Volume 3, Issue 2, 2024, pp. 83–89
https://doi.org/10.62078/grks.2024.v03i02.008
Research Article

GS WOW
Wisdom of Worthy Research Journal

The Use and Misuse of Positivism in Economics

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Article History
Received: 08 October 2024
Accepted: 28 November 2024

Cite
Lama, S. (2024). The use and misuse of positivism in economics. *GS WOW: Wisdom of Worthy Research Journal, 3*(2), 83–89. https://doi.org/10.5281/zenodo.14500590

ABSTRACT

This essay attempts to demonstrate controversies concerning positivism in the discipline of economics and reasons that have yet kept it alive. It suggests strategy that can simultaneously reduce the mechanical methodological aspect and increase the predictive power of positivist approaches. The paper employs a critical theoretical approach, wherein the inadequacy of positivism is discussed with relations to economic theories. The findings suggest that the nature of social science itself does not let any methodology hold its ground firmly. The combined application of "common rationality" and "social rationality" can simultaneously reduce the mechanical methodological aspect and increase the predictive power of positivist approaches. Drawing on the criticisms leveled upon positive economics, a novel model is envisioned for more reliable economic theory-making, which involves the fusion of "common rationality" and "social rationality".

Keywords: John Stuart Mill, Friedrich Hayek, Milton Friedman, positivism, methodology, common rationality, social rationality

Introduction

The difference between positive and normative economics has been long discussed in economics and has achieved certain degree of agreement based on "is/ought" dichotomy – stating that positive economics is concerned with "what is" and normative economics relates to "what ought to be" (Boland, 1991, p. 89). According to Samuelson and Nordhaus (2008, p. 7), positive economics explains the facts of an economy whereas normative economics deals with value judgments. This implies that the distinction between facts and values is reasonably clear to many economists. Positivists conceive of economics as a science of facts that provides policy-makers and others with unbiased information and guidance for choosing appropriate means to accomplish their chosen ends (Bishop, 2007, p. 260). However, the concept of economics as a science of facts has been widely challenged. Economic theories, models, and methods are contested, as well as its status as a science (Mäki, 2002, p. 3).

In Knight's (1940) opinion, positivists view of science are particularly inappropriate to economics because all sciences of human action including economics, should be consistent to reasons, motives, values and errors not just causes and regularities.

> "Economics and other social sciences deal with knowledge and truth of a different category from that of the natural sciences, truth which is related to sense observation – and ultimately even to logic – in a very different way from that arrived at by the methodology of natural science" (Knight, 1940, pp. 5-6).

Although many economists have proposed alternative methodologies to economics, the basic approach to economics is still predominantly positivist (Boland, 1991, p. 88). This essay attempts to demonstrate controversies concerning positivism and reasons that have yet kept it alive. It also suggests strategy that can simultaneously reduce the mechanical methodological aspect and increase the predictive power of positivist approaches.

Positivism in Economics

According to Solow (1985, p. 328), the fact that economics is a social science, entitles it to Damon Runyon's Law that nothing between human beings is more than three to one. One of the pioneers to classical economics, John Stuart Mill (2008, pp. 47-48), maintained that large number of causal factors at work makes it impossible to conduct a controlled `a posteriori (inductive) experiment in the area of social science. He claimed, however, that "`a priori (deductive method) is a legitimate mode of philosophical investigation in the moral sciences"; and that "it is the only mode" (Mill, 2008, p. 47).

In his scientific approach, Mill, first, recommended to inductively establish the premises governing individual causal factors or basic psychological laws – such as "people seek more wealth" or the law of diminishing returns (Hausman, 1989, p.116). These established premises are statement of tendencies not "universal laws", yet effectively accurate to state how specific causal factors operate. Moreover, statements of tendencies may be subject to "disturbances" or "interfering causes" that cannot be specified in advance; thus proper allowance for unforeseen disturbances – ceteris paribus – is necessary to formulate economic theories (Hausman, 1989, p. 116). A ceteris paribus law explains what will happen in a particular situation provided only the influences it covers are in play (Bishop, 2007, p. 261). Then, with these psychological and technical laws in hand, and proper allowance made, economists can draw their conclusions, and so long as the assumptions are true, "and differs from the truth no otherwise than as a part differs from the whole, then the conclusions which are correctly deduced from the assumption constitute abstract truth" (Mill, 2008, p. 49).

> "The conclusions correctly deduced from these assumptions, would be as true in the abstract as those of mathematics; and would be as near an approximation as abstract truth can ever be, to truth in the concrete" (Mill, 2008, p. 49).

In Mill's method, empirical confirmation or verification is crucial to determine the correctness of deductions, accounting of causal factors left out, and applicability of the theoretical conclusions (Hausman, 1989, p.116). However, such verification in no way challenges the validity of basic laws – already established by introspection and experimentation. In this sense, political economy is comparable to the science of tides, which use laws that have been independently established (Hausman, 1989, p.116).

Mill's objectivist approach to political economy is criticized for both its mechanistic methodology and indifference to standard of predictive power. For example, Friedrich Hayek (1964, p. 31) asserted that the objects of economic activity cannot be defined in objective terms but only with reference to a human purpose. Any attempt to explain the actions of the actors – that is, to subsume them under rules that connect similar situations with similar actions – will inevitably fail unless we can comprehend what the actors mean by their actions (Hayek, 1964, p. 31). In political economy, we are concerned with the results of conscious human action, not with the objective properties of the external world. "It is only by the systematic and patient following up of the implications of many people holding certain views that", Hayek (1964, p. 34) argued, "we can understand, and often even only learn to see, the unintended and often uncomprehended results of the separate and yet interrelated actions of men in society". Hayek (1945) claimed that the knowledge of the particular circumstances of time and place is "not given to anyone in its totality", rather it is "dispersed among many different individuals". For this reason, Hayek was opposed to all attempts – whether Keynesian or monetarist – to manage inflation by way of central planning (Cooper, 2011, p. 376).

Many economists, like Hayek, believe that Mill's method focuses unnecessarily on scientific experimentation and fails to explain much of the economic phenomenon in terms of reality. Since the validity of the notion of economy itself, or any interpretation of behavior in terms of motives, depends on the factor of error or uncertainty in many forms, Knight (1940, p. 27) asserted that economics cannot strictly adhere to the realm of physical causality (uniformity of sequence) and deny the relevance of any other categories of interpretation. Hausman (1989, p. 115) suggested that the act of formulating economic models and investigating their implications resemble more to conceptual exploration and less to assessment of empirical hypotheses. McCloskey (1983, p. 482) argued that economics should get its standards of arguments from itself instead of borrowing it from other disciplines. He maintained that the applicability of theories does not improve by clinging to the scientific method, or any other methodology, rather what matters is the conceptual clarity, honesty and truthfulness.

The Failure of Predictive Success in Positivism

Milton Friedman offered the apparent way out of empirical difficulties in an attempt to reconcile economics to philosophy of science (Hausman, 1989, pp. 119-120). Friedman was thoroughly positivist in his vision of the virtues of so-called competitive capitalism (Rodrigues, 2018, p. 130), a system where businesses can prosper when decision-making is "consistent with rational and informed maximization of returns" (Friedman, 1953, p. 22). Thus, in stark contrast to Hayek's general contempt for state intervention in the market, Friedman boldly assigned a pivotal role to the central bank in managing inflation (Cooper, 2011, p. 376). While Mill held that the confidence of economists in the science of political economy is based on the direct and indirect confirmation of its assumptions, Friedman argued that theories should be appraised exclusively in terms of their ability to confer predictions. He maintained that theories may be of great predictive value even when their assumptions are extremely unrealistic (Bishop, 2007, pp. 263-264).

> "The goal of positive economics is to provide a system of generalizations that can be used to make correct predictions about the consequences of any change in circumstances. Its performance is to be judged by the precision, scope, and conformity with the experience of the prediction it yields" (Friedman, 1953, p. 4).

According to Wilber and Harrison (1978, p. 66), since correct predictions imply correct explanations, hypotheses (or predictions) regarding economic phenomena must exhibit a high degree of correspondence to the real world when tested to be confirmed as scientific explanations (or theories). On the other hand, hypotheses with a low level or lack of correspondence to real world indicate flaw in the theory, and inherently rejected as disconfirmed. The realism of assumptions or the static nature of its structure, thus, becomes irrelevance when the validity of a model is based on its predictive ability (Wilber & Harrison, 1978, p. 66).

If, however, the ability to predict is to be benchmark as means to verify the truth of the theory, it is necessary to explore such an endeavor in economics (Wilber & Harrison, 1978, p. 66). The world's experience with high unemployment, inflation, and energy crisis, unfortunately, suggest that successful predictions of economic phenomena are consistently lacking over the years. McCloskey (1983, p. 487) maintained that "prediction is impossible in economics". He asserted that mathematical theorizing of human behavior, frequently used for prediction in economics, is metaphorical, and literary; and extended example of the economic reasoning underlying the mathematics are often a simplified version of the situation in the real world that the mathematics is meant to characterize (McCloskey, 1983, p. 505).

Wilber and Harrison (1978, p. 67) argued that the applicability of positive methodology in explaining economic phenomena is seriously compromised for two reasons: due to the nature of subject matter and inherently poor experimental design found in economic phenomena. Whether in physical science or in social science, theoretical confirmation is subject to the stability of data generated by the subject matter. For example, a falling object with a certain mass accelerates and will always accelerate at a rate fixed by the law of gravity. Following that, successful application of scientific methods to economics is subject to the stability of data generated by the economic agents. However, the degree of stability over time in subject matter to its response to external factors is more volatile regarding economic phenomena (Wilber & Harrison, 1978, p. 67).

Certain types of economic data are highly unstable (Wilber & Harrison, 1978, p. 67). Although “behavioral responses to economic stimuli” tend to exhibit a high degree of long-run stability due to the influence of habits, customs, traditions and usages of society, “the physical nature of the production process” are highly unstable and impossible to predict (Heilbroner, 1970, p. 37). Conversely, short-run behavioral responses tend to be highly unpredictable, while technical data may be predicted with a fair degree of accuracy in the short-run. The instability of economic data, hence, makes generalizations exceedingly problematic and the ability to predict successfully is severely limited (Heilbroner, 1970, pp. 33-34).

Being a field of social science, economics also suffer from the fact that its subject matters are not amenable to controlled experiments. Unlike physical science, hence, it must attempt to generalize from open rather than closed systems. The only way to reduce the complexity of economic phenomena to manageable proportions, then, is to resort into the use of partial equilibrium analysis (Wilber & Harrison 1978, p. 67).

> “The positive economist utilizes the ceteris paribus technique in order to control artificially the potential random behavior of certain factors. This technique serves to give the model, although not the subject matter itself, a degree of determinedness” (Wilber and Harrison, 1978, p. 68).

Referring to arguments presented by Wilber and Harrison (1978), and McCloskey (1983), thereby, we can conclude that successful prediction is extremely difficult in economics. If this is the case, what makes economists to hold on to theories when they fail to fit the facts? The resistance to acknowledge failure of predictions as evidence of an incorrect theory stems from Thomas Kuhn’s concept of paradigm. According to Kuhn (1996, p. 5), the activity in which most scientists inevitably spend almost all their time – normal science – is predicated on the assumption that the scientific community knows what the world is like; and the success of the enterprise is largely due to the community's willingness to defend this assumption, even at a great cost . In the pursuit of “normal science”, the economist is thus guided by the dictates of his own paradigm that transforms the way he sees the world – consequently, the economic phenomena is erroneously modified and the confirmation situation is disguised (Wilber & Harrison, 1978, p. 68). Having established such illusionary picture of reality in mind, economists find it hard to accept empirical disconfirmation of hypotheses and hence, for the positivist economists, general theory is rarely disproved. According to Wilber and Harrison (1978, p. 68), there are three mechanisms which allow economists to rationalize the failure of their predictions.

First, ceteris paribus clause permits high degree of conditional support for theoretical predictions (Wilber & Harrison, 1978, p. 68). Hypotheses typically stated in “if…then…” propositions, allow economists to reject any disconfirmations as “misspecified” pointing to the changes in “ifs”. Second, a clear-cut test of hypothesis in economics is difficult to construct. The failure of empirical tests to discriminate adequately among competing theories, results into assessment of theories based on desirable logical qualities such as simplicity and generality, inherent to formal models. Third, in economics, data “massaging” is required to correlate statistically constructed economic data to corresponding variables in the theory, thereby making both the methods of collection and construction of economic data unreliable. If a test disconfirms a hypothesis, the economists can always blame data of being either too much or not enough "massaged" (Wilber & Harrison, 1978, pp. 68-69).

The disclosure of unrealistic assumptions and disconfirmation of predictions, hence, cannot deteriorate positivists' belief in theories (Wilber & Harrison, 1978, p. 69). The models such established become perfectly insulated from refutation and its substantive hypothesis become unfalsifiable. The value of such theory then stems from its logical description of economic phenomena and not from conformity to empirical reality. Such logical description helps economists to formulate mathematical models focused at maximizing or minimizing some objective functions under given constraints. The economists then use those mathematical models backed by ad-hoc explanations to predict economic phenomena (Wilber & Harrison, 1978, p. 70).

Positivism, leading to lack of falsifiability and inconsistency of predictions to real world outcomes, thus is no more than "storytelling" (Wilber & Harrison, 1978, p. 70). What economists produce are stories based on their own paradigm view of the world – some more plausible than others. Individual rationalities are subtracted from whole, and parts of economic phenomena add up to whole picture, problems are misinterpreted and so are the solutions. Hypothesis are not logically deduced and neither are subject to empirical verification, instead data massaging is used to formulate ad-hoc hypotheses and any question of reliability is insured by the ceteris paribus clause (Wilber & Harrison, 1978, p. 70).

Positivists conceive of economics as a science of facts that provides policy-makers and others with unbiased information and guidance for choosing appropriate means to accomplish their chosen ends. However, the concept of economics as a science of facts has been widely challenged. The nature of social science itself does not let any methodology hold its ground firmly. Accuracy and scope of generalization may be enhanced with critical assessment of historical context. It is necessary to consider human conduct in a social context – the scope of maximizing of self-interest as a "rational strategy" can diminish significantly if the social norms and laws do not permit such human action. The combined application of "common rationality" and "social rationality" can simultaneously reduce the mechanical methodological aspect and increase the predictive power of positivist approaches.

Conclusion

Despite decades of controversies, positivism has been the major economic methodology. Subject to a number of criticisms such as lack of clarity, honesty, and truthfulness, Mill's scientific approach still remains influential as the ceteris paribus law. Although Friedman tried to establish a more realistic approach to economics, he ended up supporting positivism with a flavor of predictionism. Both economists defended their methods, on different grounds. While Mill argued that there was no other way except ceteris paribusto control the large number of economic factors and formulate theories based on established premises, Friedman proposed that the only way to achieve effective economic theories was through an empirical check of the correspondence of predictions to real world situations.

However, the problem with a positivist approach to social science is that all human activities, including economic ones, are infused with values (Bishop, 2007, p. 261). This means that the regularities supported by empirical evidences and posited as theories and laws may hold as long as the meanings of those values remain constant. The truth, however, is that values associated to human needs and wants continue to restructure and thus the validity of such laws is challenged with the lapse of time (Bishop, 2007, pp. 261-262). Moreover, economists are also crippled by choice of options due to the very nature of social science. The nature of social science, itself does not let any methodology hold its ground firmly. In such a situation positivism appears to be as good as any other methodology, despite the limitations.

While economists should continue to develop models and test them as best they can, it is important to recognize that these models are likely to be partial in scope and limited in applicability (Solow, 1985, p. 331). Accuracy and scope of generalization may be enhanced with critical assessment of historical context. It is necessary to consider human conduct in a social context – the scope of maximizing of self-interest as a "rational strategy" can diminish significantly if the social norms and laws do not permit such human action. The social rationality of a particular era tends to arise from historical forces of norms, ideas, and institutions. For example, historically, economic growth was often prioritized over environmental concerns. Many industries and businesses operated with little regard for the long-term environmental consequences of their activities, as they focused on maximizing short-term profits. As the environmental impact of industrialization, deforestation, fossil fuel use, and waste became more apparent, modern economics (public and private) increasingly emphasizes the importance of sustainable practices, corporate social responsibility (CSR), and green technologies.

In contrast to methodological individualism, wherein the purposeful action of others, whether present or absent, known or unknown is formulated into a theoretical system by means of "common rationality" (Kaufmann, 2011, p. 155); the "social rationality" introduces a level of generality, beyond individual experience, with reference to particular historical phases with concepts like capitalism, liberalism, fascism, etc. (Cox, 1976, p. 66). While both concepts seek to construe regularities in human activities, and are fruitful within defined historical limits for describing social and economic reality, only the latter recognizes human conduct in a social context and that both human nature and the structures of human interaction change in the long run (Cox, 1985, p. 53). The combined application of "common rationality" and "social rationality" can simultaneously reduce the mechanical methodological aspect and increase the predictive power of positivist approaches.

"One will have to recognize that the validity of economic models depend upon social context. What is here today may not be here tomorrow, or if not tomorrow, may be in ten or twenty years' time" (Solow, 1985, p. 331).

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