

A Manifesto for a paradigm shift from traditional Economics to Evidence Based Economics

By Dr. Stefano Gori¹

1 Nov. 2016

“You want a valve that does not leak and you try everything possible to develop one.
But the real world provides you with a leaky valve.
You have to determine how much leakiness you can tolerate.”

(Arthur Rudolph the developer of the Saturn 5 rocket quoted by Saxon, 1996).

Abstract

In the past century, the Mainstream Economic debate has been the quasi-monopoly of males educated or having a tenure in elite Anglo-Saxons universities. This has severely hindered a diversified and multifaceted approach to economic theory and to empirical research with a negative spill-over on policy making. Hence, there is a growing need for a new economic paradigm encompassing the changes in technology and the evolution of our societies. This paper has the objective to bring one step forward the debate on Evidence Based Economics, which is providing a sensible approach to complicated issues in these times of economic, political and financial uncertainty. An open, transparent, pragmatic, innovative and non-ideological method using Relative Preferences could help to bring some order also by helping to develop a code of conduct for the Economic profession and could eventually lead to a Paradigm shift in the medium and long term with unprecedented and unexpected policy implications.

A. Introduction

In the past century, the Mainstream Economic debate has been the quasi-monopoly of males educated or having a tenure in elite Anglo-Saxons universities (e.g. Ivy League, Stanford, University of Chicago, Oxford/Cambridge, LSE)² and the affiliation of Noble Price winners proves it. This has severely hindered a diversified and multifaceted approach to economic theory and to empirical research with a negative spill-over on policy making.

There is a growing need for a new economic paradigm encompassing the changes in technology, the evolution of societies (e.g. immigration, cultural globalization, changes in the relations between the different genders) and the intertwined communication, economic and demographic flows between countries. The Financial Crisis, the increasing economic inequalities, the ongoing digitalization of the economy, environmental changes, the impact of globalization and the Fourth Industrial Revolution (*Schwab, 2016*) are challenges which need to be addressed by thought leaders from a different perspective and with new tools eventually leading to an overhauling of the traditional approach of the “Dismal Science”, Economics.

The objective of this Working Paper is not to develop a one-fit for all economic theory instead it is to lay down the first steps of a methodology to comprehend the economic trends and try to tackle the economic issues with a practical tool box useful also for non OECD countries. To attempt to develop this approach there is a need to involve young experts in Economics and other social

¹ Board Member of the CESPI Research Center. The content of this Working Paper does not reflect the opinion of the affiliated institution. Responsibility for the information and views expressed in this Working Paper lies entirely with the author. I dedicate this Working Paper and the research work which will follow to my dearest friend Professor Michael Crew, who passed away on September 26th, 2016, and his wife Hillary.

² It is very interesting the analysis carried out by Colander, Holt & Rooser (Colander et al., 2004) on the terms mainstream, orthodox, heterodox and how they can be applied to Economics.

sciences from emerging and developing countries and not to use only the conventional approach from the usual mainstream economic circles. Instead of a theoretical approach it would be more appropriate to use Applied Economics encompassing also the contribution of other social sciences similarly to the method used by Behavioral Economics, Law and Economics and Game theory applied to Economics. The main result could be an on-going debate on these issues to develop a new common ground and possibly a shift in the economic paradigm in the medium and long term. A diverse and intertwined world needs an Innovative Sustainable Economic Paradigm (hereafter ISPE) but it is still too premature at this stage to develop a well-defined and structured paradigm.

The starting point of this debate could be the Presidential Address by Richard H. Thaler at the meeting of the American Economic Association held in San Francisco on January 4th, 2016. The proposal consists in the embracement of Economics as an empirical discipline “made possible by simply turning our attention to the study of Humans rather than Econs” (Thaler, 2016, p. 1597). He calls this approach Evidence Based Economics (here after EBE). He builds on the work from the 2013 John Bates Clark Medal Recipient Raj Chetty (2015) “Behavioral Economics and Public Policy: A Pragmatic Perspective” and fully endorses Chetty proposal to “stop arguing about theoretical principles and just get down to work figuring out the best way of understanding the world” (Thaler, 2016, p. 1597).

At this stage, before developing a proper well structure sustainable Economic Paradigm (such as the ISPE) it would be already an important step forward to work on Thaler’s EBE and to develop a shared flexible methodology. Already several universities, mainly in Germany (e.g. LMU), have developed courses or graduate programs on EBE and even a Summer conference was recently organized on this topic in Freising. Furthermore, several books have been written on how to apply evidence-based decision to Economics building from the experience of other disciplines (e.g. Shemilt et al., 2011). The next section will attempt to lay down seven elements of a starting point for an “Evolving Manifesto” for EBE.

B. An on-going open EBE Manifesto

Reiss in his 2004 paper “Evidence Based Economics” (Reiss, 2004) presents an interesting outline of a methodology for EBE using an interesting three level approach, the first level concerns measurement of economic quantities (Reiss uses a insightful practical example the measurement of inflation). In the second level of analysis he raises the issue how claims about economic quantities are justified by the inference procedures. The third level concerns “idealization”, the issue raised is “whether the quantities and relations selected are justified by the stated aim of the inquiry” (Reiss, 2004, p.346). The approach used in this paper is slightly different even if it addresses similar questions and utilizes extensively the work from Reiss, which focuses more on all the aspects linked to the measurement of quantities.

The EBE Manifesto needs to be based on the idea that there is a need to go beyond the neo-classical approach and its three main assumptions:

a-Agents have well defined-defined preferences;

b-they make optimal choices and

c-their primary motivation is self-interest (Thaler, 2016, p. 1578). The objective of this concept paper is to contribute to the on-going debate on how to go beyond the neo-classical approach encompassing the different innovative and multidisciplinary³ approaches such as those generated by Behavioral Economics. In this preliminary phase seven important “building pillars” (the term “assumptions” is probably inappropriate at this early stage) could be used for opening the discussion:

3 Colander, Holt & Rooser favor the term“ ‘transdisciplinary’ to describe the new developments at the edge, which implies a more thorough going and profound interaction between the disciplines leading to some kind of new synthesis and transcendence.“ (Colander et al., 2004, p.498).

1-Open and Pragmatic Platform

To be a flexible and evolutionary approach the EBE Manifesto needs to be an open and pragmatic platform which needs constant maintenance taking into account the evolutions of our societies, the method used to update this manifesto needs to be dynamic. The debate should involve young economists (with an equilibrium in the gender and nationality composition, as much as possible from emerging and developing countries) and other social scientists (psychologists, sociologists, lawyers, philosophers, historians) and mathematicians.

2- Relative Preferences

One of the strengths, and at the same time the main weakness, of Neoclassical Economics is the concept of well-defined preferences and how it is linked to the self-interest motivation. These oversimplified assumptions have helped in the construction of “clean and elegant” Economic models often with clear policy implications. However, there are two main limitations to this approach. The first one is linked to the issue of information, even if all agents are rational to have well defined preferences it is important that all agents have access to the same information sets⁴ and have the same tools to analyze them (e.g. similar educational background). This optimal scenario is very difficult to obtain. Secondly, the one size fit all assumptions have failed to encompass the concept of altruism (Boulding (1969) criticized the view of humans as indifferent to the welfare of others) and the fact that utility can be derived also by non-quantifiable monetary elements.

In fact, these well-defined preferences apply merely to certain limited elements of societies while in a globalized environment they seem inappropriate. Hence, to attempt to address this it could be useful to introduce in EBE the concept of Relative Preferences (hereafter RP). RP were discussed by McAdams already in 1992 taking into account the work of Boulding (1969): “Neoclassical economics... has neglected the fact that people desire relative position. The omission of relative preferences from economic theory is part of a broader tendency to assume that consumer preferences are independent of each other, i.e., that individuals are concerned only about their own consumption, and are indifferent to the welfare of others” ((McAdams, 1992, p. 3).

The RP are preferences related to a certain group or subgroup under analysis in a well-defined space in a specific time frame and can be modeled to be incorporated in applied economics. These preferences (incorporated in a defined and transparent information set) could be limited to a niche group or can be extended to larger groups⁵ and in a dynamic context they change very rapidly. In applying the EBE approach to cross-country analysis it is important to lay-out the assumptions on the preferences taking into account the different cultural, religious, demographic and gender specificities. For example, Labor statistics are often influenced by the definition of “working activity” and how it is perceived in different countries. This impacts heavily on the results of labor surveys and has an effect on employment statistics. Another example relates to the work carried out on efficiency analysis of network industries across countries. In this domain it is important to incorporate in the analysis the different geographical and demographic factors impacting the functioning of an institution (Gori, 2013). A practical example could be a cross-country study on the cost efficiency of railways in five different countries: The Netherlands, Greece, Switzerland, Canada and Japan. The geographical and demographic factors impacting the cost structure of an operator (institutions operating in large versus small country, flat versus mountainous country, united country versus country with many islands, demographically urban concentrated country versus sparsely concentrated rural country) would have to be taken into account to avoid getting spurious results.

4 Fama in his seminal paper presented at the annual meeting of the American Finance Association (December 1969) discussed extensively about Efficient Capital markets and how prices reflect/incorporate the information in the markets (Fama, 1970).

5 With larger groups it will be important to describe how dominant these preferences are and explain how preferences differ between the majority of the members in a group and the minority.

3-New Economic clusters

Much of the current Economic analysis is focused on countries, regions, cities, custom union, economic unions and entities with clear-cut borders or institutional frameworks. However, more and more of these boundaries are losing economic significance and there is a growing research on evolving communities. Cross-border regions are rapidly emerging like the transnational Øresund Region, which covers Denmark east of Great Belt (including Copenhagen) and Scania. In the near future, the AlpTransit project, a new rapid railway link below the Swiss alps, will create an integrated transport system and eventually an economic area from Southern Germany to Northern Italy. Similarly new communities are emerging in the digital world some like payment platforms e.g. blockchains and others generated from on-line games e.g. Agar.io. All of these communities cannot be analyzed using traditional economic measurement tools of revenue, cost and employment. The concepts of “value” and “utility” need to be reassessed for these communities.

4-The use of more theories

A more pragmatic approach based on the analysis of the behavior “of Humans rather than Econs” (Thaler, 2016, p. 1597) with lead to a less Manichean attitude toward economic theories. An open approach could lead also to the use of more than one theory at a time without segmenting the research into pre-defined schools of thought, this could lead to a less *a priori* bias research. Humans do not think and act like Classical, Keynesian, Neo-Classical economists and in different phases of their life they might change their behavior based on the Relative Preferences hence they cannot be “confined” like Econs into predetermined theories.

5-Post-mortem analysis

In Management sometimes at the end of failed projects a post-mortem analysis is being carried out. This rarely happens in Economics because published research needs to have clean, clear and significant results. Seldom papers emphasize negative results and this hinders the publication of research on innovative topics where often results are counterintuitive or go against well-established economic theories. Hence, our profession needs to be open and tackle this issue by adopting post-mortem techniques applied in Project management. The first step would be the assessment on the consistency of the dataset, in the second step the tools used (e.g. functions, econometric method) should be evaluated and, in the third step a thorough analysis should be carried out on why the results are null and the policy implications of the results.

6-Stimulate Crowdsourced initiatives

To implement an EBE approach it might be useful to stimulate joint research initiatives through exchange platforms where researchers can undertake joint research and activities to exchange ideas and disseminate the results of their own work. The approach proposed by Silberzahn and Uhlmann in their article “Crowdsourced research: many hands make tight work” (Silberzahn & Uhlmann, 2015) might turn out to be useful. It is based on their experience of a project launched in 2013 involving 29 teams of researchers on the same research question and with the same dataset. They observed that the different groups used a wide array of analytical techniques and obtained very different and contradictory results⁶. According to them this approach to research can balance discussions, validate findings and eventually better influence policy (Silberzahn & Uhlmann, 2015, p.189). To reinforce also the argument discussed in the previous section on Post-mortem section it is important to underline that normally research is published only if it finds significant effects, while research in crowdsourced projects can contribute even with null findings.

⁶ As they underline these “contradictory results” signal that often conclusions are contingent to analytical choices.

It needs to be clear that crowdsourcing does not eliminate all bias, for example important decisions must still be made on the hypotheses to test, the source of dataset, and even more important which variables can or cannot be collected (*Silberzahn & Uhlmann, 2015, p.190-191*).

7-Setting up a Code of conduct and research protocols

Finally, to build EBE on solid foundations it is important also to address the fact that the Economics profession has had an unprecedented impact on society compared to any other social science (*De Martino, 2005, p.88*). This entails that there is a need to address seriously the moral implications of this profession. In 2011, during the annual meeting of the American Economic Association (AEA), in Denver, Colorado, much emphasis was placed on the role of ethics in the economics profession mainly linked to the role of economists in the financial crisis. During the discussion it emerged that economists unlike other social scientists, such as sociologists, anthropologists and statisticians, do not formally subscribe to a professional ethical code. In that occasion nearly 300 economists (including George Akerlof and Christina Romer) signed a letter/petition requesting the AEA, as the most important association of economists in the world, to step up and propose such code (*The Economist, 2011*). That petition needs to be the first block of the code of conduct of our profession. More specifically on EBE, It would be appropriate to build on the suggestion of Edward Phelps, the 2006 Economic Nobel laureate, to apply to EBE the experience from Evidence based medicine. He explains that there is a trend in the medical sector to require that applications for licenses to sell a new medicine be “evidence-based” and that is in contrast with conventional Economics where often economists view their discipline as having already achieved this scientific standard. He believes that currently “Economics is not evidence-based in selecting its theoretical paradigms. Economic policy initiatives are often taken without all the empirical pre-testing that could have been done” (*Phelps, 2005, p.1*). Thus, the idea could be to set up a Code of conduct with well-defined procedures to generate protocols similar to those applied in the medical sector. We would need to learn from the medical sector how to design protocols to address the issue of diseases, symptoms, observations, causes, side effects of medicines and the impact of unobservable external factors and extend them to our discipline. As discussed by Reiss “the overwhelming majority of economic quantities are not observable in any straightforward sense.. hence their existence and facts about them must be established on the basis of more or less involvement procedures” (*Reiss, 2004, p.347*).

In this code of conduct it will be crucial to emphasize the transparency in:

- a) the restrictions/assumptions in the method used,
- b) the database being used (even providing the database itself and clarifying if and how gaps have been filled, e.g. Montecarlo simulations),
- c) the tools (e.g. software, functions used) utilized to analyze these databases,
- d) a detailed analysis on the quality of the results (even those not in line with expectations as discussed above on Post-mortem analysis) to avoid for example spurious results and
- e) and in case of use of new methods it will be important that the results of the new approach are checked against the results of other approaches (*Reiss, 2004, p.352*), emphasizing also the different assumptions behind each approach and their impact on the final result. This would allow other colleagues to carry out the same research.

All these elements should already be the basis for our discipline but sometimes some of these elements have not been taken as seriously as they should have been.

C. Conclusion: The way forward and the policy implications

This paper has the objective to bring one step forward the debate on Evidence Based Economics, which is providing a sensible approach to complicated issues in these times of economic, political and financial uncertainty. An open, transparent, pragmatic, innovative and non-ideological method using Relative Preferences could help to bring some order also by helping to develop a code of conduct for the Economic profession (the slogan could be “less Astrology and more Astronomy”)

and could eventually lead to a Paradigm shift in the medium and long term with unprecedented and unexpected policy implications.

D. References:

- Boulding K. E., 1969:** “Economics As a Moral Science”, *American Economic Review* 59: 1-6.
- Chetty, R., 2015:** “Behavioral Economics and Public Policy: A Pragmatic Perspective”, *American Economic Review* 105 (5):1-33.
- Colander D., Holt & P. F. Rosser J. B., 2004:** “The Changing Face of Mainstream Economics”, *Review of Political Economy*, Vol. 16, Issue 4: 485-499.
- De Martino G., 2005:** “A Professional Ethics Code for Economists”, *Challenge*, Taylor & Francis, Ltd. Vol. 48, No. 4: 88-104
- Fama F. E., 1970:** “Efficient Capital Markets: A Review of Theory and Empirical Work”, *The Journal of Finance*, Vol. 25, No. 2, Papers and Proceedings of the Twenty-Eighth Annual Meeting of the American Finance Association New York, N.Y. December, 28-30, 1969 (May, 1970): 383-417.
- Friedman T. L., 2005:** “The World is Flat”, Farrar, Straus and Giroux.
- Gori S., 2013:** “A comprehensive approach on the application of cost efficiency methods to network industries: special focus on the postal sector”, Institute of Governmental Studies, UC Berkeley *Working Papers Series*, <https://escholarship.org/uc/item/4d60z5dv>.
- McAdams R. H., 1992:** "Relative Preferences", *Yale Law Journal* 102.
- Phelps E. S., 2005:** “Evidence Based Economics”, op-ed Project Syndicate and Columbia University on-line Working paper, January, online: www.columbia.edu/~esp2/Evidence%20Based%20Economics.pdf.
- Reiss J., 2004:** “Evidence-Based Economics”, *Analyse & Kritik* 26, Lucius & Lucius, Stuttgart: 346-363.
- Saxon W., 1996:** “Arthur Rudolph, Developer of Rocket in First Apollo Flight”, *The New York Times*, January 3rd.
- Schwab K., 2016:** “The Fourth Industrial Revolution”, *The World Economic Forum*.
- Shemilt I., Mugford M., Vale L., Marsh K. and Donaldson C., 2011:** “Evidence-based Decisions and Economics: Health Care, Social Welfare, Education and Criminal Justice”, *John Wiley & Sons*.
- Silberzahn R. and Uhlmann E. L., 2015:** “Crowdsourced research: Many hands make tight work” *Nature*, 526 P.189-191, October, online: www.nature.com/news/crowdsourced-research-many-hands-make-tight-work-1.18508.
- Thaler, R. H., 2016:** “Behavioral Economics: Past, Present, and Future”, *American Economic Review* 106 (7):1577-1600.
- The Economist, 2011:** “An intensifying debate about the case for a professional code of ethics for economists”, January 6th issue.