Qualitative and Quantitative Case Study Research Method on Social Science: Accounting Perspective

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Abstract—The main aim of this paper is to set the parameters within which the study is to be conducted, specifically justifying the use of qualitative research, informed by theory. This paper argues that the social world is subjective in nature and may be accessed through the interpretive approach provided by the people involved in the context of the study. The paper defines and distinguishes between qualitative and quantitative research methodologies, explores Burrell and Morgan’s framework for social research, and presents the study’s adopted methodology and methods, with the rationale for these choices.

Keywords—Accounting, methodologies, qualitative, quantitative research.

I. INTRODUCTION

QUALITATIVE research is "an approach to the study of the social world which seeks to describe and analyse the culture and behaviour of humans and their groups from the point of view of those being studied" [2]. Quantitative researchers have tended to view qualitative research as an exploratory way of conducting social investigations [10]. They see it as a useful tool at the preparatory stage of a research project [2] and yet there are significant differences between the two methodologies. Reference [32] divided the differences between qualitative and quantitative methodologies into three areas. The first was related to the distinction between explanation and understanding as the purpose of the inquiry. Qualitative research, he suggested, was concerned mainly with understanding the complex interrelationships between different variables, while quantitative researchers were interested in explanation and control. The second area of divergence he identified was related to the distinction between knowledge discovered and knowledge constructed. Qualitative researchers believe that knowledge is constructed rather than discovered [32]. Proponents of qualitative research see this methodology as a useful tool to expose actors’ meanings and interpretations. The distinction between the personal and impersonal role for the researcher was the third major difference between qualitative and quantitative studies highlighted by [32]. The personal influence of researchers on the research setting is not acknowledged in quantitative research, but is recognised in qualitative research.

Several authors [2], [5], [23] have provided a summary of the important dimensions on which qualitative and quantitative research diverge. Table I summarises these differences according to their viewpoints.

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The table shows that the relationship between the qualitative researcher and the subject is close and the researcher is seen as an insider. Reference [2] suggested that qualitative researchers can better view the world by getting close to their subjects and becoming an insider within the research setting. In contrast, the relationship between the quantitative researcher and the subject is usually brief or non-existent, with the researcher seen as an outsider [2], [5], [23].

With regards to the reality dimension, quantitative researchers tend to convey a static view that exists independently of the researcher. It is based on the notion that there is only one social reality. On the other hand, qualitative researchers believe that social reality is constructed by the actor and can be changed. Qualitative researchers try to preserve the multiple realities that may exist [4], [6].

The role of theory and concepts within the two approaches is different. Theories are the starting point for investigations within the quantitative approach whereas developing or refining a theory is the concern of qualitative research [2]. Qualitative data may suggest a theory to explain the phenomena being studied, which can then be strengthened by quantitative support [8]. Research methods adopted in quantitative research tend to be more structured than those adopted in qualitative research. Quantitative research is structured in the sense that sampling determination and data collection instruments, for instance, are designed prior to the data collection process [2], [7], whereas in qualitative research project the subject being studied often evolves as the research is undertaken.

In relation to research findings, a distinction is made between quantitative and qualitative methodologies in terms of nomothetic and ideographic modes of reasoning. The collection of large-scale quantitative data lends itself to a
nomothetic approach. While a qualitative study usually takes an ideographic approach:

Anomothetic approach seeks to establish general law-like findings which can be deemed to hold irrespective of time and place; an ideographic approach locates its findings in specific time-periods and locales [2].

Thus, understanding the reality of the practice of accounting objectives from the participant’s perspective may better be achieved by collecting data through ideographic methods. An ideographic approach is one where the researcher obtains insights using techniques that take the researcher inside the subject of interest, for example via personal encounter with the subject and/or involvement with the subject’s “everyday flow of life” [3]. Since this study acknowledges the Libyan context, qualitative methods are more appropriate to achieve its objectives, through a case study approach.

There are many valid reasons for doing qualitative research rather than quantitative. The important one, and probably the most valid one, is the nature of the research problem [31]. For example, research that attempts to understand the meaning or nature of the role of accounting information systems, with problems such as decision making, planning and control and finding out what people are doing and thinking, can only be conducted by using qualitative methods. Qualitative methods can be used to explore substantive areas about which little is known, such as in Libya, or in a situation in which much is already known, in order to gain a fresh and deeper understanding. In addition, qualitative methods can be used to obtain intricate details about phenomena such as beliefs, thought processes, and emotions that are difficult to extract or learn about through more conventional research methods [33]. Qualitative researchers seek to make sense of personal stories and the ways in which they intersect [11]. Qualitative research is of specific relevance to the study of social relations, owing to the pluralization of life worlds [10], and hence is appropriate to this study, which investigates the role of AIS in meeting the development needs of Libya. Qualitative research is therefore most appropriate for this study of the Libyan context. The accounting profession in Libya, for example, has a short historical background [18]. As a result, very little is known about its accounting practices and the profession generally [1]. Where studies of Libyan accounting do exist [18], [28], [29], they have mostly provided general descriptions of the accounting system in Libya, not the problems faced by the accounting profession nor the strategies available to resolve these problems [1]. Libya has funded many students to study overseas [18] and whilst these students have undertaken many research projects, most have focused on research about other countries rather than Libya, because of the difficulties of the availability of data in Libya. Access to data in Libya is restricted, and governed by time-consuming and bureaucratic rules. The opportunity to gain firsthand knowledge of the way Libya’s accounting systems work, can best be grasped by using a qualitative approach, with interviews of people actually involved in accounting.

This paper places an emphasis on a consistency between the purpose of research and the theoretical, methodological and methodical choices. Thus, the approach is mainly qualitatively based, and as such, relates to the interpretive tradition. It seeks to collect data based on case studies, and to interpret that data in the light of the economic development theory of globalisation. This is in keeping with social science researchers who employ qualitative research methods and who espouse an approach in which theory and empirical investigation are interwoven [30].

II. CASE STUDIES

Case studies include a variety of data collection methods including document analysis and interviews, as well as the technique of data triangulation to establish the validity of data. Data triangulation involves “using multiple sources of evidence” [37]. These are adopted in this paper, for they permit a greater understanding of the particularities of accounting objectives and development needs in the Libyan research setting than do research methods limited to surveys and questionnaires.

The term “case study” has been defined as "an empirical inquiry that investigates a contemporary phenomenon within its real-life context; when boundaries between phenomenon and context are not clearly evident; and in which multiple sources of evidence are used” [37]. A case study is therefore contextualised, “a detailed investigation, often with data collected over a period of time, of one or more organisations, or groups within organisations, with a view to providing an analysis of the context and processes involved in the phenomena under study” [12], [13]. Reference [12] further argued that a case study approach is not a method but rather a research strategy. Reference [8] described a case study as a research strategy which focuses on understanding the dynamics present within single settings. The terms case study method and case study strategy have been used interchangeably.

Reference [32] distinguished three purposes of a case study. First, a case study can be employed to understand and learn more about a particular case. This type of case study is called an intrinsic case study. Secondly, a case study can assist in understanding something through studying something else. The aim in this case is to accomplish something other than understanding just a particular case. This type of inquiry is called an instrumental case study. Finally, a collective case study refers to conduct of a detailed investigation where more than one case is chosen. Case studies can involve either a single or multiple cases. Reference [37] distinguished between three types of case studies: descriptive, exploratory and explanatory. Reference [25] added illustrative and experimental case studies. In undertaking case studies, different methods can be used in collecting and analysing data. These methods may be either quantitative, qualitative or a combination of both [12].

The selection of a case study relies on theoretical sampling as cases are chosen for theoretical rather than statistical
reasons. Cases may be chosen to replicate previous cases, extend emergent theory, or to fill theoretical categories [8].

The current role of accounting systems was examined through the use of an explanatory qualitative case study, a most effective way of gaining an understanding of specific cases. The opposite side of this specificity, however, is the difficulty of generalising the insights gained from the study. This will be discussed further later in this paper.

III. USE OF THEORY IN QUALITATIVE RESEARCH

The use of theory in qualitative research has been a problematic issue. In quantitative research, the hypotheses and research questions are often based on theories that the researcher seeks to test. In qualitative research, in contrast, theory is often adapted or refined throughout the research process in an attempt to link diverse and unrelated facts in logical way [16]. Researchers will face many problems when they incorporate theory into their research, for instance, clarifying the role of theory in qualitative case studies, the relationship between theory and data, and how to apply theory in their research [21]. Reference [21] identified five different levels of theorizing: metaphor, differentiation, conceptualization, context-bound theorizing of settings, and context-free "grand" theorizing. According to the first level, peoples' experience of the world is grounded in metaphor. The use of metaphor is a way in which human beings make sense of the world, by grounding their image of reality and experience in a familiar picture [21]. Theories of differentiation highlight contrasts in the study [21]. On this level, the researcher's lens will enable him or her to sift the qualitative data gathered into distinctive categories that are set in opposition to each other. At the third level, concepts are theorised by linking theory and structure to practice. The fourth level of theorising refers to making sense of relationships between theory and data within a particular context. It shows the setting for activity important in understanding data. Accounting as a human activity takes place within a social context, and demonstrates the way social and organizational structures are intertwined. Level five of theories according to [21] refer to "grand" theory that is theorisation by explaining impersonal, large scale and enduring aspects of social life, at a society-wide level [15]. This type of research is concerned with ideas, philosophical underpinnings, or a meta-theory that explains the world. Research outcomes are formed when a societal view is projected onto the world scene.

In the present paper, the third and fourth theoretical levels are applied to the Libyan context by using an economic theory of development. The paper argues that there is a close connection between the environment of the country and its accounting practices as represented in Fig. 1. In any study, the application of a theory to accounting represents the outworking of the researcher's philosophical beliefs. Four paradigms have been identified as being available to researchers studying a phenomenon. Reference [3] combined the objective-subjective and regulation-radical change dimensions and produced a matrix defining four key sociological paradigms. These four paradigms are labeled as functionalist (acknowledging an objective reality and concerned with regulation), interpretive (seeing reality as subjectively constructed and concerned with regulation), radical structuralist (objectivist and concerned with radical change) and radical humanist (subjectivist and concerned with radical change). These paradigms are portrayed in Fig. 1, and according to [3], are founded upon mutually exclusive views of the social world. Each stands in its own right and generates its own distinctive analyses of social life.

The radical humanist paradigm is defined by its concern to develop a sociology of radical change from a subjectivist standpoint. It emphasizes individual perceptions and interpretation, it views the social world from a perspective which tends to be nominalist, anti-positivist, voluntarist and ideographic [3]. The radical structuralist paradigm treats the social world as being composed of external objects and relationships independent of any particular person. It approaches these general concerns from a standpoint which tends to be realist, positivist, determinist and nomothetic. Theorists located within this paradigm advocate a sociology of radical change from an objectivist standpoint [3].

From a functionalist viewpoint, the social world is composed of relatively concrete empirical phenomena which exist independently of particular human beings. Thus, functionalists apply the methodologies used in the natural sciences to analyse the way accounting systems work. By doing this they assume they are neutral, objective, and value-free observers of the role of accounting systems under investigation [3]. Functionalists also accept power and political arrangements as given and so consider the existing power structure as unproblematic. Their concern is to search for workable solutions to practical problems which will help accountants and managers achieve better alignments of these systems with other organizational elements and forces.

![Fig. 1 Four Paradigms for the Analysis of Social Theory](image-url)
understand the fundamental nature of the social world at the level of subjective human experience. The focus is an individual meaning and people’s perceptions of reality rather than any independent reality that might exist external to human perception. The social world is perceived as an emergent social process which is created by the human individuals concerned [3]. According to the interpretivist paradigm the role of accounting systems does not stem predominantly from social structures which exist independently from accountants and managers, but is reflexively developed. This study takes an interpretive approach at the level of collecting and studying data, but moves to more functionalist approach in proposing changes in Libya’s accounting systems.

To sum up this section, qualitative methods are often more useful for the study of how language and meaning evolve and are modified, and therefore to study how accounting meaning is socially generated and sustained. Indeed, it is because there are so many ways of conceptualising the role of accounting that a certain degree of prior theorization, in the form of a theoretical lens, is considered necessary, in order to limit the complexity and make sense of the results. For the present study, theories of economic development have been chosen as a theoretical lens, considered against a backdrop of accounting in developing countries, public sector reform and state control. The study does not intend to test or validate theory; rather it uses theory to assist in organizing ideas and identifying themes, while remaining open to the possibility that new theory may emerge from the data.

IV. THE CONDUCT OF THE STUDIES

Archives, observations, questionnaires and interviews are among data collection methods which may be adopted when undertaking case study research [8]. The benefit of using documents is to corroborate and augment evidence from other sources [37]. The use of multiple sources of evidence in case studies allows an investigator to address a broader range of historical, attitudinal, and behavioural issues. However, the most important advantage presented by using multiple sources of evidence is the development of converging lines of inquiry, a process of triangulation mentioned in the earlier section of this chapter. Gathering data by studying documents follows the same line of thinking as observing or interviewing. The potential usefulness of different documents should be estimated in advance and time allocated so that it is judiciously spent [32].

Participant observation is probably the collection method with which qualitative case study research is most closely associated [2]. Through participant observation it is possible to describe what goes on, who or what is involved, when and where things happen and how they occur [32]. Participant observation is especially appropriate for exploratory studies, descriptive studies and studies aimed at providing a theoretical interpretation. The main advantage of this method is that it enables the researcher to collect first-hand data in a natural setting. Moreover, researchers can understand and interpret the observed behaviour, attitude and situation more deeply than by using only questionnaires or interviews. However, one of the disadvantages of being an observer is the inability to observe and record all actions in a setting. The main disadvantage is that individuals who may find it difficult to translate the events into useful information make most of the observations. Other problems are concerned with ethics, confidentiality, objectivity, visibility and the impact of the researcher on those being observed [23]. Observer bias may arise due to different interpretations of an action, event or behaviour. Due to the above limitations, time and cost constraints, participant observation was not adopted as the main data collection method in this study. Data collection was accomplished through archival information, interviews, meeting attend and the distribution of questionnaires.

Questionnaires have already been identified as a technique primarily of quantitative research [14]. They allow the researcher to collect data from a large sample. It is considered to be cheaper than other methods such as telephone questionnaires or interviews. However, in spite of the advantages of questionnaires as a tool for data collection, there are some disadvantages of this method, one of the main ones being the misinterpretation of questions by participants. Low rates of response and unanswered questions are the most common problems with posted questionnaires [35]. Furthermore, questionnaires are criticised for not allowing respondents to express freely their views due to the limited and pre-determined answers of the questionnaires [27].

The interview method of data collection has three main features that distinguish it from other methods: it is a highly flexible method; it can be used almost anywhere; and it produces data of great depth [19], [20], [35]. The interview has a wide variety of forms and a multiplicity of uses. The danger of using this method is that researchers may feel that it is too familiar, straightforward and even boring. If the goal of a qualitative research project is to see the phenomena from the perspective of the interviewee, and to understand how and why he or she comes to have this particular perspective, then an interview is a most useful and appropriate data-gathering technique. The most common type of interviewing is an individual, face-to-face verbal interchange, which can be structured, semi-structured or unstructured.

Interviews were conducted because it is acknowledged that the interview is a powerful method of data collection. It provides an opportunity to ask for clarification if an answer to a questionnaire is vague [34]. Interviewing was thus a vital source of data from employees within the organisations. A key feature of the qualitative research interview method is the nature of the relationship between the interviewer and the interviewee. This view is based on seeing the interviewee as a participant in the research, actively shaping the course of the interview rather than passively responding to the interviewer’s pre-set questions [17], [19].

There are several sources of bias or error arising from carrying out an interview. Reference [24] described three types of bias to be considered when conducting interviews. These were interviewer bias, interviewee or response bias and sample bias. Interviewer bias is related to the interviewer's
comments, tone or verbal behaviour during the interview that may affect the interviewee response. Interviewee bias occurs when an interviewee gives biased answers either to conceal some facts or to please the interviewer. Sample bias may occur as a result of bias in the individuals or organisational participants who agree to be interviewed. These may not have the information the researcher is looking for to answer the research question(s) and to achieve the research objective(s).

V. DATA ANALYSIS

Principally, the analysis process was applied to the fundamental data acquired through personal interviews with the participants in the study, and from documents and observations made in meetings. Qualitative analysis of these data includes comment on them with a focus on observing some matters that arose during the researcher’s presence in the company. Regarding quantitative data, due to the small size of the respondent population (less than 30 participants), and because of the contrast in the unknown population, a descriptive statistics test was employed and the result of it was determined [36]. Discovering and understanding the role of accounting systems in providing useful data for the development plans, and the extent of the feasibility of these systems primarily in providing data and information, were the key objectives in gathering and analysing data.

VI. PRODUCING GENERALISATIONS

Case studies seem a poor basis for generalisation, particularly for quantitative researchers, who typically deal with large sample populations [9]. In this study only two cases will be studied, but these will be studied in depth and at length. Certain activities, problems or responses will be shown to have come up again and again. As a result, the researcher may become convinced that certain generalisations can be drawn. On the other hand, the ability to generalise from case studies is not usually the main concern for researchers adopting this method. References [26] and [37] distinguished between theoretical generalisations and statistical generalisations. A case study “does not represent a 'sample,' and the investigator's goal is to expand and generalise theories (analytic generalisation) and not to enumerate frequencies (statistical generalisation)” [37]. The unique circumstances of each case study make generalisation a difficult task. Reference [25] argued that statistical generalisations, as opposed to theoretical generalisations, do not explain; rather they only indicate the statistical regularities. The aim of the case study is not to understand other cases but to understand a particular case [32] and any researcher bias that might affect the result of the study.

VII. DRAWING CONCLUSIONS

The process of collecting data was divided into four major steps: data collection, data display, data reduction and conclusions, both informed by and informing theory [22]. Fig. 2 illustrates these steps and their interrelationships.

Displaying the interview data in tables and other forms is a helpful tool to reduce, categorise, understand and interpret the data [22]. Therefore, after the collection process, data were grouped and reduced into different categories manually. This process helped to move from burdensome unorganised data to more organised data from which patterns emerged. Categorising the data helped the researcher to develop an understanding of how accounting information was practised and understood by participants. From these patterns and through a theoretical lens of Economic Development Theory, conclusions were drawn based on the researcher’s interpretation of the participants’ view points. In order to encourage feedback, participants were given an outline of the researcher’s impressions. The participants were then invited to comment upon it. Receiving feedback from participants was important as a source of assuring the conformability of observations [22], [32].

After collecting and analysing the data, an account of each case study was made. From the data gathered from these cases and the conclusions drawn, an assessment was able to be made of the present state of accounting in Libya, and what action would be needed to advance the role of accounting in order to enhance Libya’s economic development.

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