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Paradigm Shift and Diversity in Finance

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Abstract

This study provides an overview about the paradigms and to highlight the paradigm to which finance belongs. It discusses four paradigms on the basis of their ontology, epistemology, axiology and research methodology. Rather than creating new paradigm, it explains the role of paradigms other than Positivist paradigm in Finance. It concludes that positivist paradigm must adopt the tools of other paradigms to gain more and to enhance its ability to contribute more to the world knowledge. This study will be a helpful contribution for the finance the researchers to follow the other approaches of other paradigms as well along with positivism paradigm and to use multi method research designs.

Keywords: research paradigms, finance, paradigm diversity, multi method research design

Introduction

Finance is considered an important discipline for policy makers as well as for academia. Most of the researches conducted in the field of finance follow the quantitative approach (Shah, Butt, & Hasan, 2009; Nikoomaram, Banimahd & Shokri, 2012). It means that these researches are based on some measurements and observations and highlight the cause and effect relationship.

Mostly the researches that are carried out in finance are based on mathematical modeling and follow positivism paradigm. These models have positive impact on financial theories and their implications. They should be used to identify the causes of different financial problems that are being faced around the world and also for the basic assumptions of theories. Moreover, there a is need to move a step ahead from positivist paradigm to paradigm diversity.

This study starts with an overview about four major paradigms i.e. functionalist or positivist, post-positivist, interpretive and

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pragmatic paradigm and differences that exist between all paradigms on the basis of their ontology (nature of reality), epistemology (view about knowledge), axiology (researcher's value) and research methodology (methods of the research).

Paradigm can be explained by number of ways. It is a world view approach and system of thinking which includes basic assumptions, grand challenges to be answered and different research techniques (Neuman, 2011). It provides a map or guidelines for solving research puzzles. It can be defined as set of fundamental beliefs and assumptions which build a thinking framework for researchers that ultimately guides the researcher's behavior as it is the way of seeing reality (Ardalan, 2003a). Saunders, Lewis and Thornhill (2009) claimed that all the paradigms can be differentiated on the basis of two fundamental philosophies i.e. ontology and epistemology. Ontology is nature of reality or way of seeing reality and epistemology can be defined as nature of knowledge or view about knowledge acceptance. Later on it was discovered that paradigms can also be differentiated on the basis of axiology and research methodology (Saunders el al., 2009; Wahyuni, 2012). Axiology is all about ethics and discusses about the value of research highlighting whether the value of the researcher can be incorporated in the research or not. Methodology explains the model to be incorporate in the research.

This paper presents a brief overview about fundamental beliefs of each paradigm followed by the strengths and weaknesses of each paradigm. Without a deep understanding, it would be difficult to relate each paradigm to finance. Next, it presents the paradigm shift and dominant paradigm in finance. After that, it explains paradigm diversity in finance. The paper ends with the conclusion.

1.1. Research Paradigms

It is important to understand the basic assumptions of each paradigm because without understanding the basics it would be difficult to relate each with financial theories. The assumptions of four basic paradigm i.e. positivism, post positivism, interpretivism and pragmatism are presented below. Each of the paradigms differ from others on the basis of some dimensions like objective and subjective dimension or on the basis of some basic assumptions like assumptions about nature of society (Burrell & Morgan, 1979). In short, it can be concluded that every paradigm is different from other paradigm on the basis of its ontology, epistemology, axiology and methodology. Each paradigm has some dominant assumptions about reality, nature of knowledge and research methodology (Meer-Kooistra & Vosselman, 2012).

1.1.1. Positivism and post positivism paradigm. Both paradigms are similar in some context but there exists some differences as well (Porta & Keating, 2008). Positivism paradigm follows the rules of natural sciences (Neuman, 2011). Ontological view of this paradigm is that there exists a single and concrete reality. For positivist paradigm 2+2 will always be equal to 4 as there is only one possible answer or a single reality for this case. The reality is external, physical and objective in nature. Epistemologically, they support the knowledge which is numeric based or the knowledge which can be generalized (belief on law like generalizations), re-produced and captured easily (Porta & Keating, 2008). Positivists are individualists, which mean that properties of an aggregate are determined on the basis of properties and characteristics of a unit. Axiologically, researchers cannot add value to the phenomena being observed. They observe "what is" without adding value to it (Ardalan, 2003a; Neuman, 2011). They only state the results which they observe. In other words, the researchers and the phenomena under observation are totally independent of each other. They follow the etic approach which is also known as outsider approach. Positivist paradigm discovers causal laws and uses the quantitative approach as they deal with the testing of a theory by developing different hypothesis and use statistical tests and techniques to find the answer and carrying the research process (Porta & Keating, 2008; Neuman, 2011; Wahyuni, 2012).

Post positivism also follows the same ontology in which reality is single, concrete, external, observable and objective in nature. But they challenge the belief of their ontology as interpretation involves human aspect to it. So this paradigm is sometimes termed as critical realism (Wahyuni, 2012). This particular paradigm follows deductive procedures. The reality is known but it cannot be captured easily. The knowledge in case of post modernism paradigm is in the form of probabilistic laws (Porta & Keating, 2008).

1.1.2. Interpretivism paradigm. Interpretivism paradigm, which is also known as constructivism, talks about multiple realities. Ontologically, truth is socially constructed i.e. on the basis of human's perceptions and beliefs. The perceptions and beliefs are subjective and may vary from individual to individual so cannot be generalized (Saunders et al., 2009; Hatch & Cunliffe, 2013), reproduced or replicate (Wahyuni, 2012). Similar arguments were developed by Ardalan (2005) saying that reality varies from individual to individual because it is subjective in nature. Epistemological view is that knowledge is created through interpretations, subjective meanings and social phenomena. Knowledge is acceptable if it is based on detailed solution and reality. Humans in these paradigms are perceived as free. Axiologically, researchers and the phenomena under observation are dependent to each other. They cannot be separated from one another. Researchers can add value to the research so they take stance of emic or insider approach. Researcher's value matters a lot in data collection and interpretation process (Saunders et al., 2009; Wahyuni, 2012). As far as methodology is concerned, this particular paradigm uses qualitative approach. Some researchers argue that interpretive approach is the systematic analysis in which the meaningful actions of people are directly and deeply observed. The purpose of such observation is to get an idea that how people interact and maintain the social worlds (Neuman, 2011).

1.1.3. Pragmatism paradigm. Pragmatism is one of the paradigms which follows the mixed ontology, epistemology, axiology and methodology. Ontology and epistemology is chosen on the basis of research question to be answered. Ontology for this particular paradigm can be objective and subjective as they follow the characteristics of both positivism and interpretivism paradigm. For them, the reality can be singular as well as multiple depending upon the situation and research question. They preferred the mixture of both paradigms i.e. positivism and interpretivism. Axiology is etic-emic which means that a researcher can have inside as well as a outside perspective. While choosing the methodology, emphasis is on what works best to solve the research question. A mixture of qualitative and quantitative approach is the best solution and is preferred too (Wahyuni, 2012).

Four fundamental beliefs (i.e. ontology, epistemology, axiology and methodology) for four different paradigms (functionalist or positivist, post-positivist, interpretive and pragmatic paradigm) are presented in Appendix A based on Saunders et al. (2009).

1.2. Strengths and Weaknesses of Paradigms

Each paradigm has some strength as well as limitations. Major strength of the positivism approach is that the data is gathered through hit and trial method but data gathered is accurate and law like generalizations can be made out of the results. If theory is presented in a wrong way it will not have any impact on the nature. For example, the initial prediction was that the Sun revolves around the Earth. Later on, it was explored that the Earth revolves around the Sun. Belief on wrong knowledge had no effect on the nature. The major limitation of this particular approach is that it cannot capture the social phenomena (Ardalan, 2003a). Post positivism approach also uses objective and accurate data but explains phenomena critically which results in deep investigation of the phenomena. Each phenomenon is explained through critical lens and social conditioning (Wahyuni, 2012). The weak point of this paradigm is that there is no specificity of the results. The researcher can be biased by incorporating his own experience. Interpretivism paradigm believes on multiple realities so each researcher can interpret the result in his own way depending on the given detail. This can also be one of the biggest weaknesses of this paradigm. As complete information might not be available in all the situations and law like generalizations cannot be made. The strength of pragmatism is the use of multi method approach. One method can cover the weaknesses of other while working on the research model. Mix method approach helps to understand the clear picture of the phenomena. Furthermore, actual research problem can be recognized in a better way. It also highlights those hidden facts which cannot be seen by using single method approach (Creswell, 2014). This paradigm depends on framing effect which can be the strength as well as the limitation (Porta & Keating, 2008). Researcher is value bound so biasness can also affect the results of the research. Table 1 provides a clear picture of the strength and weakness of each paradigm.

Table 1
Strengths and Weaknesses of Paradigms

Paradigms	Strength	Limitation
Positivism	Accurate prediction Law like generalization	No focus on social aspects
Post positivism	Accurate prediction Critical evaluation	Content validity bias
Interpretivism	Cater social phenomena Evaluation on the basis of reality information	No generalizability Non availability to accurate information
Pragmatism	Multi method design Framing effect	Framing effect Researcher's bias

2. Paradigm Shift in Finance

2.1. Dominant Paradigm in Finance

It has been proved by number of researchers that the dominant paradigm in finance is the positivism paradigm and many financial theories follow positivism paradigm (Ardalan, 2002, 2003b, 2005, 2007a, 2007b; Neuman, 2011). The word finance is associated with concrete reality and causes and effects. Different theories of finance that are presented since 1970s believed on the characteristics matched with the positivist paradigm. Some of the major theories of finance are agency theory (Ross, 1973; Mitnick, 1975), theory of dividend policy (Miller & Modigliani, 1961; Black, 1976), theory of capital budgeting, theory of capital structure (Modigliani & Miller, 1958; Myers & Majluf, 1984) etc.

To identify the objectivity or subjectivity of social science research, four factors should be discussed i.e. ontology, epistemology, axiology and methodology so that better information can be gathered about nature of social science research and nature of society (Burrell & Morgan, 1979). Based on Burrell and Morgan (1979) work researchers identify that financial researches are objective in nature. As most of the researches in the field of finance follow cause and effect mechanism (ontology), follow law like generalizations and have nomological connections (epistemology), interaction of human beings is natural (human nature) and all follow quantitative methods i.e. information is obtained through observations and measurements without adding value to it (methodology) (Bettner, Robinson, & McGoun, 1994). Other researches also proved that these characteristics are same as of positivism paradigm (Ardalan, 2002, 2003b, 2005, 2007a, 2007b). So, it can be concluded that mostly financial researches and financial theories lie in positivist paradigm.

2.2. Paradigm Shift

The debate about multiplicity of paradigm was started by Burrell and Morgan (1979). Most of the researches carried out in the field of finance are based on mathematical models that are empirically tested. Frankfurter and Lane (1992) claimed that financial work is nothing more than empirical testing. As in most of the researches existing theories are tested. It does not explain new phenomena. So it is said that it's explanatory power is zero as compared to social and natural sciences. The reason behind this is that it follows a specific paradigm i.e. positivism. Almost all the researchers conducted are related to this particular paradigm and there is no focus toward other paradigms (Jensen & Smith, 1984).

Positivist paradigm is not the only source of financial knowledge. The only way to enlarge research scope is a step towards paradigm diversity. This paradigm must be combined with the other paradigms i.e. post positivist, interpretivism and pragmatic paradigm for getting an idea about the basic assumptions of the financial theories. Brand (2009) also confirms that researchers should decrease their reliance on the positivism paradigm and should move towards integration with other paradigms. Each paradigm has some strength over other and each has scope which motivates the researchers to use all paradigms while conducting financial research.

With the changing issues in finance, its research methodology is also changing. Earlier researches of finance are part of positivism paradigm (Kao & Wu, 1994; Evans, 1998) but now many researchers are adopting paradigms other than positivism paradigm and are moving towards clinical methodology. Clinical methodology is different from positivist paradigm. It starts with inner learning, observation and action within phenomena. Practically, researcher visit, observe, listen and interacts about the people that he/ she observes in surroundings. The methodology traditionally used by researchers was the scientific research methodology and shift is from quantitative approach to qualitative approach (Paudel, 2005; Parker, 2012). These researchers further explained about the popularity of qualitative research method in the field of accounting and finance and explored that qualitative research can make a signifcant contribution in solving grand puzzles and challenges that are still unsolved because of following only one paradigm i.e. positivist paradigm. Qualitative researchers use case studies, observation and interviews etc while deciding about their research methods. A study conducted by Lahmann, Stranz and Velamuri (2017) used case study in their research to determine the private firm's value creation which tells that financial researches are moving towards qualitative approach.

According to Morgan (1983), as cited in Paudel (2005), scientific research methodology consists of five stages i.e. observation, building a theory, developing hypotheses, designing framework and hypothesis testing to accept or reject the theory. Whereas, clinical methodology follows a bit different steps i.e. understanding phenomena from inside, adopting learner's role, providing symbols along with the meaning to a particular system, identifying and explaining them and testing the opinion to accept or reject. In order to find about the agency issues or agency conflicts, deep understanding of the phenomena is very important. After that, researchers can give different meanings and interpretation to that phenomena on the basis of their understanding. At the end, the opinion of the researchers can be accepted or rejected. Simple observation may not lead us to the true picture but deep understanding and explanation will help to solve many issues. As in the later case the interpretation can be different at different situations.

3. Paradigm Diversity

Most of the researches in finance carried out around the globe and especially in Pakistan are based on positivist paradigm. Common practice in the field of finance is that after data collection process some mathematical model is tested by using collected data. After that, the results are interpreted. This approach is not broad as it sometimes fails to find solutions to the existing problems and does not explain the nature. It is not impossible to reach the hidden reality by applying positivist paradigm. For example, firms pay dividend to the shareholder in order to maximize the shareholder's wealth. Wealth maximization is somehow related to inner satisfaction. But the problem faced in this case is that the satisfaction level of the investor cannot be measured. Such situations might lead towards agency conflicts which cannot be solved without involving human aspect in it so hidden reality i.e. actual conflict or cause of conflicts cannot be determined by numbers only. The firms whose major assets are humans rather than capital cannot use the assumptions of positivist paradigm only. The knowledge based firms have different characteristics. For example, these firms try to involve human elements in their decision making or in their daily operations so the paradigm used for such firms will also be different (Brennan, 1995). Some of the scholars also discuss the limitations of the dominant paradigm i.e. positivist paradigm (Gouws & Rehwinkel, 2004; Hardy & Ballis, 2005).

To avoid these limitations, the researchers must adopt paradigm diversity as it is the only solution to all the problems. Paradigm diversity is the integration of different paradigms to answer one or more research questions. In this process more than one theoretical constructions are applied on given data (Ardalan, 2000). There are some studies that discussed about the paradigm diversity in finance. Bettner et al. (1994) examined the narrowness of current paradigm used for conducting the study on capital markets and explored the influence of qualitative research on capital markets. A study conducted by Ardalan (2003a) emphasized on paradigmatic context and financial theories. This paper concluded that financial theories are based on positivism and suggested that finance should adopt the tools and characteristics of other paradigms as well. Ardalan (2007a) presented a paradigmatic view of corporate governance and argued that all paradigms have unique characteristics and their tools and methods are of equal importance. Furthermore, researchers argued that these paradigms must be adopted by all fields. A similar study was conducted by Ardalan (2010) to identify the paradigmatic view of globalization in the field of finance. It is explored that in order to understand about the concept or a phenomena in detail, integration of different paradigm should be used. Furthermore, it was concluded that social researchers can gain much by using multiple paradigm while researching a phenomena. Bogt and Helden (2014) also discussed the ways to reduce these research gaps in the fields that use positivism paradigm as a dominant paradigm. Other studies also confirm the concept of paradigm diversity (Ardalan, 2002, 2003b, 2005, 2007b).

This paper discusses the paradigm shift and some of the questions in the field of finance that cannot be answered by positivism paradigm. Number of studies confirm that leading and dominant paradigm in finance is positivism but there are few gaps and limitations in this particular paradigm. In order to fill these gaps, the researchers can take help of other paradigms as well. Some of the cases are discussed below.

3.1. Case of Principle-agent Conflict

Agency theory best explains the principle-agent relationship, their conflicts and problems arise because of these conflicts. Further, it suggests ways for solving these conflicts. In this relationship one party (principal or owner) engages the other party (agent or manager) to perform certain functions for them, as the first party has control and authority over the other. Most common agency relationships are of employer and employee, state and ambassador and shareholder and CEO etc. Ardalan (2002, 2003a, 2005, 2007a, 2007b) argued that this theory uses the positivist paradigm to solve the agency problems. Agency problems/ conflicts arise because of information asymmetry, unaligned goals and divergent interests. Agency theory might not solve all of the conflicts by using only positivist approach as it involves human beings, their divergent interests and goals. Neither information nor interests can be measured physically or in term of numbers. Using positivist paradigm alone is not sufficient to identify the interests of both parties and the availability of information. For these types of measures, qualitative survey is useful (Saunders et al., 2009). For this particular case, the suggested suitable paradigm is interpretivist and pragmatic paradigm as both involve social phenomena. The reason behind suggesting interpretivism is that qualitative approach helps to identify the main causes of the conflicts. After identifying such conflicts, possible solution can be decided. Secondly, it helps to find out the reasons of non-availability of information. Hence, possible solution can be suggested to spread equal information to all. The reason behind suggesting pragmatic approach is that sometimes these conflicts are removed by providing bonuses and compensations to the managers. These benefits can be measured objectively as well as subjectively or by using multimethod approach and pragmatic approach is the appropriate paradigm for it (Wahyuni, 2012). If quantitative method is used alone, it will be difficult to find the actual causes of the conflicts and causes will remain unsolved.

3.2. Dividend Policy

Dividend can be defined as the expected financial return to the shareholders over a given time period as a result of an investment. This return can be used in form of cash payments, stock, share repurchase or in any other form (Baker & Weigand, 2015). Financial theory states that one of the major goals of management is to create value for shareholders. Their goal is to maximize the shareholder wealth. This goal can be achieved by paying dividends to the shareholders of the firms (Jensen, 2001). Mostly firms pay dividends to attract investors and to fulfill the shareholder's needs. This goal is particularly related to the shareholder's wealth to satisfy them. The satisfaction level can never be measured in terms of numbers or by using positivist paradigm. For measuring satisfaction, one can choose interpretivism paradigm in which we can measure the satisfaction of the shareholder by using questionnaires or through interviews. As for measuring satisfaction, qualitative method approach is suitable. Sometimes firms pay dividend not to increase the shareholder's wealth but their main purpose behind dividend distribution is to create positive signal in the market. Signaling effect is dependent on the group behavior (behavior of the investors) which is impossible to measure objectively. It might have positive impact on some investor or might not have any impact on others. If more investors take/ consider that signal a positive one, then it will create positive signal in the market otherwise negative market signal will be created. The behavior is something that does not remain constant. It changes with the time so ontologically positivist paradigm fails to measure it. Again, the Interpretivist paradigm is the best to measure such types of behaviors as it provides context based knowledge (Lincoln & Guba, 2005; Wahyuni, 2012).

3.3. Profitability

In the field of finance, profitability is a widely used concept. Profitability can be measured in terms of sales, reduction in cash conversion cycle or the waste reduction. Some firms focus too much on earning profits and in doing so, they exceed their limits that results in liquidity problems. Sometimes, firms report those profits as well which are not yet received in order to attract more investments. So, measuring firm's profitability by facts and figures and in form of numbers will be misleading. It is suggested that firms must set an optimal level between profitability and liquidity so tradeoff between both is the best possible solution (Bolek, 2013; Pike & Pass, 1987). Again the question arises that how a firm should choose the optimal level? It can not be selected by using a single paradigm and there is no fix amount for the profits to be earned. In other words, there is no law like generalization for earning profits. Rather, limit is set on the basis of judgement and past experiences. Positivism paradigm does not allow the researchers to add values in the research. So, there must be some other paradigm along with positivist paradigm. And in this particular situation, post positivist paradigm is suitable. As axiologically, the researchers can add values on the basis of their experience (Saunders et al., 2009; Wahyuni, 2012).

3.4. Investment Policy

Firm's investment policy is somehow linked with the firm's profitability. As most of the time, the reason behind firm's investment is to increase profits and value of the firm. Investment in a particular project is based on the individual's personality. Some individuals are risk takers so they will be ready to invest in risky projects but those who are risk averse will choose only those projects for investments which are less risky (Kahneman & Tversky, 1979). Similar case is for the investor. Investors can also be risk takers or risk averse. Investor who is also the employee in particular firm will have different attitude and investment behavior as compared to the investor who is not the employee (Shafi, Akram, Hussain, Sajjad, &

Rehman, 2011). For measuring the individual's personality or investor's behavior, interpretivist paradigm is more suitable and appropriate. As far as positivism is concerned, it believes on law like generalizations and a singular reality. There is no room for multiple realities. But personality varies from individual to individual and also the behavior of one firm is different from other firms. Kordeš (2009) explored that decision making is based on judgement and on the basis of experience. Decisions are not based on the just external reality. So individuals are not objective but they make subjective decisions.

3.5. Theory of Capital Structure

Capital structure is the relative mix of firm's debt and equity which has an impact on the firm's structure in long run. Capital structure is related to the behavioral perspective. The individual who is more confident (or over confident) will tend towards more debt ratio and will choose highly levered financing structures (Barros & Silveira, 2007). Such type of behavior cannot be pointed out through positivist paradigm rather interpretivist paradigm best explains it (Ardalan, 2005). Confidence can be observed or measured using interviews but it cannot be measured by using numbers. So it can be said that confidence of an individual cannot be tapped through quantitative method but it is possible to top through qualitative methods.

3.6. Behavioral Finance and Concept of Rationality

Behavioral finance which is also known as open mind finance is the most controversial area in the field of finance (Ardalan, 2003a). Traditional view of finance states that economic agents expect maximum utility and they are rational whereas behavioral finance states that market behavior is totally dependent on the behavior of people. Again, positivism paradigm fails to deal this situation as behavior cannot be tapped by numbers but interviews are the most appropriate way to measure the behaviors. So, for dealing the behavior of people, interpretivism paradigm is most suitable and appropriate as it incorporates human element to it.

Finance follows positivist paradigm which says that researchers should be value free. They must not include anything from their side in the research (Ardalan, 2003b). They should only report what is actually observed and not what they think or have experienced about the phenomena. But in actual situations, it is not possible for the researchers to be value free and etic. Researcher's bias is always there in reality (Wahyuni, 2012). So exploring absolute reality is not possible even when dealing with numbers or on the basis of facts and figures. The shift towards other paradigms is beneficial as it reduces limitation of positivist paradigm and also helps to solve number of questions that are still unanswered through positivist paradigm.

4. Conclusion

This paper highlights that dominant paradigm used in finance is positivist paradigm. It also concludes that combination of other three paradigms (i.e. post positivism, interpretivism and pragmatic paradigm) along with the positivist paradigm will help to solve most of the financial problems. Most of the financial theories like agency theory, capital structure theory and dividend payout policy cannot be tapped through positivist paradigms alone but integration with other paradigms will provide the best way to understand these theories well. Paradigm diversity will reduce the difference between literature of academic finance and philosophy of social sciences. Its inferences will be conclusive if it decreases its dependence on the positivism paradigm and adopts the methodology and characteristics of other paradigms. It is the fact that if one task is repeated again and again with no addition in it, no value can be created. Addition of other paradigms will ultimately increase the efficiency of financial research. It removes most of the problems and limitations as it is a tool for knowledge creation.

The interpretivism paradigm can solve the limitations of positivist paradigm. The reason behind is that it deals with human element and most of the financial theories are also related to human's relationships and their conflicts (agency theory), their perception and decision making (dividend and investment decisions). Human element is not involved in positivist paradigm because human's interests, their behavior and confidence cannot be measured by numbers only so most of the times it requires the help of other paradigms.

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Appendix A: Basic and Fundamental Beliefs in Management Science Paradigm

	Paradigms in Management Science			
Fundamental Beliefs	Positivist approach (Naïve realism)	Post positivist approach (Critical Realism)	Interpretivist approach (Constructivism)	Pragmatic approach
Ontology (nature of reality)	Belief on single, external or physical reality. Reality is objective in nature and does not depend on social actors	Belief on single and objective reality. It is independent of human thoughts, knowledge and beliefs. But interpreted through social conditioning so called critical realists.	Belief on multiple and subjective reality. It is socially constructed and changes from person to person.	Belief on external and multiple realities. Realities vary depending upon the nature of research question to be answered.
Epistemology (acceptable knowledge)	Knowledge is based on the observable phenomena, actual data, and facts and figures. Focus is on causal relationship	Knowledge is based on the observable phenomena, actual data, and facts and figures. Focus is on context based explanations.	Knowledge is based on the subjective and social phenomena. Focus is on the detail about situation and reality of that situation.	Knowledge is based on either objective or subjective phenomena or both depending on the research question. Focus is on applied

	and law like generalizations.			and practical research.
Axiology (values of the researcher)	Researcher is value-free and etic Researcher is independent of phenomena being observed and does not incorporate anything value in the results and has objective view.	Researcher is value-laden and etic Researcher is biased by cultural experiences and adds value to the phenomena being observed.	Researcher is value-bound and emic Researcher and the phenomena being observed are interrelated. Both cannot be separated from each other and has subjective view.	Researcher is value-bound and etic-emic Values are vital in interpretation of the results. The researcher can adopt objective or subjective view.
Data Collection Techniques (research model)	Quantitative approach is followed, sample is large and highly structured.	Both quantitative and qualitative approaches are followed.	Qualitative approach is followed, sample is small.	Mixed or multi method approach is followed depending upon research question.