcher to distance himself from the research process makes his interpretation to be subjective and therefore fraught with bias and personal opinions. To lend credence to this, [22] opine that subjectivity in qualitative research is the more reason why many researchers believe that it lacks reliability and generalizability and thus cannot be used as a basis for proffering scientific solutions to issues. Still on this, [21] points that data and process manipulation are key features of a qualitative research. This argument was not denied by [11] as they conceded that "researchers exercise personal judgment about what is significant," thus corroborating [22] that no researcher approaches an interview with a clean slate.

It is also noted that the ability of a qualitative research to explain and describe phenomenon makes it a preferred research option for many researchers [19]; [4], as it helps to shed more light on issues that might remain grey and foggy [23]. [11] utilised this approach by unravelling three themes that shape female consumers perception such as 'product/brand emotional significance', 'retail shopping experience' and 'retail environment.' A quantitative research may not likely to be this descriptive. [7] further explain that through descriptive and explanatory approach to qualitative research, in-depth and deep-seated emotions of the respondents are brought to fore which can impact on the research findings rather than a superficial responses which characterise quantitative research. Counting the above as one of the strengths of the qualitative research is rather surprising to [9]. According to him, this should rather be one of the downsides of the qualitative research as they unnecessarily elongate the process thus taking more than the usual time and also is more expensive than the quantitative research. For instance, comparatively, the process followed by [11], to complete the study would have taken lesser time and money if it were a quantitative research. This is so because interviewing the respondents up to three times is time consuming and quite expensive.

Another major strength of the qualitative research is that it is flexible to use. For instance, in a study, [24] sought to understand the perception of people in decision making towards an integrative patient-centred model in France. A focus group was used comprising the elderly, students, users of health support groups and rural inhabitants. Though a set of questions were designed, more issues were incorporated into the interview process as the interview lasted. The findings were quite enriching due mainly to the flexibility of the process. This is unlike a quantitative research that adopts some sets of questions that the respondent merely fills out.

### **III. Triangulation approach**

Having therefore looked at the strengths and weaknesses of the quantitative and qualitative research, this paper shall look at the way of mixing the two methods otherwise called the triangulation method. Triangulation method, according to [25] is seen as the combination of the quantitative and qualitative research designs in a single research project. He further stressed that the adoption of this method stems from the weariness of the quantitative/qualitative hostilities. To [26], the mixed method is the type of research in which a researcher or team of researchers combine elements of qualitative and quantitative research (e.g. use of qualitative viewpoints, data collection, analysis, inference techniques) for the broad purpose of breadth and depth of understanding and corroboration.

It is called different names by different researchers. For instance, multi-method [27], multi-strategy [25], multiple method, blended research, triangulated studies and mixed research [2]. Despite its many names, its adoption lies in its ability to moderate the deficiencies of both the quantitative and qualitative methods [13].

#### **1.2. Strengths and weaknesses of the triangulation approach**

[28] suggest that the triangulation method is particularly useful when comprehensiveness is sought. For instance one of weaknesses of [8], is that it merely codified the responses of the participants. Again, on the qualitative research, [11], subjectivity of the process might have led to the introduction of personal bias. To have a comprehensive and balanced view of the study, it is trite to combine the two methods [7]. This, according to [4], will serve as an offset, that is, a weakness in one will be offset by the strength of another and vice versa.

[29] also opines that the triangulation method is good for a research project that has pragmatic views, that is, when multiple views are sought in a single research project [30]. This view was depicted by [31]. In a research study designed to understand the factors that motivate Chinese consumers to patronise hypermarkets, two hypermarkets were chosen for the study. One local (Beijing Hualian) and one foreign (Carrefour). Three sets of interviews were conducted and survey questionnaires also administered. It was found out that Chinese consumers patronise Carrefour more than Beijing Hualian, which is a local firm because of its quality offering. The suitability of triangulation method is very noticeable here. Neither the quantitative nor qualitative study could have achieved this result.

One compelling need for the prevalence of mixed methods research is for triangulation [30]. [30] defines triangulation as the consideration of a research project in more than one angle in order to converge and cross-validate from different sources. [32] are of the view that methodological plurality enhance the triangulation of the findings of the quantitative and qualitative methods. For instance, one major weakness in the qualitative research under review, [11] is that through subjectivity, bias might have been introduced. Hence, approaching the study through a quantitative lens is likely to balance and offset that weakness [3]. But [33] and [13] argue that quantitative and qualitative researchers think in identifiably different ways and they have different views and therefore approach issues based on how they view the world. Bringing these two belief systems under one roof in the name of mixed method is to pull down the paradigmatic wall and in some cases incompatible in application [4]. This school believes that [8] cannot approach the study qualitatively nor can [11] approach the study quantitatively because they belong to different paradigmatic camps.

Another advantage of the triangulation method, according to [4] is that it leads to completeness and content validity. Completeness because one approach is used to compensate the weakness of another [34]. Also, triangulation method proponents opine that its adoption achieves credibility which can lead to replication [35]. [35] opine that replication is stronger in a mixed method approach than a mono-research method. To this end, the findings of the different studies are converged and cross-validated to yield more reliable, credible and generalisable findings and recommendations. But [17] argues that in most cases, complementarity of the mixed method is conditional and not absolute, while [2] is of the view that complementarity is limited to some research topics. He further argues that experiments in natural sciences will have limited application of qualitative studies, thus limiting the extent to which mixed method is used.

Concepts such as dependent and independent variables, content analysis, internal validity, external validity, ecological validity, face validity and causality which are applicably predominant in the quantitative research when triangulated with concepts such as observation, interviewing and flexibility, are bound to provide better illustration much more than a mono-research approach. For instance, comparing the two research topics under analysis, while [11] lacks objectivity [8] lacks flexibility. It is therefore incumbent to suggest that the combination of the two approaches is bound to provide a richer context and deeper illustration in the chosen topic. However, since the quantitative approach is noted for replicability, [36], the qualitative component of the mixed method can invalidate the replicability of the study. According to [37], the quantitative method views the world through a narrow lens, while the qualitative method views the world through a wider lens. It is therefore possible for the qualitative component of the study to overshadow the study and thus render the study non-replicable.

While it is believed that research projects are capital intensive, [38], triangulation method will entail a heavier expenditure than if one method was used. Apart from the cost, it is also time consuming. According to [9], a triangulation approach that cuts across respondents with different social and economic status might mean that while the researcher uses online questionnaire for some, he can adopt face-to-face interview for others and yet telephone for another group. All these entail cost and time. The three-stage interview adopted by [11] meant that considerable amount of time and cost were put into the process. Imagine introducing a survey questionnaire which has to be distributed. It means both the time and money spent would be much more.

#### **IV. Conclusion**

In conclusion, this paper has looked at the philosophical underpinnings of research methodology and narrowed the discussion to two research projects (one quantitative and another qualitative). It analysed the two research projects in the light of the chosen research design and methods. Pros and cons of the quantitative, qualitative and triangulation research methods with respect to the chosen research topics were discussed. Most specifically therefore, this paper contributes that no one method is the best but the best method depends on the nature of the research. However, there are some research projects that triangulation method is inevitable to be employed if the research must yield expected result.

Furthermore, the paper has comparatively looked at two research papers with the aim of drawing out the views of the proponents and opponents of the two major research strategies. Strengths of the paper lie in the fact that it has explicitly stated when each of the research strategies should be employed, thus, contributing to dismantling the longstanding paradigmatic hostility. However, a limitation of the paper is that it mostly, except with few instances, used examples and empirical support drawn from developed economies. It is therefore recommended that a research on this perspective should primarily focus on research papers and examples from emerging economies, particularly Africa, Asia and the Middle East.

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