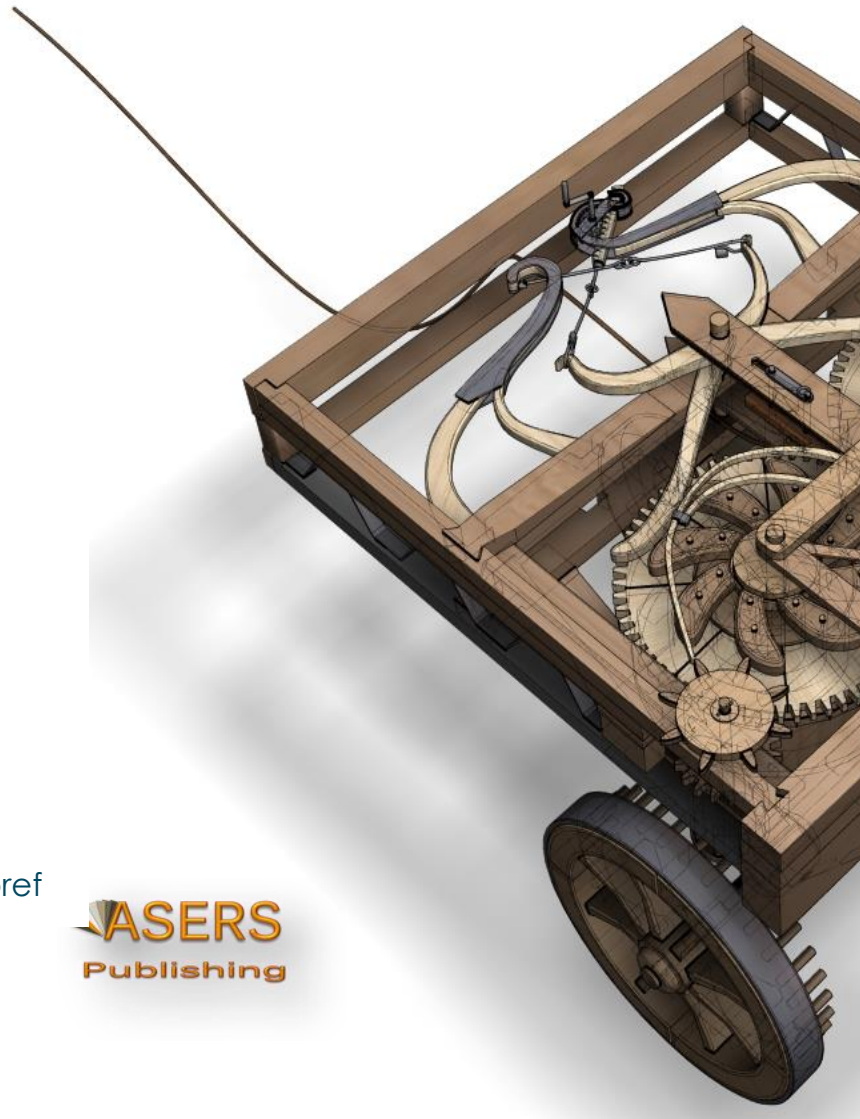
Theoretical and Practical Research in Economic Fields



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ON THE QUESTION OF THE RELEVANCE OF ECONOMICS AS A SCIENCE: POSTMODERN FILOSOFIA CRITIQUE

Emerson Abraham JACKSON
Bank of Sierra Leone, Freetown
Sierra Leone and University of Birmingham, United Kingdom
EAJ392@bham.ac.uk / emersonjackson69@gmail.com

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Abstract:

This article has adopted an open discourse in addressing pertinent concerns about the scientific existence of economics as a discipline. In doing so, some (critical) Filosofia arguments have been provided in ensuring that a well balanced approach is taken on the subject. Obviously, the approach of Popperian falsification used by economic science to address scientific justification through its varied scientific platform of technology applications like EVIEWS, STATA, MatLab and many more, have been applauded. Albeit such advances, the views of modern and postmodern critics have also come out saliently in a bid to ensuring open discourses are laid on the way forward in adding scientific credence to the subject matter. In concluding, it was acknowledged that more is needed in ensuring that economic science as practiced by economists takes an open approach to critical discourse, reflecting reality about its pursed scientific ventures, given the persistence of economic volatility manifested across the global community.

Keywords: Scientific Methodology, Filosofia, Economics, Critic, Postmodern.

JEL Classification: B41; B55.

Disclaimer: Views expressed in this article are those of the author(s) and do not reflect the official position of the named institutions.

Introduction

Economics a derivative of its original Greek term "*Oikonomia*", which started as a discipline in the social science field drifted around the early poetic writings of Hesiod (Rothbard 1995, 8) towards a quantitative science field; this was intended to study household management based on Aristotelian notion / doctrines (Eggleson 2008, 4-5). Towards the end of the 18th century, the godfather of economics, Adam Smith emerged with a new coinage to the discipline as '*Science of Wealth*' (Smith 1759 and 1776). While his idea of economics was still purporting to be valid, Alfred Marshall, a popular English economist around the same era also added to the definition as stated thus: "*Economics is a study mankind in the ordinary business of life*" (McWilliams 2008). This definition then extended the concept beyond the household to incorporate business cycle activities taking place within an economic system, for example the household, firm and also government which is considered the main engine of economic activities.

As time progresses, varied thoughts around the concept were emerging and most popular of this is that of Lionel Robins, referred to as the modern economist, with his most widely used definition: "*Economics is a*

science which studies human behaviour as relationship between ends and scarce means which have alternatives uses" (Robins 1932). According to an excerpt from one of his works (Robbins 1938, 343), the concept about economic science was further interpreted thus: "*It is a characteristic of scientific generalizations that they refer to reality. Whether they are cast in hypothetical or categorical form, they are distinguished from the propositions of pure logic and mathematics by the fact that in some sense their reference is to that which exists, or that which may exist, rather than to purely formal relations*". This for most economists, is considered very much encompassing as it addresses the scope for discourses that lend the subject matter as dynamically scientific, while at the same time addressing the need for the rationale being to make decisions based on the availability of scarce resources. One would simply argue that the filosofia element of the subject matter of economics is rooted from here, as it questioned the rationale behind (economic) decisions made by agents, which is non-static, even when one may come to look at its extensive study in relation to the case of ricardian and non-ricardian DSGE modelling concept of the entire economy structure (Torres 2012 and Jackson, forthcoming2). The thirst for its scientific root can be thought of as an epistemological journey as far as the situation is concerned in challenge of its critics about whether "*economics is a science, pseudo-science or neither*".

1. Scientific Approach to Economic Science Research

The (non)scientific discourses spanning around the subject matter of economics will seek to continue as long as professionals are insistent in pursuing efforts to make strides in proving their actions in an ever-growing research community. For instance, let us take a look at the development in model formulation ranging from time series, structural models like VAR and more lately, DSGE models used to justify the power of empirical endeavours to model macro-economic realities (Jackson *et al.* 2018, Jackson forthcoming2, Jackson 2018, Jackson and Tamuke 2018, Bangura *et al.* 2012 and Torres 2015). The best claim of the evidence can be linked with the famous Poperian falsification argument in which sub-set of economics discipline like econometrics have anchored its endeavours. Many a time, the effort to justify (apriori) theories in the economic science discipline is done through series of arduous iterations during estimation and test procedures of data manipulation.

Thanks to developments in information technology which has made it quite possible for advances in model construction around simple simulation like calibration. As a practicing quantitative economist, one may simply follow in the pathway, given the effort and time spent in making use of technology platforms like EVIEWS and many more to iterate around data provided in the process of testing established economic theories. Critics of quantitative economics may say it is simply a form of data massaging (Schrøder 2012, Boland 1977, Caldwell 1984 and Machlup 1955), but this approach as applied by practitioners is in no way different from scientific laboratory techniques used in the physical / natural sciences to justify the continued existence and reliance of established scientific theories, which in most cases involve use of catalytic actions to justify outcomes of a priori scientific expectations.

1.1. Falsification Arguments in Scientific Research

Many economic scientists, particularly those interested in quantitative economic studies have developed a positivist view of established concept or approach to justifying established economic theories through testing, given the discipline's alignment to the physical / natural sciences. As a practicing economic researcher, one is sometime turned to accepting both the normative and positivist view of proving the (non)scientific arguments of economics. In as much as Popper's approach to falsification is reigning well in the area of economic research methodology, the fact that research around the discipline is based on economic agents' behaviour meant that truth about its scientific reality will always be faced with dismal critiques. Boland's (1996) effort to advance critique on the testability and falsifiability of economic scientific insistence is justifiably warranted given the fact that economic theories can always be open to criticism with its surrounding of the (ir)rational actions of (economic) agents, even when the most reliable of data is made available. This actually shows how much of dynamism there is in economic agents' actions given the situation of scarcity of resources to satisfy their ends.

One may attest to supporting the claims of scientific experimentation in the cause of hypothetical testing procedures during research undertakings, particularly when authentic historical data are used, and for which Boland (1991) termed as a form of social engineering in which policy makers are of the opinion that their policies may not easily be refuted, given the scientific linkage(s) of their policy outcomes. This does not always prove to be true when the reality is applied to economies in which economic agents' actions do not always follow the norm of established theories. So, the question of falsification argument may seem to be very much

needed here as clarity in convincing critics about the insistence of economics direction as a science will need to be proved in all situations, for example through means like rational and irrational behaviour.

Sometimes, one is also tempted to promote some thought provoking views, normally akin to be normative in nature around discourses of economics reality as a science as one continues to engage in practice. This for example have spanned from questions relating to thoughts around heterodox views in economic research to that of the notion of Criteris Paribus in a country like Sierra Leone, where a lot of the ills of (political) economy mismanagement and the (ir)rational behaviour of economic agents seem to be in contrary to one's own ontology as a quantitative economic scientist (Jackson, 2016, 2017 and forthcoming).

1.2. Cases of Empirical Research as Evidences of Economics as a Scientific

As already addressed in the Popperian philosophy of scientific approaches, the discipline of economic science which has lend itself towards proof of empirical research is dominating the profession and more so in research-based sections / divisions in central banks, policy tink-tank institutions and also universities across the world. There are myriad of test outcomes produced on a regular basis by researchers to justify claims of the scientific nature of economics, particularly in advancing knowledge towards proving the continued existence of established economic theories or the development of new ontology of economic science's thinking.

In order to be able to argue this, it is worthwhile drawing reference to cases of the usefulness of economic science research in supporting critical thinking in areas like policy and academic advancement. To name a few, the Economic Modelling and Forecasting Group at the University of Warwick regularly makes use of econometric tools and supported by application platforms to experiment on research ventures to progress economic science research in the UK economy and the global community. The high level of uncertainty present in the global economy is actually making it much of a challenge posed on the validity of scientific work produced in the field of economic science. Like any area of applied practice, the group seem to have made some advances in keeping up to date with research in the academia and economic policy with its link with the Bank of England, and also advances in the area of software development in support of scientific data [more so, historical] usage to validate decisions about economic outcomes. A noticeable case of such scientific practices to expand knowledge discourse in the economic science field is that of Battisti *et al* (2007), who attempted to (partially) redress paucity of literature on the joint analysis of inter and intra firm diffusion of innovations within and as well as across countries; the application of "*Bivariate Probit Mode'*" made it possible for data from independent country-specific surveys from UK and Switzerland to produce (international) comparison of inter and intra firm diffusion of Information and Communication Technology (ICT). Most important to this outcome is the dissemination of knowledge that has emerged out of the empirical investigation in promoting and exploring new ways of identifying robust relationships. Such research have also spearheaded similar ventures in the direction of enhancing knowledge dissemination, much more so in the area of critical methodological discussions, and also the application of findings to support policy decision in the real world of applied research (Ya-Ching Lee 2010).

At the bank of Sierra Leone for example, research economists have over the years and to date endeavoured to prove their efforts in support of the relevance of scientific economic theories to address the core objective of the bank, which is to "*maintain price stability*". Work produced by Bangura *et al.* (2012) for example, demonstrated scientific approach through methods like Structural Vector Autoregression (SVAR) models to estimate pass-through effects of exchange rate changes to consumer prices in Sierra Leone. Econometric methodology tools used and supported by appropriate application platform like EVIEWS sufficiently helpful in providing justified outcome to testify that exchange rate depreciation [which is due to economic agents' high dependence on foreign inflows] is a potential source of inflation in the Sierra Leone economy. Like any laboratory scientific experimentation, the philosophical approach of such a study is highly based on iteration, and for which those opposed to economic science methodology are normally quick to link it to data massaging.

Equally in the same year, Mansaray and Swaray (2012, 87) also made use of Granger-causality test methodology, which identified the presence of uni-directional causality running from real balances to inflation and real effective exchange rate respectively. One may claim in this case that the use of dummies is akin to catalytic substances usage in laboratory experimentation, which is considered a justified means of scientific step to support researchers' filosofia efforts in adding value to existing discourses spanning in the area of the scientific nature of economics. Equally, post-credit-crunch scientific research carried out by economist at the Bank of England, namely Joyce *et al*. (2011) and Kapetanios *et al*. (2012) made great strides in demonstrating the relevance of economic science's (methodological) endeavours in assessing the economy-wide effects of

quantitative easing on asset pricing and long-term low interest rate in the UK; all of these were sufficiently greeted by the application of robust methodologies like Bayesian VAR and GARCH in pursuance of knowledge exploration.

One may come to the reality of complementing efforts made by economic researchers across the world, and particularly in central banks, despite ongoing criticisms in relation to the continued ir(rational) behavioural state of economic agents, which cannot directly be blamed on ignorance advanced by those opposed to economics insistence as a science. As explained by Haldane (2016), the pressure of global financial threat and also critiques around the usefulness of economic science is in itself an essential element in making it possible for a rethink about the discipline's approach to scientific research, either in the way of embracing others or in cognisance of the social realm in which economics as a discipline is rooted. The above [critique] is not sufficient to stop research ventures in economics coming to a halt as research effort by scholars like Joyce *et al*. (2011) and Kapetanios *et al.* (2011) were considered useful in addressing pertinent development in the advancement of research towards assessing the impact of quantitative easing since the last global financial crash between 2007/09. In a similar token, univariate methodology like ARIMA continue to prove its scientific ground as applied regularly by economic science researchers to support intuition on '***in and out-of-sample***' forecast of inflation and its exogenous determinants for policy decision(s) at central banks and also in industrial / professional endeavors (Jackson *et al.* 2018 Jackson 2018; Tamuke *et al.* 2018; Ericsson 2016; Erik *et al.* 2013 and Bigovic 2012).

The above highlight of varied scientific approaches used in the justification of economics as a science discipline cannot be totally complacent given the dynamic nature of the social realm in which the subject matter rest. In this regard, there is a need for researchers in the discipline to be more receptive to their critics, simply on the basis of accommodating the development of new thoughts in addressing global occurrences. Despite critiques levied on the more recent approach to DSGE modelling, as a practicing professional, it is perceived as an ideal scientific model in allowing economic systems to be simulated, even without the use of real data (Torres 2015).

2. Contemporary and Postmodern Critical Discourses

Some economists like Crespo (1998) and Hodgson (2008) have questioned the morality and ethical value of the scientific base of economic science - to Crespo in particular, economic science is considered a practical science that should seek to direct human epistemology into addressing practical realities of life. In the journey of methodological approaches used by quantitative economists, this it seems, may only seek to be modelled around justifying established theories as opposed to establishing practical realities on how economic agents adjust to things happening in their surroundings. In contrast to Friedman's (1953) dogmatic notion of precision about economic model forecast outcomes, Hodgson (2008) was able to provide alternative perspective, especially in the case of complex phenomenon and non-linear interactions about the limited scope for prediction and for which science must endeavor to explain outcomes based on causal relationships.

Critical discourses is resounding all around the world and even amongst hard-core practicing economists about the direction of economics (and particularly reliance on models) in its continued insistence about been scientific, rather than concentrating on its practical realities of engaging with the social realm; one such person is Blaug (1997) who on quote stated that "*Modern economics is sick - Economics has increasingly become an intellectual game played for its own sake and not for its practical consequences for understanding the economic world. Economists have converted the subject into a sort of social mathematics in which analytical rigour is everything and practical relevance is nothing*". In his book titled "*The Methodology of Economics or how economist explain it*", Blaug (1997) provided a clear, but more so, thought provoking discourses about the insistence of economics and its alignment with the physical science.

To many, and not only those in present or modern society, economic science seem to have embraced itself with mathematical modelling rather than on the practical realities on which human decisions are meant to be focused (Knight 1921, Keynes 1937); to many of the critics, models are thought to be very limited in their scope to address issues of pertinent concern to the human race, which are mostly considered to be unpredictable. On a similar critical viewpoint, Kirman (1992) noted that our understanding of economic phenomena cannot be adequately realized without taking into consideration the diversity within population of human characteristics and dispositions. This is an area of critical importance when it comes to justifying economic model outcomes, without much cognizance to the varied economic systems and cultures people are exposed to around the world; some of the practicing systems are thought to be existing in an almost perfect market environment, while some are just too imperfect to enable sound judgements to be made about economic

model applications (Jackson 2017). This then puts limit on the use of mathematical modelling to address and deal with real situations, despite efforts made by some model proponents in applying intuition to support policy prescription (Torres 2015). More recently, published works by economic scientists like Boland (2014, 124) have questioned the unsolved puzzles and performances of econometric-based forecasting models; to him, econometric models are meant to be a '*shot at the real target*' and which does not really work for two category of reasons: "*(1) it was a 'bad' shot –that is, the model was logically invalid or empirically false – or (2) the target moved – that is, there was random unexplained variation in the objects the model is designed to explain* (Boland 2014, 126).

Postmodern thoughts involving the practice of economics have taken varied views on the practice and application of the subject matter, particularly its alignment as a science and also in relation on how it is practiced, given the use of models to shape economic realities. Klamer and McCloskey (1989, 4) and more lately, Ruccio (1991, 496) have argued their points, not only based on disagreement spanning around economic issues and politics, but most importantly on the mechanical and scientist notion on the doings of economists. There is the notion of dichotomy spanning around uncertainty amongst myriad of models on which neoclassical views are based. According to Ruccio (1991, 505), it is thought that economists have avoided the nihilistic approach to postmodern critique spanning the notion of uncertainty, while dogging in the direction of less probabilistic uncertainty and rational expectations. Such criticism is rather placed between value and science, and also the role of mathematics in addressing issues of concern to the postmodern critics on the subjective approach to its modernistic practice.

Postmodern thinkers like Warren Samuels (1990) have argued in favor of a turn from the modern notion of theoretical models to that of critical discourse analysis and Critical Realism as emphasized in a working paper by Boland (n/d) to address situations of scientific theories - to him, there is scope to re(construct) established theories in a bid to reshape situations in economic science. In this way, the acclaimed application of universal methodology of economic science can be viewed from "*eclectic and agonistic point*", and also the use of metaphors, which is not only restricted to communication and teachings, but more so on the cognitive content of theories. In moving on with critical discourses surrounding the direction and scientific nature of economics, Ruccio (1991: 508) highlighted some pertinent questions for the postmodern thinker:

- *Can the notion of scientific argumentation within economics be opened up to include the rhetorical and figurative dimensions of discourse? What, then, is the role of mathematical models, axiomatic logic, and other -formal| modes of persuasion?*
- *What remains of the discipline of economics if it contains incommensurable theories and discourses? What are the conditions for conversation among economists? And what is the relationship of economics to other areas of human thought, including literature?*
- *Does economics have a responsibility to consider the effects of the (non)rational and irrational - the economy of desire, the will to power - on rationality? What about the discursive constitution of rationality – "animal spirits" and expectations? Is there a position for the decentered subject within economics?*
- *Can economics endure the disruptive effects of time? Is it possible to displace master binary oppositions such as equilibrium / disequilibrium and to move economic analysis outside equilibrium?*

The above highlights are considered thought provoking in the direction of the future of economic science, which also takes cognizance of its social science root. In this regard, thoughts should be spanning around incorporating wider notion of the social realm on which the subject matter lies, rather than its insistence in shaping complex mathematical models, with very little scope for intuition on how (ir)rational behaviour may affect outcomes.

In digressing further on this, the views of new-comers in the economics profession like feminist economists, development economists and also ecological economists would also attest to the complex and varied models to satisfy its scientific base, mainly as a way of appeasing those of its critics about its pseudo or non-scientific base. The conception of '*homo-economicus*' is an area that has been of contention around feminist view of their exclusion when it comes to economic model construction; this to the many feminist and also supporters of feminist movement have made it very difficult for rational discourses to be debated around women's contribution on the debate in making their cases for the advancement of scientific contribution to the subject matter (Nelson 1991).

On a similar note, development economists have equally provided their (postmodern) thoughts in the area of methodological advances pertaining to the need for changes to economics thinking, more so connected with the applicability of theories to different economic situations (Jackson, forthcoming3). It is but certain that

the practice of economic science and its methodological approach will need to embrace postmodern views around dynamism in economic situations, and for which the practicalities of models in developing country's context can be very less applicable or irrelevant given the imperfect conditions prevalent in their market systems.

Conclusion

In all fairness, economic science has come a long way in terms of aligning itself with mainstream traditional scientific disciplines, and more so affirming its recognition through the application of Popper's doctrine of falsification. The high usage of numerical contents to address complex economic models is one of great concern to modern critics and also, postmodern thinkers in the discipline. As a practicing economist, one may be inclined to subscribe to the discourse of critical views given the generality notion and difficulties associated in adapting models to less complex economic systems. Economic science as practiced in developed economies can be argued in the direction of proving its scientific dogma given the fact that model applications can be reasonably well tested with (near) accurate and authentic data. In the case with developing countries, particularly economies like Sierra Leone where data accessibility is difficult to come by and also, added to the irrational behaviours manifested by economic agents, it is almost impossible for economics to prove its scientific base in affirming established economic theories. This makes it quite difficult for testability to be proved as the use of varied and incompatible data can easily render theories non-generalizable.

On a positive note, the practice of economic science has come a long way and particularly through advancement in technology to handle (complex) data manipulation in testing theories through its (laboratory) platform of varied technology applications. Such developments have made it possible for epistemological progress to be made in terms of the applicability of theories to economic policies and also new developments in thoughts pertaining to future progress in the discipline. Moving on, there is a need for consensus in the direction of embracing both modern and postmodern views in order to make the discipline less susceptible to dismal criticisms. In this situation, concept around '*critical realism*' should be embraced as a considered methodological approach in addressing discourses around ways of developing thoughts pertaining to the applicability of established models to support economic advances on how to challenge global economic malaise. As stated by Viktor (1981), modern economics should consider diverting attention to embracing qualitative analysis (more literally, intuition), in addition to quantitative data manipulation, given the fact that even the most sophisticated of quantitative econometric models were not sufficient to prevent an economic crash as witnessed around 2007-09.

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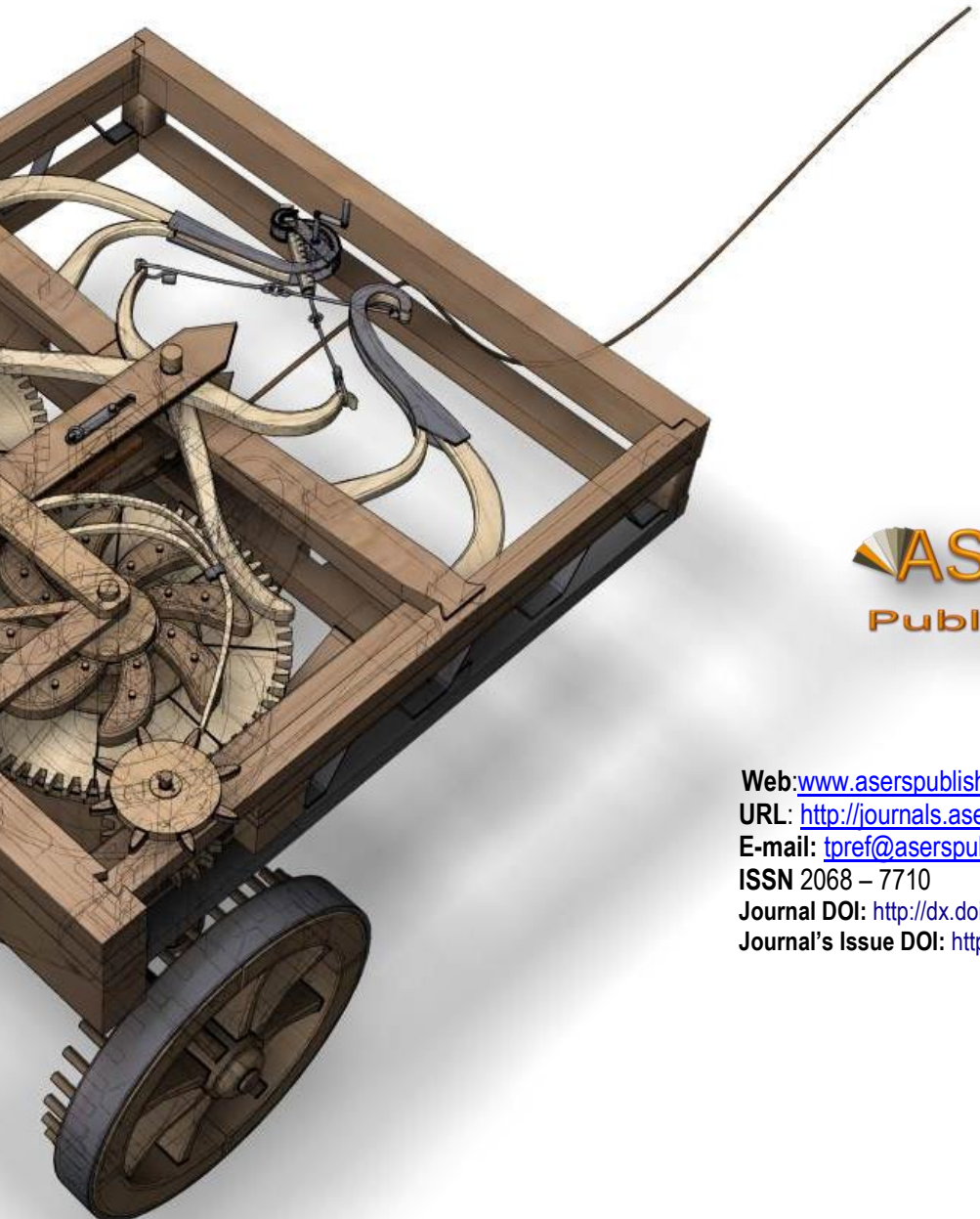

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