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THE INFLUENCE OF QUANTITATIVE RESEARCH IN BUSINESS & INFORMATION TECHNOLOGY: AN APPROPRIATE RESEARCH METHODOLOGY PHILOSOPHICAL REFLECTION

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Abstract
The purpose of this study is to examine quantitative methodology in the context of Business & Information Technology research. The study provides an overview of the evolution of methods, paradigms, and interpretive frameworks in Business & Information Technology, explores important benefits, and limits, and examines fresh trend quantitative data in a single research project to reconcile methods for Business & Information Technology. The appropriate selection of a research technique is a critical decision for effective scientific research, and it is mostly dependent on matching research objectives to the features of accessible research procedures. One of the most difficult decisions a researcher must make is which research method to use. This is because researchers in the fields of economics, business, and technology must choose from a lot of different approaches and techniques. As a result, the purpose of this study is to examine an appropriate research technique for identifying and assessing essential strategic management aspects and phases, as well as difficulties linked to (a) quantitative research and (b) strategy (c) management (d) information systems, (e) digital systems. According to the findings, research methods, in addition to quantitative research, provide an engaging style of conducting business research.

Keywords: Quantitative Research, Strategy, Management, Digital Systems, Information Systems, Business & Technology Sectors.

Introduction

The quantitative technique, which began in natural sciences such as biology, chemistry, physics, and geology and was concerned with researching things that could

be observed and quantified in some manner, was usually utilized in the social sciences for several decades. Until the early 1980s, when the "paradigm wars" advocates of quantitative research reached a new high (Guba, 1990; Tashakkori and Teddlie, 1998), quantitative research was the widely acknowledged research paradigm in educational research. This article does not purport to provide a thorough examination and synthesis of all elements of quantitative research technique. It does, however, try to emphasize them from an ontological, epistemological, and methodological standpoint. As a result, the research examines quantitative meta-theoretical assumptions about the nature of the knowable or reality (ontology), perspectives on truth and valid knowledge (epistemology), and how the inquirer obtains information (methodology). A critical examination and synthesis of previously published materials is used with the goal of supporting and equipping business researchers to comprehend the genuine distinction between quantitative and qualitative research. The remainder of the paper is laid out as follows: The literature review follows, which contextualizes the contrast between quantitative research from ontological, epistemological, and methodological viewpoints. The review is concluded and summarized in the last section. Digital systems have been characterized as social systems where technology is only one aspect of them (Land, 1992). The study of Business & Information Technology is a multidisciplinary research object and as the literature review shows, there is a lack of a single global research approach that includes all the necessary areas of knowledge required for an efficient study (Galliers, 1992; Walsham, 1995). Strategic Management of Digital Systems is based on the understanding of various variables and key strategic factors related to: (a) business, (b) technology, (c) people, (d) enterprises, (e) economy, (f) law and (g) politics. Research in Business & Information Technology is characterized by methodological pluralism and the assortment of an appropriate research methodology is a crucial topic that attracts researchers' attention (Galliers, 1992; Miles & Huberman, 1994; Yin, 2011). Therefore, in research issues that combine Economics, Business and Information and Communication Technology (ICT) aspects, researchers have to choose among a variety of research methods, approaches and techniques to develop an appropriate research framework. Research is defined as systematic creative labor aimed at increasing knowledge and applying that information to establish or confirm facts, solve issues, develop new ideas, and give inventive solutions.

Quantitative research is one of the most common types of study. Researchers select quantitative methods to find, gather, and evaluate data to improve our understanding of a problem based on the study goal, goals, nature of the topic, and research questions. The research process often includes steps such as defining research questions, collecting data, analyzing data, answering research questions, and presenting findings (Goertz & Mahoney, 2012).

The quantitative approach is provided and discussed in the next sections of this article, and the choice of an appropriate research technique to test a strategic management framework for Digital Systems is justified based on the research's aim and particular objectives.

Literature Review

All research is founded on specific philosophical assumptions about what constitutes "legitimate" study and which research procedures are appropriate for the purpose of knowledge generation in a certain subject. The paradigm that guides the research endeavor has an effect on the research method used. The term "paradigm" is derived from the Greek word "paradigm," which means "pattern," and was used by Kuhn (1962) to refer to a shared conceptual framework shared by a group of scientists that acted as a helpful model for analyzing problems and determining solutions. According to Kuhn, the term "paradigm" refers to a research culture defined by a group of academics sharing a set of similar beliefs, attitudes, and assumptions about the nature and conduct of research (Kuhn, 1977). Thus, a paradigm is a pattern, structure, framework, or system of scientific and scholarly principles, assumptions, and ideas (Olsen, Lodwick, and Dunlop, 1992). Simply said, it is a way of conceptualizing and doing research. According to Terre Blanche and Durrheim (1999), the research process is divided into three basic dimensions: ontology, epistemology, and methodology. They assert that a research paradigm is an all-inclusive system of interrelated practices and ideas that shapes the nature of inquiry along these three dimensions. According to Guba and Lincoln (1998), a research paradigm is intrinsically tied to the concepts of ontology, epistemology, and methodology. They stated that a research inquiry should be founded on the concepts of ontology (how the investigator defines truth and reality), epistemology (how the investigator obtains knowledge of truth and reality), and methodology (how the investigator obtains knowledge of truth and reality) (i.e., the method used in conducting the investigation). According to these researchers, responses to questions regarding these three traits serve as the foundation for the whole research process, from strategy and procedure development through analysis.

Quantitative Research

Quantitative research is concerned with the systematic and empirical examination of phenomena via the use of statistics and mathematics, as well as numerical data processing. Estimating numbers is critical when doing quantitative research because it relates the actual world to the mathematical representation of quantitative connections. In quantitative research, data is often selected and analyzed numerically (Singh, 2006; Goertz & Mahoney, 2012). Researchers frequently use statistics when: (a) a large amount of quantitative data must be analyzed and processed in order to test

a theory; (b) the theories under consideration are unknown; (c) questionnaires with simple questions and short responses are used; and (d) the data can be quantified and compared. In quantitative research, data processing is often carried out using specialized statistical tools (Martin & Bridgmon, 2012; Singh, 2006). As has been discussed in the literature, quantitative research has a number of advantages. (a) the outcome is numerical (quantitative), which means that the research and facts are unaffected by personal feelings or opinions; (b) the quantitative approach makes it easier to process large amounts of data; (c) it makes data comparison easier; and (d) quantitative research enables the development of a variety of different types of research. These are only a few instances of quantitative research's benefits. Several of the fundamental aspects of quantitative research methodologies that are important to certain research aims are as follows: This may be accomplished by connecting research to experiments, conducting investigations, and using sophisticated statistical methods (Goertz & Mahoney, 2012; Newman, 1998; Singh, 2006). Additionally, this may be accomplished via the use of surveys (often with closed questions), the quantification of correlations and characteristics, and the collection, processing, and presentation of quantitative data Younus, A. M., Tarazi, R., Younis, H., & Abumandil, M. (2022). The basic aspects of quantitative research methodologies are summarized in Table 1.

Table 1: Key Features of Quantitative Research Approaches

Quantitative Research	Brief Description	Literature
EXAMINES	Phenomena: A fact or situation that is observed to exist or happen, particularly when the cause or explanation is in question.	Singh, (2006); Goertz & Mahoney, (2012); Dawson, (2002); Kothari, (1985); Kumar, (2005).
INTERPRETATION	The quantitative research approach usually refers to the systematic investigation of phenomena through statistical and mathematical analysis and the processing and analysis of numerical data.	Bhattacherjee, (2012); Kumar, (2005).
USUALLY SELECTED WHEN:	➢ It is necessary to analyse and process a large amount of quantitative data to verify hypotheses and / or test the theory. ➢ There is no uncertainty about the conceptions under consideration. ➢ The research can be carried out with questionnaires that include simple questions and short answers that can easily be quantified and compared.	Dawson, (2002); Kothari, (1985); Kumar, (2005); Bhattacherjee, (2012); Singh, (2006); Goertz & Mahoney, (2012).
GENERAL CONTEXT	Correlation with experiments Testingof Hypotheses related to phenomena. Use of advanced statistical tools Using questionnaires	Martin & Bridgmon, (2012); Black, (1999); Balnaves & Caputi, (2001).
QUESTION FORM	Closed Questions	Balnaves & Caputi, (2001); Singh, (2006).
DATA FORMAT	Numeric data (quantified) usually obtained by questionnaires.	Miles & Huberman, (1994); Goertz & Mahoney, (2012).

Ontological Issues in Business Research

Ontology derives from two Greek words: onto (meaning "to be") and logia (meaning "to know") (meaning "science, study, or theory"). Ontology is a branch of philosophy concerned with articulating the universe's nature and order (Wand and Weber, 1993, p. 220). It establishes the structure and character of reality, as well as the extent to which it may be taught. Objectivism and constructionism are diametrically opposed philosophical positions; objectivism believes in an autonomous reality, while constructionism thinks that reality is the consequence of social processes (Neuman, 2003). The positivist paradigm for investigating social reality is based on the philosophical concepts of Augustine Comte, a French philosopher. According to him, the most effective methods for comprehending human behavior are observation and reasoning; authentic knowledge is based on sensory experience and may be acquired via observation and experimentation. Positivism maintains that reality is objectively given and measured using ontologically unrelated properties and tools; in other words, knowledge is objective and measurable. Positivistic thinkers use scientific methods to regulate the knowledge-generating process and quantify parameter descriptions and correlations to increase their accuracy. Henning, Van Rensburg, and Smit (2004) describe positivism as the "empirical search for truth." According to Walsham (1995b), the positivist position maintains that scientific knowledge is composed of facts, but its ontology assumes that reality is self-contained. If the subject of the investigation is a continuous and unchanging reality, the researcher may adopt an "objectivist" perspective: They can employ methodology that is based on the control and manipulation of reality, as well as a realist ontology—belief in an objective, real world—and a detached epistemological stance based on the belief that people's perceptions and statements are either true or false, correct or incorrect, and on a view of knowledge as hard, real, and acquirable. On the other hand, interpretive scholars think that reality is composed of people's subjective impressions of the outer world. As a consequence, reality is produced socially; it is a human construction (Mutch, 2005). According to Willis (1995), interpretivists are anti-foundationalists who believe there is no one correct method or approach to knowledge. Walsham (1993) asserts that in the interpretive tradition, there are neither "correct" nor "incorrect" assumptions. Rather than that, they should be evaluated on the basis of their "interest" to the researcher and others working on related subjects. They attempt to get their findings from the field by conducting in-depth studies of the phenomena of interest. According to Gephart, interpretivists believe that knowledge and meaning are acts of interpretation and that there is no objective knowledge that is independent of human thinking and reasoning (1999). According to Myers (2009), interpretive scholars believe that the only way to access reality is via social constructs such as language, consciousness, and shared meanings (whether given or socially produced). The interpretive paradigm is

founded on the observation and interpretation paradigms; observation is the process of gathering knowledge about occurrences, whereas interpretation is the process of making sense of that information by drawing conclusions or determining the fit between the facts and some abstract pattern (Aikenhead, 1997). It attempts to make sense of things by examining the meanings ascribed to them by others (Deetz, 1996). According to Reeves and Hedberg (2003, p. 32), the "interpretivist" paradigm stresses the need for contextualizing analysis. The interpretive paradigm is concerned with seeing the world via the subjective experiences of individuals. They depend on subjective contact between the researcher and the participants in order to apply meaning-focused (as opposed to measurement-focused) techniques such as interviewing or participant observation. Interpretive research does not predetermine dependent and independent variables; rather, it focuses on the unfolding complexity of human sense-making (Kaplan and Maxwell, 1994). The interpretive technique is concerned with deciphering the subjective motivations and meanings that underlie social behavior. Interpretivists are more concerned with examining, assessing, and improving interpretative concepts than with generating new theories.

Business Research Epistemological Issues

Epistemology is concerned with the nature of the researcher's (knower's) interaction with the world and with "the nature of human knowledge and understanding that may be obtained via various forms of inquiry and alternate ways of study" (Hirschheim, Klein, and Lyytinen, 1995: 20). The following questions are posed by epistemology: What link exists between the knower and the known? How do we come to know what we do? What is "knowledge"? There are two major epistemological schools of thought: positivism and interpretivism – constructivism. The objective of inquiry, for positivists, who came primarily from a nineteenth-century philosophical perspective, is scientific explanation. According to Neuman (2003), positivism views social science as a systematic approach for integrating deductive reasoning with accurate empirical observations of individual behavior in order to identify and establish a set of probabilistic causal laws capable of predicting broad patterns of human activity. For positivists, social reality has the following characteristics: empirical facts exist independently of human ideas or thoughts; they are regulated by laws of cause and effect; social reality patterns are stable, and knowledge of them is additive (Crotty, 1998; Neuman, 2003; Marczyk, DeMatteo and Festinger, 2005). As Ulin, Robinson, and Tolley (2004) noted, a fundamental premise of this paradigm is that the purpose of research is to establish the most objective procedures feasible in order to get the closest approach to reality. Researchers that approach problems from this viewpoint provide quantitative explanations for how factors interact, affect occurrences, and result in outcomes. They often conduct experimental research to establish and

evaluate these ideas. Multivariate analysis and approaches for statistical prediction are two of this area of research's seminal achievements. This paradigm asserts that valid information is derived through direct observation or modification of natural occurrences using empirical, often experimental, methods (Lincoln & Guba, 2000, 2005; Neuman, 2003). On the other hand, an interpretivist/constructivist viewpoint, which is the theoretical foundation for the majority of qualitative research, views the world as built, interpreted, and experienced by individuals in their relationships with one another and with larger social systems (Maxwell, 2006; Bogdan and Biklen, 1992; Guba and Lincoln, 1985; Merriam, 1988). According to this paradigm, inquiry is interpretative in nature, and its objective is to comprehend a specific phenomenon, not to generalize to a population (Farzanfar, 2005). Interpretivist researchers are naturalistic in that they apply to real-world circumstances as they emerge organically; they are also non-manipulative, inconspicuous, and non-controlling. According to Ulin, Robinson, and Tolley (2004), qualitative research technique often depends on personal interaction between the researcher and the group being investigated over an extended period of time. Establishing a relationship with research participants may result in a greater understanding of the situation under investigation, so enriching and deepening the data. Thus, qualitative techniques are inductive, that is, geared toward discovery and process, have a high degree of validity, place a lower premium on generalizability, and place a higher premium on a better knowledge of the study topic in its particular context (Ulin, Robinson and Tolley, 2004). Both positivists and interpretivists believe that human behaviour may be patterned and consistent. While positivists see this through the lens of cause and effect, interpretivists view it through the lens of developing meaning systems that individuals form via social interaction (Neuman, 2003). Because interpretive researchers place a premium on gaining a better understanding of the world through first-hand experience, accurate reporting, and quotations from actual conversations from insiders' perspectives (Merriam, 1998) rather than on testing the laws of human behaviour (Bryman, 2001; Farzanfar, 2005), they employ context-sensitive data collection methods (Neuman, 2003) that enable rich and detailed, or thick descriptions of social phenomena by encouraging participation. As a result, the most often utilized data collection procedures for qualitative researchers include the interview, focus group discussion, and naturalistic observation. On the contrary, positivist researchers place a premium on understanding behaviour using quantifiable data collected via highly standardized methods such as questionnaires and psychological tests with carefully phrased questions. Issues of trustworthiness and credibility, as opposed to positivist norms of validity, reliability, and objectivity, are significant concerns in the interpretivist paradigm. According to Ulin, Robinson, and Tolley, positivists employ validity, reliability, objectivity, correctness, and generalizability to assess the rigor of

quantitative research that is intended to characterize, predict, and verify empirical relationships in relatively controlled situations (2004). Qualitative research, on the other hand, cannot utilize the same criteria to assess the quality and results of research since it aims to discover, explore, and understand. According to Lincoln and Guba (1985), the key criterion for qualitative reporting is trustworthiness. How can a researcher be certain that "the results of a study are worth considering"? They are perplexed. To be considered genuine and legitimate, investigations must be predicated on a compelling reason that verifies the approach chosen and the processes used in data collection and analysis.

Methodological Issues in Research Business & Information Technology

The term "methodology" refers to the process through which a researcher determines what he or she believes may be discovered. It's a research method that translates ontological and epistemological notions into research instructions, as well as the norms, methods, and activities that govern research (Sarantakos, 2005). (Kazdin, 1992, 2003a, cited in Marczyk, DeMatteo, and Festinger, 2005). The positivist research paradigm underpins the quantitative method. The realist/objectivist ontology and empiricist epistemology of the positivist paradigm entail a detached or objective research strategy, with a focus on measuring variables and assessing hypotheses connected to broad causal explanations (Sarantakos, 2005; Marczyk, DeMatteo, and Festinger, 2005). Experimental designs are used in positivist research to analyze impacts, particularly those related to collective changes. Data collection methods are oriented toward gathering hard data in the form of numbers in order to quantitatively demonstrate proof (Neuman, 2003; Sarantakos, 2005). Positivism obtains the truth through verifying and repeating observable results (Guba and Lincoln, 2005), manipulating factors associated with the research objects (Trochim, 2000), and employing statistical analysis (Bryman, 1998; Kim, 2003). As a result, positivists emphasize the importance of using true and reliable methodologies to describe and explain events Ahmed, M. Y. (2021).

Distinction Quantitative Research Paradigm

The confirmatory scientific method is most often used in quantitative research. Quantitative researchers believe that it is critical to state your ideas and then test them against real-world facts to see if they are true. On the other hand, qualitative research is often undertaken in an exploratory scientific manner. Qualitative research may be used to discover or establish new ideas or hypotheses. Qualitative research is also useful for describing what is seen in a region. Qualitative research is used when there is a dearth of information about a subject or phenomena, and you want to learn more about it. It is a widely used technique for analyzing and expressing human feelings.

According to proponents of mixed research, it is vital to use both exploratory and confirmatory approaches in one's study (Johnson & Onwuegbuzie, 2004). When doing research, the majority of scientists use both inductive and deductive reasoning. This style of thinking enables individuals to seek for patterns in their data, to generalize, and to choose which answer is the best. Due to the lack of conclusive proof from empirical investigation, the logic of confirmation is ultimately inductive. When researchers determine what should happen after the formulation of a hypothesis, they use deductive reasoning. They verify their hypotheses using new empirical data. When they determine that a hypothesis is incorrect, they use deductive reasoning. They will then proceed to generate and test additional hypotheses and concepts if they reach this conclusion. Due to the fact that quantitative research has not discovered any universal or unchangeable principles governing how individuals behave, the majority of contemporary quantitative researchers hunt for probabilistic explanations (Humphreys, 1989). A probabilistic statement states that "Adults who abuse drugs and alcohol are more likely to drop out of high school than non-addictive teenagers. "In quantitative research, just one or a few factors contribute to the occurrence of events. This kind of lens is referred to as a "narrow-angle lens." Quantitative researchers maintain constant the variables that are not being investigated. This is typically done in the laboratory, where an investigator randomly divides subjects into groups, manipulates a single component, and then examines the outcomes.

Table 2: Quantitative Approaches Research Paradigms

Orientation	Quantitative Approach
Paradigm/Worldview	Positivism/Realism
(Assumption about world)	
Research Purpose	Numerical description
(rationale)	Causal explanation
	Prediction
Ontology	
(Nature of reality)	
Epistemology	Dualist/Objectivist
(Theory of knowledge)	
Methodology	Experimental/Manipulative
(aims of scientific	
investigation)	
Research Methods	Empirical examination
(Techniques and tools)	Measurement
	Hypothesis testing
	Randomization
	Blinding
	Structured protocols
	Questionnaires
Scientific Method	Deductive approach,
(Role of theory)	testing of theory
Nature of Data	Variables
	collection instruments
Data Analysis	Identify statistical relationships among
	variables

Results	Generalizable findings
Final Report	Formal statistical report with: A. Correlations
	B. Comparisons of means
	C. Reporting of statistical
	significance of findings

In general, quantitative research reduces measurement to numbers. Attitudes are typically assessed using rating scales in survey research, for example. The interviewer or questionnaire makes a statement, and the respondents choose one of five response options. The researcher normally calculates and publishes an average for the group of respondents once all the respondents have supplied their responses. Qualitative researchers, on the other hand, rarely collect data in the form of statistics. The focus group facilitator would most likely record the meeting and write down what was said. The tape would then be translated into words, which would then be looked at with qualitative data analysis tools. A qualitative researcher will also write down what he or she sees in the field, as well as pertinent ideas and opinions.

Table 3: Quantitative Research Approaches

Key Features	Quantitative Research
EXAMINES	Phenomena
INTERPRETATION	The quantitative research approach usually refers to the systematic empirical investigation of phenomena through statistical and mathematical analysis and the processing and analysis of numerical data.
USUALLY SELECTED WHEN:	➢ There is a need to analyze and process a large amount of quantitative data to verify hypotheses and / or test the theory. ➢ There is no uncertainty about the conceptions under consideration. ➢ The research can be carried out with questionnaires that include simple questions and short answers that can easily ➢ be quantified and compared.
GENERAL CONTEXT	➢ Correlation with experiments ➢ Testing of hypotheses related to phenomena. ➢ Use of advanced statistical tools ➢ Using questionnaires
QUESTION FORM	Closed Questions
DATA FORMAT	Numeric data (quantified) usually obtained by questionnaires.
ADVANTAGES	A. The result is numerical (quantitative) and is therefore often considered objectively (fact-based, measurable, and observable). B. The quantitative research approach facilitates the processing and analysis of large volumes of data. C. Quantitative data makes it easier to highlight changes and differences. D. The quantitative research approach facilitates the development of quantitative E. valuation indicators.

Justification for an Appropriate Research Approach in Business & Information Technology

This interpretive research will be conducted using a case study approach. These approaches are used to learn from experience and to conduct research on business and information technology adoption in their natural setting. Qualitative research is typically coupled with an interpretive strategy. Since some challenges to such ideas exist, several approaches are presented and discussed below. Philosophical attitudes in research is a subfield of philosophy concerned with the philosophical principles, claims, and consequences of science. It is related to epistemology and is concerned with concerns such as (a) the principles behind scientific assertions and ideas, (b) the meanings used to determine the veracity of information, and (c) the influence of scientific procedures. Due to the diversity of philosophical perspectives, selecting the correct one is a tough and time-consuming learning process (Walsham, 1995; Goertz & Mahoney, 2012). Though a review of the literature reveals a variety of philosophical approaches to research, including (a) instinctivism, (b) constructivism, (c) empiricism, and (d) pragmatism, with significant differences in the number and content of the approaches, most researchers focus on three fundamental philosophical stances: (a) positivism, (b) interpretivism, and (c) pragmatism. (a) pragmatism, () (Orlikowski & Baroudi, 1991; Denzin & Lincoln, 1998). The philosophical techniques discussed and examined above have a significant impact on research strategy, and developing an appropriate philosophical attitude is critical to doing good research. Gill and Johnson (1991) argue that researchers should adopt a philosophical perspective that enables them to properly examine participants in order to appreciate their internal reasoning. A positive and critical viewpoint may be used in the disciplines of economics, business, and technology, although there are limits to the study. For example, the essential restriction of a critical approach is that it is often used to critique weaknesses in research findings in areas with a high level of research activity. A critical approach may not be acceptable given that this is the first time this study has been undertaken and no empirical data from previous surveys is available. Because the proposed research (a) is not based on quantifiable and quantitative data and (b) is relatively new, a critical approach appears to be inappropriate for this research's purpose. An interpretive research approach is chosen to explore and understand the phenomenon through the researcher's active participation. Since the study of strategic management of ICT adoption in multinational enterprises is interconnected with (a) technology, (b) people, (c) the economy, and (c) multinational organizations, an interpretive research technique may be beneficial. A versatile interpretative method is expected to be well-suited for in-depth study of a wide variety of variables. By analyzing written materials and/or spoken words, the interpretive technique attempts to grasp and interpret (a) life, (b) the world, and (c) the person. Researchers commonly combine individual,

psychological, sociological, historical, and economic studies to get a deeper understanding of the study issue. Proponents of the interpretative method believe that truth can only be fully known via interpretation (Kaplan & Maxwell, 1994; Merriam, 2009). Given the significance of strategic management of digital systems as a research issue, an interpretative qualitative research approach looks to be a suitable method for examining and evaluating the present research subject (Yin, 2011). Qualitative research's primary objectives are to comprehend, explain, explore, uncover, and clarify situations, emotions, perceptions, attitudes, values, beliefs, and experiences. The organizational, technological, and cultural environment of pay-tv across various digital platforms cannot be divorced from critical strategic variables, necessitating the use of a qualitative research technique to gain a better understanding of the process of ICT adoption and key strategic considerations Ahmed, M. Y., & Abumandil, M. (2022). The proposed strategic management framework will be evaluated via the use of a case study method since this seems to be a more appropriate strategy for the digital systems business Younus, A. M. (2021). A case study gives a "holistic" view of the mechanisms at work as well as a concrete illustration of the research subject. Case studies provide multi-perspective assessments that contribute to a thorough understanding of cultural systems of action while also providing answers to exploratory inquiries. Case studies are often used to assess the effectiveness of digital solutions in ICT adoption (Baskerville et al., 2010). Due to the need for a large amount of empirical data, a case study approach is advised since it enables in-depth evaluation of processes. Numerous techniques for data collection for a case study are a critical element that results in a wealth of empirical data for this research. A worldwide media organization will be utilized to assess the previously established and published strategic management framework (Basias et al., 2016a). Information will be gathered via interviews, documentation, and observation. A structured interview agenda will be developed to ensure that all relevant questions are addressed, and that the data collected is comparable among respondents. The data for this research will be gathered using an interview approach that has been defined. Employees who were instrumental in the launch of a newly launched pay-TV project will be questioned. As part of this process, we will interview a project manager, an IT manager, a business manager, and an HR director. Interviews will last between 40 and 60 minutes and will be digitally recorded. Transcripts will be prepared as soon as feasible after each interview. To clarify and investigate perplexing subjects, telephone, Skype, and e-mail communication will be used. Additionally, the data will be cross-checked several times to avoid discrepancies introduced by data acquisition from multiple sources. The major data source for data collection and verbatim transcription will be interviews. Structured and/or semi-structured interviews are often conducted at the interviewees' offices. The interviews will be structured using the interview agenda developed for this project. Using this

agenda, respondents will react to specific questions regarding pay-TV using a variety of digital channels. Interviews will be conducted in a semi-structured format during breaks and without the use of an interview agenda. These will be a series of open-ended questions on the themes we're interested in discussing. Students benefit from the open-ended nature of the questions since they assist them in establishing the study subject. Additionally, it enables both the interviewer and the interviewee to go deeper into the issue. The empirical data from the case will be triangulated and then analyzed to provide empirical results. The purpose of triangulation in qualitative research is to increase the credibility and validity of the findings. As previously said, a quantitative technique may be used in combination with a qualitative approach to analyze and visualize the crucial strategic elements' rankings. The strategic management framework will be evaluated by an American commercial broadcast television network using the research approach described above. Due to confidentiality issues, we are unable to divulge the organization's exact identity at this point in the investigation. To determine the case structure, the researcher employed a checklist developed by Miles and Huberman (1994). The following are the primary justifications for selecting the particular case organization: The business is called: (a) is a large and profitable commercial broadcast television network in the United States, (b) is well-known for the specialized services it provides, and (c) has recently implemented video on demand and pay-TV strategies across multiple digital platforms, including computers, mobile phones, tablets, laptops, and televisions. (d) operates many entertainment channels in a variety of global markets, and (e) is one of the world's major players in terms of revenue, assets, and international reach. The case organization is a motion picture and television entertainment company with four divisions: motion pictures, television stations, television broadcast networks, and cable network programming. The examined organization is a diverse group with a common set of ideas and objectives that spans the globe, with over 10,000 entrepreneurs, innovators, and risk-takers who share a love for film, television, and sports. The entertainment company has created ground-breaking video-on-demand services on a range of digital platforms. Video on demand is a service that enables clients to choose and stream video content at any time on their televisions, desktops, tablets, smart phones, and laptops. Therefore, the selected example company serves as an intriguing research object for the purposes of this study. The study approach is depicted graphically in Figure 1 to help the reader comprehend the full research plan described in this section. The methodology presented here has been successfully applied to previous research on Business & Information Technology in banks (Basias et al., 2015a, 2015b, 2014, 2013, 2012), and will be applied to develop, examine, and test a strategic management framework for pay-TV services delivered via multiple digital platforms (Basias et al., 2016a, 2016b).

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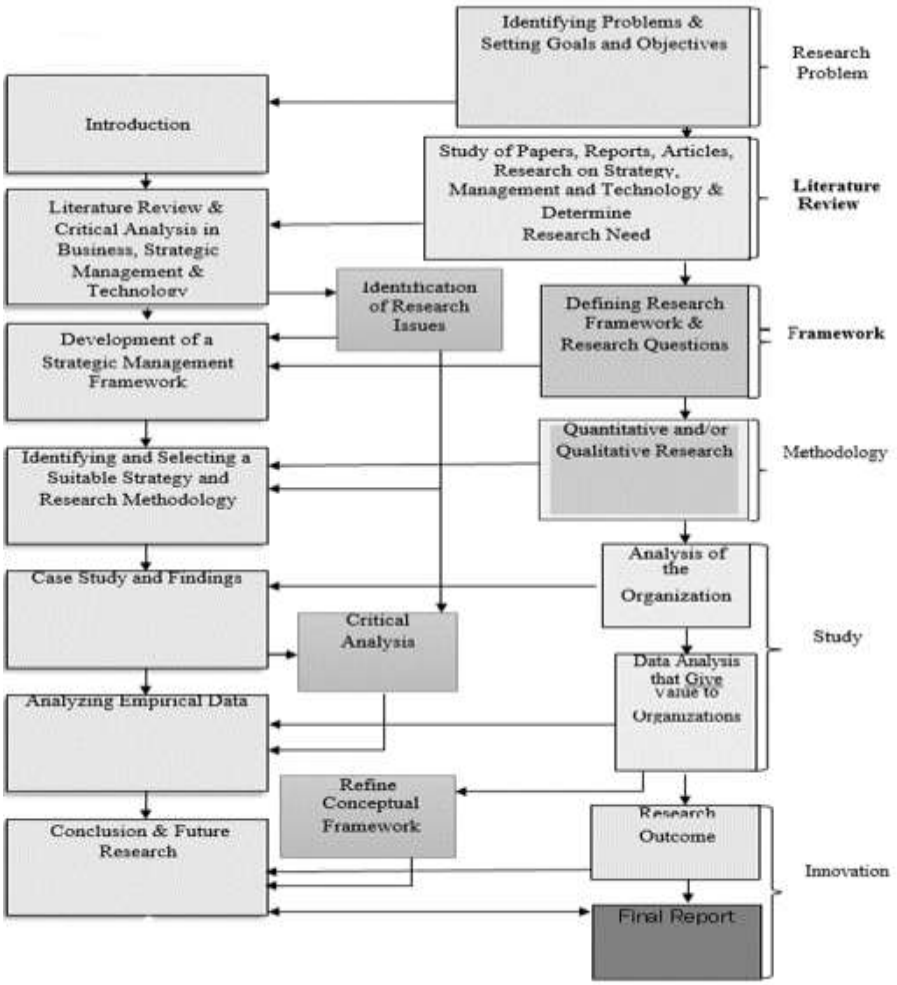

figure 1: Research Methodology

Conclusion

Due to the absence of a single global research approach that spans all important disciplines of knowledge, researchers use quantitative research techniques to discover, collect, and evaluate data in accordance with the study's purpose, goals, nature of the problem, and research questions. As a consequence, this article addresses quantitative research theory and a process for designing, testing, and modifying a methodical strategic management framework. The suggested research approach has been successfully used in earlier interdisciplinary research on Business & Information Technology in banks, and it will be used to develop, analyze, and test a strategic management framework for pay-TV services delivered through a variety of digital platforms. Other academics, especially those with cross-disciplinary interests in

economics, business, and technology, we believe, would benefit from the suggested research approach. Additionally, it will: (a) aid researchers in gaining a better knowledge of quantitative research techniques; (b) aid researchers in choosing the appropriate research method, which is crucial for obtaining accurate findings; and (c) contribute to the academic literature's enrichment. The quantitative technique and the positivist paradigm are the two most prevalent research paradigms. Quantitative techniques are concerned with efforts to quantify social phenomena as well as the collection and evaluation of numerical data, with a particular emphasis on the correlations between a small number of characteristics over a large number of instances. By connecting research to philosophical traditions or schools of thought, a researcher's theoretical frameworks might be clarified (Cohen et al. 2000). An ontology is a collection of ideas about the universe and its inhabitants. A technique is a means to get information. An epistemology is a theory about how to obtain information, while an epistemology is a theory about how to obtain information. This has resulted in a proliferation of distinct research approaches in social science research. It is not the methodologies themselves that distinguish qualitative from quantitative research, but how they are used to substantiate their findings. The two methodologies at issue are worldviews or paradigms that have resulted in the formation of radically distinct ontological and epistemic viewpoints (Silverman, 2004). According to Guba and Lincoln (1994), paradigms encapsulate an individual's fundamental beliefs and must therefore be accepted on faith. Each researcher should choose the paradigm that best reflects his or her own views and adhere to it. To begin, Merriman (1998) suggests that you consider your own fundamental ideas about the nature of reality, the purpose of study, and the extent to which knowledge can be gained. Given this data, it is reasonable to assume that the technique used for study is determined by its "fit for purpose," as Tuli puts it (2010).

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