



Critically Discuss Epistemological Issues by Examining the Claim to ‘Truth’

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ABSTRACT

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This research paper critically investigates epistemological subjects by examining the claim to truth in the works of De Mello (1999) and Hansen and Rand (2006). To assess the claim to truth, this paper mainly adopts a positivist approach as its theoretical framework. This approach includes a diverse range of methods for studying economics and finance and purposes to establish a construction between positivism and the research topic related to economics and finance. It draws on the fundamental principles and perspectives of positivism to facilitate critical analysis (Yaqub 2024). The paper emphasizes on this approach because economists often rely on mathematical models to uncover truths. However, positivism has notable limitations, mainly in the framework of social sciences. To estimate these claims, the researchers adopt a positivist theoretical framework, encompassing a variety of alternative approaches to the study of economics and finance.

KEYWORDS:

Truth, Positivism, epistemological

1. INTRODUCTION

This paper critically discusses epistemological issues by examining the claim to truth in the articles of De Mello (1999) and Hansen and Rand (2006). In order to test the claim to truth, the researchers will firstly draw deeply upon a positivist approach as a theoretical framework, which covers a wide range of alternative approaches to the study of economics and finance. This research paper attempts to establish a connection between positivism and the research topic. Claim to truth and draws upon the major views and beliefs of the approach for the purpose of critical analysis. The reason why the researchers concentrate on a positivist approach in this research paper is because economists generally depend on mathematical models in order to reach the truth. However, positivism has several limitations particularly in the study of social science.

The next part of this research paper defines truth and epistemology. After that debate between empiricism and rationalism about claim to truth, justification of the truth will be argued, linking the positivist approach with the topic

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examined in both chosen papers. The next section will describe constructionism and then falsifications, linking to the topic examined. Finally, the conclusion will draw up all the outcomes discovered in this paper (Yaqub 2024).

2. EPISTEMOLOGY AND TRUTH

Epistemology is defined as a “branch of philosophy that finds out knowledge and justification” whereby “knowledge is justified true belief” (Ladyman, 2002: 6). Therefore, the major difference between truth and belief is that people believe different things, but the truth is the same for everybody. Greetham (2006) pointed out that belief comprises of the subjective component of knowledge whereas truth is the objective component; however belief and truth are a necessary condition of knowledge, but they are not sufficient; we need to be able to give sufficient reasons for believing that something is true, otherwise it may nothing more than mere guesswork. The traditional interpretation in epistemology has been that knowledge can only be claimed once we have an adequate justification for our beliefs. There exist different perspectives on claim to truth such as rationalism view point about truth, empiricism and falsification theory and other paradigms as well (Yaqub 2025).

Rationalists consider that reason is the basic route to truth, which exists in the idea. Human minds are able to access ideas via a priori reasoning, and innate thoughts exist within human

minds before we start thinking. According to a rationalist approach, truth is defined as a connection between ideas. Many truths, for instance general facts and rules of thought, cannot be recognized by reason or the senses (Karem et al. 2021). Therefore, in order to believe what is true, researchers should use appropriate scientific methods for gathering and assessing the evidence (Ladyman, 2002).

However, Empiricists consider that knowledge about the world can only be attained via the use of the senses and not by the use of pure thought or reason alone. In other words, the way to establish justified beliefs about the world is to acquire proof by making observations or collecting data (Greetham, 2006). Sayer accepted that "knowledge is not immune to empirical checking" (Sayer, 1992) and he argued that knowledge is generally received via activity, both in attempting to change our environment and also via communication with other people.

On the other hand, a group of philosophers, the so-called logical positivists, developed a way of distinguishing form from content in proper mathematical and logical language used to represent scientific theories. They believed that they could isolate the empirical content of theories. Bhaskar (1998) pointed out that there are two sides of knowledge: the transitive and intransitive objects of knowledge. Intransitive objects of knowledge do not depend on human activity. Transitive phenomenon relates to artificial objects made by scientists. These could be founded theories, methods, paradigms, models, and techniques of research that are implemented by a specific investigators or researchers (Ibid). In order to believe that FDI has positively impacted on economic growth, there should be some justification for whether this claim is true or not. De Mello (1999) assumes in his article that FDI can have a significant impact on economic growth in a host country. The question we need to consider is how De Mello arrived at this outcome; what sort of justification has he given? Economic theories (neoclassical economic growth theory) have given us several reasons (justification) as to why FDI leads to improved growth performance of the host country. In neo-classical growth theory, FDI is positively correlated with output growth because it raises the volume of investment means, increasing the volume of production and/or its efficiency. According to De Mello's (1999) test, transferring technology leads to higher productivity and lower production costs; and at the end to higher economic growth in the host country. Thus, this puts the economy on a higher long-term economic growth path. Therefore, the justification is that transferring technology leads to higher production due to higher productivity. This result was based on neo-classical growth theory (Karem et al. 2022).

On the other hand, Hansen and Rand (2006) claimed that FDI has a negative impact on economic growth. They found that the technology used in the process of production between home and host country is uncompetitive. Their justification for their claim is that a higher standard of technology

resulting from FDI crowds out local producers, which in turn damages domestic factories and at the end leads to negative economic growth in the host country. Why do two different authors have such different views about the impact of FDI on host countries?

3. EMPIRICISM AND RATIONALISM

The researchers have chosen two articles related to the thesis topic, both of which apply the deductive research strategy. Neither of the articles adopts a rationalist approach as the knowledge used as a starting point is not a priori knowledge (Fatah and Amin 2023). Both papers cite various theories such as theories of economic growth and theories relating to foreign direct investment (FDI), in addition to arguing for causality between economic growth and FDI. The hypotheses are derived from this regularity and suitable data is examined. Rationalism places its primary trust in reason to reveal and justify truth. As in mathematical and logical propositions, certainty is needed and this can be assured via deductive reasoning from premises that are considered self-evidently true. In this sense both articles justify truth and have certainty, however an absolute truth is not attained by either of the papers De Mello (1999) as well as Hansen and Rand (2006). Both articles arrive at different results concerning causality between economic growth and FDI.

Empiricists, however, for instance John Locke in the seventeenth century, and Bishop Berkeley in the eighteenth centuries, agree that knowledge does not have to be absolutely certain in this way (Greetham, 2006). Such certainty is restricted to limited areas, especially in mathematical and analytic truths. Despite the fact that Kant agreed with empiricists, like Hume, that knowledge begins with experiences, he argued that although all our knowledge begins with experience it does not follow that it arises from experience (Ibid). Empiricist economics starts with data and then models (mathematical models) representing the data (Karem 2024). These models are then used in order to reach true conclusions about the present and future.

4. POSITIVISM, TRUTH AND ALTERNATIVE APPROACHES

According to the positivist approach, a truthful statement is not meaningful if it does not say anything about past, present or future observations; one can say that it has no empirical content (Bhaskar, 1998). There is one way to connect these ideas and that is by supposing some causal link between them. This is the foundation of induction according to Hume, and therefore, Hume believes that in order to understand our knowledge of matters of fact, researchers need to study our knowledge of the relation between cause and effect (Greetham, 2006). Hume's causality is a method that is focused on formulating regular causality relations between facts. With regard to causality, scientific realists do not totally reject Hume's causality; they claim that its level of explanation is shallow. Scientific realists argued that the

detail of regular causality relations between facts has been ignored in Hume's causality method (Ibid). In addition, scientific realists, unlike those taking the positivist approach, focus on the nature of causality (cause and effect). Advocates of Realism point out that knowledge is generally tentative due to our perception of cause-and-effect relationships and may change as a result of mind- and theory-dependent observation (Sayer, 1992). Furthermore, they argue that, in some situations, there may be metaphysical facts. This means that some facts cannot be measured, in the process of cause and effect. In relating to the articles examined, one of the factors of attracting FDI is political stability which affects the level of inflow of FDI into host countries; but how can we measure political stability?

Positivism believes that mathematical models are significantly important for supporting conclusions. However, there is much evidence that using the same data can lead to different mathematical models and opposite results (as shown in the examined articles). Sayer (1992) pointed out that statistical and mathematical methods cannot represent what are called internal relations without a prior qualitative method analysis of the causal order which succeed in this method. Critical realism refutes the belief that mathematical and statistical models could not be able to observe such kind of qualitative method. Furthermore, Sayer (1992) explained that statistics and mathematics would not be suitable in absolute terms of explaining causal relationships. Sayer mentioned that mathematical and statistical models should only be used to find regularities between variables (Ibid). According to the above argument, both chosen papers should have conducted their research study with some qualitative analysis, but both papers relied solely upon quantitative mathematical models. Thus, a reliable outcome was not achieved.

Our purpose here is to try to comprehend why contradictory outcomes seem to be discovered by different studies? This is as a result of different statistical and mathematical models. One study applied the cross-section method and the other the time series method. Using the cross-section method, it was found that there was a positive correlation between FDI and technology spillovers, whereas using the time series method it was found that there existed negative correlation between FDI and spillovers. Thus, the result of the studies depends on the methods of econometrics (Bayz 2018). Therefore, despite positivists arguing that models and mathematics offer significantly precise outcomes, this is not always true (Aivas 2022). In addition, positivism has been criticized for having a "naïve realism" in which reality and knowledge can be captured and generalized in a context-free form. In response to criticism against positivism, Karl Popper argued that we should not quickly neglect all the good qualities of the scientific method (Ladyman, 2002). Rather, small adjustments and improvements can be made to provide objective research within the social sciences. Both examined articles follow the same economic theory though they used

different methods to determine the impact of FDI on economic growth.

5. THEORIES AND DEBATE ABOUT ABSOLUTE TRUTH

Karl Popper pointed out that there are no absolute truths. According to Popper theories cannot be confirmed but only falsified (Ladyman, 2002). Theories can never achieve the level of absolute truth, they can simply move closer to truth (Phillips, 1987). As we have seen in neoclassical economic growth theory, which has been applied by both examined papers, this theory does not give the same results in all cases. However, according to the positivist approach the external world is the main determination of science (Ladyman, 2002). In order to receive knowledge, positivism advocates the building of general propositions representing regular causal relationships. It also advocates that these general propositions can be found only via systematic observation and experiment (Ibid). Therefore in order to decide whether these theories are true or false, they should be tested via systematic observation and experiment. In the examined articles the theory of neoclassical economics given is not complete enough to cover all types of FDI. In fact, Hansen and Rand (2006) do not cover the new phenomenon of investment by Less Developed Country (LDC) firms in developed country markets. Moreover, the firm-specific advantages contained in their (Hansen and Rand, 2006) model only arose due to the intense technological nature of the product process examined, implying significant savings of labour that needs of the high-income consumers in the home country. This is different from LDC because developing countries suffer from low incomes and low savings rates. Therefore, the impact of FDI on economic growth is very limited.

On the other hand, Realism pointed out that successful theories are close to reality. However, critical realism criticizes this argument by asking how a theory can be proved. Realists respond to this criticism with the "correspondence theory of truth (Ladyman, 2002). According to this theory, the more a proposed hypothesis is associated with truth and the more it corresponds to truth, the more precise it is. Scientific realism claims that unobservable metaphysical facts exist in the nature and the observational ability of the observer is insufficient to identify these metaphysical facts (Sayer, 1992). This gives a more meaningful clarification of the nature of social sciences than positivism. The outcomes of observation and experiment mean absolute certainty for positivists. In regards to this both articles used observation but their results were opposed to each other despite the use of the same underlying theory in both studies. One of the problematic issues with these articles is that they include only observable facts within the context of study and they have rejected metaphysics. The rejection of metaphysics also means rejection of metaphysical reality. Unlike the positivists the realists assert that what we directly observe in both nature and in society is produced by hidden

mechanisms which we cannot observe, but which scientists conclude from theoretical and observational work (Phillips, 1987). Scientific realists consider good theories as being accurate model of reality rather than of absolute reality mean while they believe that truths constantly change and that new truths wait to be discovered.

This opinion is opposed to forms of interpretation which state that scientific theories are simply constructions. Nowadays when people call themselves positivists, they are talking more about probability rather than absolute certainty. It is difficult for theories in social science to be simple and precise since the world we live in consists of many people with multiple perspectives and interpretations of events making theories more complex.

Conversely, Realism points out that successful theory is close to reality. However, critical realism criticizes this argument by asking the question of how a theory can be proved. Realists respond to this criticism with the "correspondence theory of truth." According to this theory, the more a proposed hypothesis is associated to truth and the more it corresponds to truth, the more precise it is. Scientific realism claims that unobservable metaphysic facts exist in nature and the observational ability of the observer is insufficient to identify these metaphysical facts. This makes a more meaningful clarification of the nature of social sciences than positivism does. Thus, the above debate brought about the formation of a different paradigm, namely the Constructionist paradigm.

6. CONSTRUCTIONIST PARADIGM

The Constructionism paradigm is sometimes named the "anti-positivist" paradigm since the interpretivist paradigm was established as a reaction to the positivism approach. It is also sometimes called constructivism because it highlights the ability of the individual to construct meaning (Aivas 2014). The epistemological matter with respect to the examined papers is that their assumptions and outcomes would be part of a plurality of truths about different constructions of fact concerning the connection between FDI and economic growth. Different propositions might exist as relative knowledge next to each other (Hussein et al. 2024). Their search plan of abduction is to translate lay descriptions of social life into technical and scientific descriptions (Ladyman, 2002). The analysed papers do not examine lay accounts in order to explore knowledge constructions of the effect of FDI on a host country's economy. Thus, in a constructionist approach, the papers of De Mello as well as Hansen and Rand can claim the truth based on the knowledge construction of the writers themselves, since the work of the articles reflects their construction of knowledge. In addition, the post-modernist interpretation about claim to truth would point out that the language of the researchers may not be able to express reality because language itself creates reality. The relativity of knowledge in the constructivist approach is a feature of post-modernism (Ibid).

Therefore, according to this concept, both papers (De Mello as well as Hansen and Rand) can be seen as part of a discourse about the impact of FDI on a host country, which creates various, fragmented realities, for instance, the different opinions about the effect of FDI on economic growth in the recipient country (Noori et al. 2022). Thus, in order to investigate more about the above argument, the researchers should talk about realism as a middle way between positivism and interpretism and how these relate to the researcher's topic.

7. THEORY-LADEN, MIND-DEPENDENT AND FALLIBLE KNOWLEDGE

The correspondence theory of truth pointed out that "a statement is true when it corresponds to the facts" (Ladyman, 2002: 157). According to the ontological approach an independent objective reality exists in the world that researchers are able to observe directly (Greetham, 2006). For the examined papers this means that foreign direct investment exists, that we are able to observe this proposition directly, and therefore that a corresponding truth statement is framed (Aivas 2017). The observational procedure in thesis a research study is mind-dependent since the researchers can just think of real objects with regard to thought objects (Sayer, 1992). For instance, the explanation of any observation relies on the observers: how he or she interprets the observation (Ibid). Data and Observation are theory-laden because the researchers need knowledge in order to explain observation. Sayer (1992) argued that knowledge must be fallible since no one can establish "absolute truth".

8. FALSIFICATIONISM

An assumption of both articles is that the determination of FDI depends on certain variables such as level of education, openness (trade openness), infrastructure and macroeconomic stability. In addition, according to neo-classical growth theory, economic growth in a host country takes place when transfer of technology occurs via FDI from home to host country, i.e. De Mello as well as Hansen and Rand are assuming that the theories about relationship between economic growth and FDI are true.

However, Levine et al, (2000) applying neo-classical economic growth theories, doubt that this assumption about the relationship between FDI and economic growth exists. They examined the relationship between FDI and economic growth for 72 countries over the period 1960-1995. Their results indicated that for both developed and developing economies there was no positive impact of FDI on economic growth, despite availability of education, degree of economic development, level of financial development and trade openness of the host country. The epistemological matter is to what degree the examined papers can claim that their assumptions are true, in this case the underlying assumptions may be incorrect (Williamson, 2000).

Falsification has been used to argue that the method of both investigated papers is falsified and therefore should be abandoned. In the case of the positive or negative impact of FDI on economic growth, the question would be as to which of the different proofs would falsify which theory of economic growth first. The examined articles might be interpreted as being embedded in study structures as well. But the neo-classical theory applied to three countries by Hansen and Rand (2006) shows that the empirical evidence on FDI and economic growth is ambiguous, although in theory FDI is believed to have several positive effects on the economy of the host country.

9. NATURAL SCIENCE AND SOCIAL SCIENCE

Science can generally be divided into two parts: social sciences and natural sciences. It has been argued that social sciences advocate that those scientists carrying out research in social science cannot be completely objective in the research process. From this claim, the natural sciences differ from social sciences due to their nature (Levine et al, 2000). Though the natural sciences provide academics with several variables that can be kept under control, however, due to its dynamic nature the social sciences provide scientists with several variables that cannot be kept under control due to social science's relation to human behaviour (Hussein et al. 2024). Human behaviour cannot be controlled without interfering with the variables. Different scholars set several explanations. If these outcomes are assessed from the perspective of philosophy of science (not from the statistical perspective), it is believed that a 100% explanation cannot be explained by the illustrative quality of the sample (Ibid).

Economics is a social science, thus decisions about investing in different places in the world are dependent on the behaviour of the investor and how they consider these investments. In other words, there are no concrete decisions that will be everywhere in the world. For this reason, the positivist approach has been criticized for applying the scientific method to research on humans (Ladyman, 2002). In this research paper the relationship under consideration is that between economic growth and FDI. The argument is that unchanging causal relations that can be proven in the study of natural science cannot be proven in social science; for instance, in natural science, water boils at 100 Celsius (Hussein 2022). This is an absolute relationship that hold sat any time and everywhere, whereas, in social science all we can say is that the science of economics is strongly related to human behavior. Therefore, the assessed impact of FDI on economic growth is different in different research studies as we have seen in both examined papers. For some countries FDI is positively related to growth and for others a negative correlation was observed. Decisions about investing in different places differ between investors. Therefore, it can be said that there does not exist absolute truth in human science in such cases in economics.

10. CONCLUSION

According to the positivist approach, quantitative analysis is the only way to reach truth because this approach claims that absolute truth can be gained. Absolute truth can be absolute for the natural sciences but for social sciences truth cannot be absolute, even using mathematical models as with natural science. This has been seen in the papers examined leaving questions on causal relations between economic growth and FDI unanswered. The articles may participate in an argument constructing social reality. Nonetheless, the claim to truth of the papers examined may not be viewed as absolute in any way. The claim to truth of the examined articles can only be relative to the epistemology the reader believes in. With respect to empiricism and rationalism this cannot be claimed as a result of the lack of a priori knowledge and the connection of inductive implications in the research setup. The different outcomes existing in the examined articles with respects to the causality between FDI and economic growth are confusing the application of falsificationism. In general, it can be said that there does not exist absolute truth in the social sciences, particularly when applying theory as we have seen in these articles.

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