

Ontological Roots of the Schism in Economics and the Origins of the Conflicts between Orthodoxy and Heterodoxy

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This paper discusses the roots of the unending conflicts between Orthodoxy and Heterodoxy in economics, including the paradigms behind the main disagreements. Historically, it is impossible to define any school of economics and thought – in Orthodoxy and Heterodoxy – via homogeneous and monolith terms, concepts, outlines, definitions, and ideas. The most essential and obvious fact of the economy (and the especially central fact of political economy) is the "transformation of economics," including concepts, methodologies, understanding, and even perception(s). Since the early 19th Century, the "concept of economics" has changed. This process has been advancing on controversial studies based on concrete facts and phenomena in human life (especially inflation, unemployment, growth, wealth, poverty, development, etc.). But just like the methodologies and understanding of the facts, economic studies' and focuses on economics transformed the outcomes of these concepts) have also been changing. Unfortunately, most economists still choose to label themselves via one of the "poles" (Orthodox or Heterodox) and become part of/this polarization. And the economy has much more profound and solid polarization than any other social sciences (including sociology, anthropology, psychology, history, etc.) and natural sciences (math, statistics, physics, chemistry, etc.). Also, this polarization means more than just methodologic differentiation. It also includes biases and, most of the time, ideologic backgrounds. This fact makes "the schism" much deep, unique and vital, especially in critical periods (such as like financial crisis in 2007, Covid19 in 2019, and many others). Also, unlike other social sciences, economics is directly related to daily life (and political dilemmas). And the main focus of this article is briefly explaining the roots of this polarization(s) via the most explosive conflicts between Orthodoxy and Heterodoxy, including a brief Ontological analysis of this schism.

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1. Introduction

Every economist has to face a theoretical conflict between Orthodoxy and Heterodoxy at least once in their career (or education)². Usually, the terms have been explained briefly during under-graduation in "economic theory"³ courses. The lectures generally begin with Adam Smith and David Ricardo (without deep dive, just briefly mentioning) for the first week, sometimes even for the first hour. Then, students generally beamed up to General Theory. Regarding a brief introduction to the Monetarism, the course ends with "learning" the main differences between Neoclassic Economics, New Neoclassic Economics, Keynesianism, Neo Keynesianism, and New Neo Keynesianism and even if the student is lucky enough, a very brief introduction to Post Keynesianism. And generally, the course ends with New Institutionalism (especially Post – Ostrom period). According to the initiative of the tutor, if the student is extra lucky, they can have a brief idea of the changes in economics after the Marginal Revolution (and if the

² According to the context, Orthodoxy and Heterodoxy might not be very clear and also there is not a very clear borders between both poles. Both terms might characterize different contexts; in this article Orthodoxy and/or Orthodox Economics characterizes Neo-Classical and New Neo-Classical schools of economics and their very distinct approaches. Such as like "equilibrium", "homo-economicus", "utilitarianism", etc. However, in this article Heterodoxy and/or Heterodox Economic characterize much wider area; including Post-Keynesianism, Classical Institutionalism (Veblenian Institutionalism), Marxism, Progressivism, Modern Monetary Theory, Mutualism, etc.

It is much difficult to characterize Heterodox Schools of Economics comparing Orthodoxy. One of the main reasons is mostly each heterodox schools have unique foundations and unlike Orthodoxy; Heterodox schools does not build on general accepted theoretical foundations. This makes difficult to characterize all heterodox schools under one solid definition. But in as stated in this article main criterion is general and solid characteristics of Neo-Classical Economics.

student has a tutor who has deep theory study mostly learn about German Historical School and Austrian School of Economics).

But in reality, the depth and volume of the theoretical background are much more profound than "the syllabus of economy theories course(s) and general "Orthodox – Heterodox disputes." Initially, there was a much more profound and unforeseen path of deep schism, including methodological and notional differentiation. There are two main crossroads in the history of "economics." The first is disengagement from "Political Economy," and the second is the domination of econometrics.

While the programs operated under the name of "Political Economy" in the universities regarding the 1890s, the programs shifted from "political economy" to "economics," and the changes were not limited to only the names of the plan; but also concepts and contents have reorganized according to Marginal Revolution. Since the early 20th Century, economics (and economics programs in the universities) have

³ There is an extremely wide variety of courses in economic theory. Usually, the theory lectures shapes by structure of the department and in some cases theory lectures might be very specific (even without any general theory lessons). It is possible to have overall theory lectures in some universities and in some cases theory lectures are very specific (such as like microeconomics theory, principles of macroeconomics, Keynes's economics, etc.).

For more information reader can compare differences between programs and lectures (especially about theory) in economic degrees between universities (for bachelor degrees; The University of Chicago (US), Central European University (Hungary), University of Bremen (Germany), Berlin School of Economics and law (Germany), Jerusalem Hebrew University (Israel), Tel Aviv University (Israel), University of Cambridge (UK), Massachusetts Institute of Technology (US), Leiden University (Netherlands) can be a great examples about different perspectives on theory lectures and also differentiation in concept of economics education).

reorganized on the new paradigm. And unlike the standard opinion, economics has not faced segregation, but economics was built after "the schism." And this article discusses the roots of this schism.

And contrary to popular and common opinion, basic concepts, notions even

2. Origins of the Endless Conflicts and the Ten Eternal Battlefields

Economics; always has been a very eristic scientific (intellectual and political) activity. Also, since the beginning – and birth of – *modern economics*,⁴ contradictions have been the primary triggers of progress and dynamism between schools of economic thought(s). But the "conflicts" have much deeper backgrounds and meaning than just they seem (mostly theoretical disputes have deeper ideologic grounds). As a social science, economics always has included

⁴ There is another very old, deep and ongoing debate in economics which mostly based on roots of "*modern economics*". Mostly *history of economics* and *historical background of economic thoughts* cover very small percentage of economy education. Students (and even academics) have no idea about how "economics" replaced "political economy" and how sharp and deep were the early conflicts. This article focuses on the main unsolved and continuing disputes (which are evaluated to deeper quarrels) which are defined as "battlefields" in it this part of the article. For more information Ingram, John K. (1888)

⁵ Even in Orthodox and Heterodox economics there are no homogeneous explanations on these disputes. Also, there are no any smooth agreement and reconciliation in themselves. As an (solid and well known) example both Post Keynesianism and Marxism have very different approaches on role of money. While Marxism accepts dichotomy, money (and perception of money) is not neutral in Post Keynesianism. Or as another very well-known dispute in (the inside of) Orthodoxy "the market mechanism" does not have self-stabilization according to Keynesianism, contradicting to Neoclassical economics. As discussed in the article disputes on "structure of the market" or in other words (3) "*invisible hand*" evaluated to another stage and

definitions were not a monolith, de facto, universal, or even transparent. This study mainly argues how mainstream economics has shaped the separation of economics from political economy.

"political views and perspectives." Still, economics has transformed and evaluated by time and in political toughies) and there are 10 (ten) main uncompromising disputes which have turned into "unending battlefields" between Orthodoxy and Heterodoxy.⁵ And the battlefields did not end but have been expanding and intensifying (constantly).⁶ But still, the center of the conflicts did not change much. The "market" still stands at the center of the disputes. Also, perception and perspectives on market and market mechanisms are disputing subjects.

created another – and deeper – dispute on (4) "*Role of State*" in economics. Which is a pretty common fact for economic. Generally, disputes create new – derivative – arguments (and fusses) which generally ends up with creation of new disputes. From Ordoliberalism to Institutional Economics many different fractions of mainstream have influenced from the facts and empirical evidences, and the disagreements generally becomes foundations of new disagreements. (For more information on Post – Keynesianism reader can utilize King, J. (2002)).

⁶ Related polemic subjects; influence (and transform) school of thoughts – deeply – by the time. Also, some subjects have influenced concept of mainstream; such as like "*inequality*" ... Since early 19th Century inequality has seen as "natural outcome of growth" and/or a "natural phenomenon" in Neoclassical economics, but after 1980s "inequality" became one of the popular focuses in mainstream economics, which also combined with "sustainability" and "sustainability of growth" in 1990s. While it used to be labeled as "natural outcome of growth and development" it is now becoming one of the most popular focuses in mainstream.

Since the beginning of economics, the market (and market structure) always has been the main focus⁷, and it always has been a "mystery" for economists.⁸

Early economists were aware of catastrophic inequality⁹ (which existed before the Industrial Revolution), but the gap had never been so deep and massive¹⁰ until the 18th Century. And class conflicts were not so deep before 18th Century. "Proletariat" or "working class" and "bourgeoisie"¹¹ were both faced conflict during Industrial Revolution. As a 21st Century phenomenon, there another new class was taken. It is the "Precariat,"¹² which includes low-income and middle-income classes. And the main peculiarity is lacking certainty (and predictability). The concept of this new class or group is also significantly related to another origin of the conflicts "certainty" ([Breedem, 1986](#); [Dreze et al., 1972](#); [Reyna & Farley, 2006](#); [Von Neumann & Morgenstern, 1964](#); [Kahneman & Tversky, 1979](#); [Krauss et al., 2004](#); [Reyna & Ellis, 1994](#)).

⁷ "market" also represents the market itself and "mechanism of the market" in this content.

⁸ Functions of market mechanism is highly related to "price" and "price mechanism". Since Adam Smith price mechanism has been referred as "invisible hand" which regulates the supply and demand and keep the market work. And price mechanism always has been defined as a natural phenomenon which is being created by the market. So also, it is highly related to "self-functioning market" concept which has been mentioned by both Bernard Mandeville and Adam Smith. It is also possible to see price studies after Marginal Revolution. For more information reader can check Pareto, Vilfredo. (1906).

⁹ There are many critiques about inequality and poverty during early Industrial Revolution. The critiques include observation on societies and social structures. The early critiques include historical background of private property and social order. The outstanding studies on inequality in the ear are; Proudhon (1890), Engels (1902), Engels (1881), Owen (1814), Marx (1867) are the most known early

And the "market" always called the attention of early (and even modern) economists as the primary mechanism, which was the source of the advancement, transformation, and also massive wealth and poverty (in other terms, inequality) at the same time. Another function of the market was/is the mechanism connecting all different actors and components. As Adam Smith mentioned, bakers, butchers, and brewers were not producing and working because of ethical concerns or social responsibility. The actors' only focus was/is "profit" and "benefit." And this self-interest somehow was making "everything work itself (interference-free)."

There were always commercial relations between people, groups, countries, and cultures. Still, the first time a "market mechanism" has transformed traditional relations and commodified (almost) everything, including the "labor" of the people and "time." Commodification is a complex process that is also transformed by changing dynamics of

critiques about the mass poverty and early inequalities.

¹⁰ Industrial Revolution has created massive poverty and wealth at the same time unlike any other era in the history. And this transformation has triggered class conflicts, strikes and even Luddism and social movements in industrialized economies.

¹¹ It might be more accurate to use "industrial bourgeoisie" and most economists prefers it; but since the beginning of Industrial Revolution (also before the Industrial Revolution since the Commercial Revolution) there was strong "Financial Bourgeoisie" which was also part and financiers of the early industries. But generally, without any specific identification "bourgeoisie" is the general preferred term.

¹² As a term "precariat" was named by Guy Standing and his book "The Precariat: The New Dangerous Class" (2011) explains insecurity problem, causes and results.



economics. Especially regarding Industry 4.0 (internet), social relations (especially social network) has commodified (and even become an asset).¹³

First time in history, "mass production" and "standardization" became the main focuses of manufacturing, and factories replaced workshops.¹⁴ During this period, "differentiation" became one of the main issues among Classical Economists.¹⁵ (1) "*Relations and transitivity between Classes*"¹⁶ are one of the first conflicts which have started even Pre-Marx period¹⁷ and continued after.¹⁸

The central conflict was based on "class interests. Since Nassau William Senior central orthodoxy has argued about "linked class benefits," which means the interest of the working class are linked to industrialists (wealthy investors). As the antithesis of this

argument, there was/is "exclusionist relations between the classes" which was defended by heterodox economics and still it is one of the main arguments of Heterodoxy. This means that wealthy high-income classes' gains depend on the loss of the working class.

And another critical battlefield is (2) the concept of "*homo economicus*,"¹⁹ which defines humankind as purely logical and motivated by utility maximization. One of the classical critiques of this concept is "representing white Protestant man," which has been argued primarily by Heterodoxy. Modern critiques focus mainly on the irrationality of the "balanced and pure logical mankind," which has been claimed by psychology and sociology too...²⁰ There are many debates and critiques on "homo economicus" as a concept in economics. Still, the sharpest and most accepted one by

¹³ Commodification of social relations and social network is much deeper issue. Considering "influencer" phenomenon first time in the history ordinary people's social networking became "assets". Commodification of social networking is one of the new discussions in both sociology and economics. For more information; Benkler, Y. (2006), Bourdieu, P. (1986), Bruns, A. (2008), Mosco, V. and Wasko, J. (1988), Van Dijk, J. A. G. M. (2006), Sandoval, M. (2011).

¹⁴ Which also created another social transformation. "Gyeld" structure has been transformed to "business" and "forman" concept replaced "gyeld masters". The first time in the history workers became part of the process without overall understanding of the process. Every process divided to stages and workers became part of the specific stages of the production process.

¹⁵ It is difficult to use "Classical Economists" as unified term. From value perspective (labor theory of value) Karl Marx is considered as a Classical economist; but from harmony of interest (between the classes) Karl Marx vary from other Classical Economists (Adam Smith and David Ricardo).

¹⁶ As a concept and phenomenon classes and class relations always part of economy theories and studies. It is possible to see very different approaches in literature. For further reading, Bukharin N (1927), Sen, A. (1990). Yitzhaki, S. (1994). Zweig, M. (2005). Wolff, E. N. (2000).

¹⁷ Pre-Marx Period defines the critiques to Classical approaches, before Karl Marx, including Charles Fourier, Pierre Joseph Proudhon, William Cobbett, Thomas Hodgskin, William Thompson, Robert Owen, etc. In some point (and by some economists) it also includes Henry George, even they (both Henry George and Karl Marx) have lived in same period. But considering their active careers it is more logical to mention Henry George as one of the "same period" economists.

¹⁸ Still, it is an ongoing and unsolved issue, especially between mainstream and classical heterodox camps.

¹⁹ Homo economicus is as a concept criticized by many different schools of thoughts in economics not by only Heterodoxy. For more detail reading; Thaler, R. (2000), Baumol, W. (1967), Elster, Jon. (1998), Kahneman, Daniel and Amos Tversky. (1979), Mullainathon, Sendhil. (1999), Rabin, M. (1993), Thaler, R. (1997), Barnes, Trevor J. (1988), Heise Arne (2014), Polanyi, Karl. (1944).

²⁰ There are many approaches about "homo economicus" concept of economics (which is one of the oldest disputes with *cetarus paribus*). The studies about consumer chouses and behavioral economics and optimization studies provides different approaches. One of the well-known studies is Urbina, Ruitz-Villaverde (2019) which discusses five main approaches on homo economicus.

"heterodoxy" is "racist understanding of human nature."²¹ This debate has been a hot topic and one of the main critiques of "basic understanding of Neoclassical and New Neoclassical economics on human nature."²²

And since the beginning (of the well-known debates in political economy); another (the third) disagreement; or "dispute" issue is itself (3) "*the invisible hand*," ([Gaynor et al., 1998](#); [Persky, 1989](#); [Blaug, 1962](#); [Pigou, 1932](#); [Say, 1964](#); [Olson, 1982](#)), which mainly has been used for (representing) "price mechanism" but in reality, it means and symbolizes much more than (only) prices.²³ It represents a self-balancing and working (functioning) market mechanism.²⁴ But since John Maynard Keynes, it is a very debatable subject and one of the

"underbellies" of Orthodoxy.²⁵ "Mainstream economists have subjected inefficiency" and "insufficiency" of the market economics since the Keynesian Approach ²⁶ The critiques on "market" and "the market economy" have been combined comments on "the state" and "state structure." Because historically, another critical problem is the position and "role of the state interventions" in the market economy.²⁷ There are two main critiques of the intervention of the state. The first one is about preferences and priorities, and the second one is methodology. Generally, heterodox economics (and sometimes mainstream economics) argues the preferences and priorities of the state. But role, concepts and functions of the state and state mechanism is the main difference between Orthodoxy and Heterodoxy.²⁸ The state

²¹ Originally "homo economicus" is very well-known cornerstone of Neoclassical Economics (and the theory) but it was firstly discussed by John Stuart Mill in "On the definition of Political Economy and on the method of investigation proper to It". Mill John Stuart (1848)

²² Especially it has been subjected in behavioral economics studies.

²³ As "concepts" price and market (mechanism) are highly related to each other by Neoclassic economics and Neoclassical economists (until John Maynard Keynes).

²⁴ Also, Neoclassical approach of price is related to "Say Law." Say, Jean-Baptiste, (1964),

²⁵ Especially regarding the Great Depression (in 1929) Keynesian economy policies became main solution which was also essential part of "welfare state"; but regarding 1973 Crisis and high inflation. One of the main critiques has been formulated by Monetarism. The critique was focusing on monetary policy of Keynesianism which was defined as main reason of high inflation. But during the first financial crisis of 21st Century it was possible to observe the market. State had to involve in the biggest mortgage crisis of American economy. 2008 Crisis became of the main and the most popular focuses of "market critiques" which basically argues that "market does not have

self-sufficiency". Keynes, J.M. (1919), Pigou, A. C. (1932),

²⁶ One of the most very well-known critique has written by Joseph Stiglitz in WEF. The critique itself is was simple but it made it very important because of the written by Joseph Stiglitz who is one of Nobel Economy prize winner economists.

<https://www.weforum.org/agenda/2016/05/joseph-stiglitz-are-markets-efficient-or-do-they-tend-towards-monopoly-the-verdict-is-in/> (last access March 6th, 2022)

Also, after 1930s, "stickiness of prices" became one of the main arguments against classical price approach.

²⁷ Classical Orthodox approach basically argues on biases and consequences of state interventions. The most known critique of main – stream economics on state interventions is biased and unproductive consequences. There are many examples about these arguments but generally Milton Friedman's arguments can represent general arguments of main stream economics. Friedman Milton (1962), Friedman Milton & Jacobson Schwartz Anna (1963) and for more explanation Wolfe David (1981).

²⁸ There are many different approaches on role of the state in heterodoxy and it is much more complex than pure Orthodox approach. It is not possible to provide more information on state concept and critiques by Heterodoxy but following studies provides general outlook on it such as like; Iannaccone, L. R., Finke,



intervention primarily focuses on saving investors and capital owners (mainly to keep the market functioning), which causes canalizing sources to corporations rather than the employees and crowds.²⁹ And the second main focus is primarily on the methodology. Most disputes are focused on preferences between "monetary policy" and "fiscal policy."³⁰

For early economists, market harmony was still a "mystery" in the 18th Century. Since the end of the 16th Century, "self-interest" has been accepted as a "social norm" regarding replacing medieval Catholic ethics with the Protestant Revolution. *"Whoever offers another a bargain of any kind proposes to do this. Give me that which I want, and you shall have this which you want, is the meaning of every such offer; and it is in this manner that we obtain from one another the far greater part of those good offices which we require. It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their interest (Smith, 2007:9-10)."* And it has been mentioned by both Bernard Mandeville and Adam Smith.³¹

The "self-interest driven market" concept raised the "position of the state" and especially "taxation" and "limitation of the state" on the market" has been argued by 17th, 18th, and even

R., & Stark, R. (1997), Dorfman Joseph (2016), Poirot Clifford & Pavel Samuel (2008), Lee Frederic (2012), Lee, Frederic and Jo, Tae-Hee (2010), Klitgaard Kent (2013), Dow Sheila (2010).

²⁹ Especially after 1980s Neoclassical Economics has argued about it and "Trickle – Down" became one of the main policies of Reaganomics.

³⁰ As main critiques of Monetarism; focusing on consequences of "monetary policies". Which basically argues that monetarization creates high inflation which also destabilizes the market (and in this perspective Monetarism raises responsibility of Keynesian policies in high inflation problem of 1970s).

³¹ Self-interest driven social benefit (and social progress) was mentioned by Bernard Mandeville

19th Century economists.³² Related critiques and disputes involve (4) *"The Role of State"* ([Barr, 1987](#); [Skousen, 1997](#); [Samuelson, 1948](#); [Coase, 1988](#); [Lipsey et al., 1987](#); [Roller, 1992](#); [Bell, 1976](#); [Deutsch, 1975](#); [Easton, 1979](#); [Parsons, 1951](#)), in economics. Many approaches and perspectives about the state and its functions (in economics) exist. The oldest dispute between Orthodoxy and heterodox economics is the primary function and purpose of the state. Heterodoxy defines the state as a "political tool and main functioning mechanism" of the hegemon classes, including military and civilian bureaucracy, to control society. Surprisingly, Orthodoxy and orthodox economics do not trust the state's function entirely fully). Since the beginning of the Neoclassical approach, "limitation of the essential" with basic functions (national security, essential system, and basic bureaucracy) has been the main argument of Orthodoxy. But recently, it has become one of the main focuses of mainstream economics (again).³³ Especially health, education, and other public services (which provide equality opportunities) are some main study fields.³⁴ The role of state services and the concept of public goods, and the effects of social services (especially education and health) have been

before Adam Smith in 1714. Mandeville De Bernard (1997)

³² It is still one of the unsolved disputes in economics in 21st Century.

³³ Just like after 1929 Great Depression, 1973 High Inflation Problem, 2008 Mortgage Crisis and Covid-19 Pandemic role of state and responsibilities (even priorities) have been arguing.

³⁴ One of the known new concepts is active state. For more information; Mazzucato Mariana, (2013). (The study, argues role of the state in innovation and development).

argued since the early 19th Century.³⁵ The idea and structure of the state have been debated, especially after WWII. There were severe transformations in the "role and functions of the state," especially in developed economies just right after WWII.³⁶

Another important (and maybe the oldest) debate on "political economy" is (5) "*scientificity*" ([Walters & Young, 1999](#); [Dopfer, 1986](#); [Jevons, 1957](#); [Karolyi, 2016](#); [Samuelson, 1938](#); [Wong, 1978](#); [Dominique, 2017](#); [Hicks, 1946](#); [Dupuit, 1844](#); [McKensie, 1957](#); [Friedman, 1953](#); [Kuhn, 1962](#); [Mirowski, 2002](#); [Winch, 1990](#); [Wittgenstein, 1958](#); [Wong, 1978](#)), It became a severe methodological debate in the early 19th Century; also, which became one of the main methodological arguments and criteria even before "Marginalist Revolution."³⁷ Measurability became a "scientific" criterion long before the 20th Century and the New Neoclassical

movement. Math and other quantitative methodologies became essential and essential parts of economics with William Nassau Senior, and it has continued with Alfred Marshall. But it has transformed into "econometrics" just after the 1930s.³⁸ "The Econometrics Society" was established (in Cleveland). The pioneers of econometrics are also very well-known economists like Irving Fisher,³⁹ Carl Menger, Edwin Wilson, and Joseph Schumpeter (and fourteen other economists).⁴⁰

It continued until the 1930s when a new concept of economics was born, called "econometrics," and it has deeply influenced economics (including mainstream economics and even heterodox economics). The first Nobel Economy Prize winner Ragnar Frisch (with Jan Tinbergen), is also one of the founder members of The Econometrics Society. And the movement has influenced economics dramatically since

³⁵ The role of the state and functions of bureaucracy are ongoing and unending debates. One of the main related subjects is "public choice". It is also one of the most popular subjects and study fields of Political Macroeconomics especially since Douglas Hibbs. (Especially "The American Political Economy Macroeconomics and Electoral Politics" (1987), is one of the well-known cornerstones of political macroeconomics studies.

³⁶ Especially in Europe, State owned public goods became one of the main characteristics of welfare economics.

³⁷ Marginalism has developed simultaneously and very well-known three figures of Marginalism are William Stanley Jevons, Carl Menger and Leon Walras. They have influenced economics very deeply. For more information Menger Carl (2007).

³⁸ As a term economics just started to be used after 1890s. The cult book of Alfred Marshall; Principle of Economics published in 1890 and became the main textbook in economics education until Paul Samuelson's "Economics" which published in 1948. If readers check early studies, he/she will see before 19th Century as term "political economy" is being preferred by authors and early economists. There is two main books in economics which are defined with

the same name "Principles of Political Economy"; the first one is "Principles of Political Economy Considered with a View to their Applications" by Thomas Malthus and the other one is "Principles of Political Economy" by John Stuart Mill. For original text reader can check Malthus T. R., (1992), Malthus, T. R., (1989), Marshall Alfred (1890)

Evolution of economics education in universities is not main focus of this article but it is highly related to transformation of economics and Orthodoxy – Heterodoxy conflicts. For more information; Malthus (1820), Mill (1848), Marshall (1890), Samuelson (1948),

³⁹ Irving Fisher is the first president of The Econometric Society...

⁴⁰ The sixteen founders (founding members) of "The Econometric Society" are; Carl Snyder, Charles F. Roos, Edwin B. Wilson, Frederick C. Mills, Harold Hotelling, Henry Schultz, Ingvar Wedervang, Irving Fisher. J. Harvey Rogers, Joseph A. Schumpeter, Karl Menger, Malcolm C. Rorty, Norbert Wiener, Øystein Ore, Ragnar Frisch, Walter A. Shewhart, William F. Ogburn, Malcolm C. Rorty, Carl Snyder, Walter A. Shewhart, Øystein Ore, Ingvar Wedervang and Norbert Wiener.



then. Econometrics and mathematical modeling have become one of the leading scientific criteria in economics.⁴¹

Since the early 1930s, another criticized issue is (6) "Equilibrium(s),"⁴² which has explicitly started critiques of "Walrasian General Equilibrium Theory."⁴³ It has been attacked not only by Marxist and Post-Keynesian schools but also by the Austrian School of Economics.⁴⁴ Explaining economics with an overall equilibrium concept has been criticized by the post-Keynesian school of economics. After John Hicks' contribution (especially the IS-LM model), even Keynesian contributions were called Hydraulic

Keynesianism.⁴⁵ But the concept of equilibrium always has been at the center of economics.⁴⁶

Equilibrium represents "state of equilibrium in the economy" which means a state of balanced structure in economics. Still concept of equilibrium is one the main conflict fields between New-Neo Classical economics and Post Keynesian School of economics. One of the main arguments of Post Keynesianism (and also other Heterodox Schools) is there is no equilibrium in economics.⁴⁷

Economics of inequality became a popular study field just after the 1960s via the rise of development economics.⁴⁸ Regarding WWII and the beginning of the Cold War, the differentiation between developed and

⁴¹ One of the very well-known critiques on economics is utilizing too much and unnecessary quantitative methodologies in order to seem "scientific" enough. It evaluated to a definition; which calls "post-autistic economics" in order to define economics studies which contains too much math and quantitative models. (Especially after early 2000s It is being used to define Neoclassical Economics and New Neoclassical Economics).

⁴² Equilibrium itself is also very related to "scientificity" in economics and role of mathematics in economic studies, also econometrics. For deeper understanding reader can see related studies. Dominique, C. R. (2017), Hicks, J. (1946), Dupuit, J. (1844), McKensie, L. (1957), Friedman, M. (1953), Kuhn, T. (1962), Mirowski, P. (1988), Mirowski, P. (2002), Winch, P. (1990), Foley, Duncan K. (1994), Kapur, Jagat N. and Hiremaglur K. Kesavan., (1992), A. Golan, G. G. Judge and D. Miller, (1996), Arrow, K. J. and McManus Maurice (1958), Metzler Llyod, (1945), Samuelson P. A. (1955), Anderson, P., Arrow, K.J. and K., Pines, D., (1988), Arthur, W.B., (1999), Arthur, W.B., Holland, J. H., LeBaron, B., Palmer, R., and Tayler P., (1997), Brock, W.A., and Hommes. C.H., (1998), Epstein, J.M., (2005), Judd K., and Tesfatsion, L. (2005), Kirman, A., (1997), Kollman, K., Miller, J., and Page, S., (1997), Lane, D.A., (1993), Samuelson, L., (1997), Schumpeter, J., (1954), Schelling, T., (1978), Debreu, Gérard. (1959), Veblen, Thorstein. (1898)

⁴³ General Equilibrium Theory has been one of the main essential components of Neoclassical Economy.

⁴⁴ Ludwig von Mises has created ERE: Evenly Rotating Economy model and argued for LRGE: Long Run

General Equilibrium replacement of Walrasian General Equilibrium model.

⁴⁵ Even the term is identified with Joan Robinson, "hydraulic Keynesianism" was used by Alan Coddington which refers macroeconomic studies after Keynesian contribution. Especially it was used as "Hydraulic Macroeconomics" which targeted contribution of William Phillips. MONIAC and Phillips Curve.

⁴⁶ Even Post Keynesian approach has developed SFC: Stock Flow Consistent model which is directly contrast of DSGE: Dynamic Stochastic General Equilibrium. The only alternative of equilibrium concept which does not provide any equilibrium is Marxist Dialectic understanding of economics; which completely contradicts Popperian Scientific Understanding (based on Hypothesis Testing) and Hypothesis concepts.

⁴⁷ There are some impressive and deep critiques on equilibrium as concepts. One of the most well-known equilibrium critiques is Kaldor (1985) and there are some other studies which discusses role of equilibrium in economics such as like Acemoglu (2007) and Acemoglu (2010).

⁴⁸ There are many valuable studies on development economics and different perspectives on inequality in development economics. Especially Ahluwalia (1977), Bourguignon & Morrisson (1998), Heckman (2013) gives idea on inequality and development relations. But lately especially with Amartya Sen "Embowing Growth" became part of the literature.

undeveloped economies became popular, and (7) "inequality"⁴⁹ became one of the focused research areas.⁵⁰ First studies were focused on inequalities between different economies; by the time it evaluated inequalities between other classes and income groups.

Inequality has grown as part of "development economics" initially; just after the 1980s, it became one of the specific research areas in economics.

The inequality-based research studies mostly focused on socio-economic inequality, which is also based on income inequality.⁵¹ But basically, there is a deep conflict between Orthodoxy and Heterodoxy when the dispute is

"inequality." The main and the essential difference is acceptance of inequality as part of growth. Inequality is the acceptable and tolerable outcome (kind of side effect) of growth and development for Orthodoxy, and it is the natural result of the capitalist production process. For Heterodoxy is more choose and prioritization than just a side-effect. And for both camps, there is a tradeoff between growth and inequality. And both sides have different priorities (similar to classical inflation – unemployment tradeoff).⁵² Also inequality critiques are highly related to "growth" and "growth concepts."

And there is another debate on (8) "growth";⁵³ which also has many different

⁴⁹ Raise of "inequality studies" is highly related to WWII and conceptionally inequality has really deep literature in economics. This article only focuses on main disputes and conflicts between Orthodoxy and heterodox economics but for more and deeper information reader can utilize Piketty Thomas (2015), Akerlof, G. and J. Yellen. (1990), Atkinson, A. (1983), Atkinson, A., L. Rainwater, and T. S. (1995), Chamley, C. (1996), Kremer, M. and E. Maskin. (1996), Krueger, A. and L. Summers. (1988), Kuznets, S. (1955), Mulligan, C. (1996), Roemer, J. (1996), Rothemberg, J. (1996), Solow, R. (1956), Williamson, J. (1985), Amable B. (2003), Doeringer P. B., Piore M. J (1971), Held, David/Ayse Kaya (eds) (2007), Lucas R. (2004), Kuznets S. (1955), Ricardo D. (1815), Sen, Amartya (2006), Therborn, Göran (2006), Weber, Max (1972) and Wicksell K. (1893).

⁵⁰ Especially after WWII, and after early 1960s inequality became very popular, firstly as part of early development economics and after different dimensions of inequality prioritized. Conceptionally inequality have many different dimensions such as like inequality between classes (in the same economy), inequality between countries, inequality between zones/territories, even inequality in center – periphery conflicts. As a concept and outcome of globalization inequality became pretty popular after 1990s too. Comparing latest studies 1960s and 1970s inequality studies are much different than 90s and early 2000s. About this differentiation Heckman (2018) provides pretty good explanation via Jan Tinbergen.

⁵¹ Especially growth and inequality relations became popular after 1990s and concept of inequality got separated from "Eurocentrism" by the time. Especially studies of Amartya Sen showed "growth" might not be solution to "inequality" because it also creates poverty

for some different income groups while it is creating wealth for some other groups. For more information and deeper understanding reader can see Sen, A.K., (1990), Sen, A.K. (1973), Sen, A.K., (1980), Sen, A.K., (1985), Sen, A.K., (2006), Sen, AK., (1999).

⁵² There are policy differences between left and right political parties on prioritization between inflation and unemployment. Which is one of the oldest and still one of the most popular subjects of Political macroeconomy.

⁵³ Growth itself is very debatable and very problematic issue in economics; including side effects (especially inequality, ecological effects and etc.) and there is serious differentiation between Neo Classical and Heterodox economics concepts. If reader would like to have deeper perspective there is some publications below to see and compare "growth concept". For further readings;

Ash, M. and Pollin, (R. 2013), Reinhart, C. and Rogoff, K. (2010A), Reinhart, C. and Rogoff, K. (2010B), Reinhart, C. and Rogoff, K. (2011), Hicks, John (1932), Jones, Charles I. (1995), Kaldor, Nicholas (1963), Kendrick, John W. (1961), Kendrick, John W. (1976), Krugman, Paul (1979), Kurz, Mordecai (1968), Kuznets, Simon (1973), Kuznets, Simon (1981), McCallum, Bennett T. (1989), Phelps, Edmund S. (1962), Phelps, Edmund S. (1966), Quah, Danny (1996), Rivera-Batiz, Luis A., and Paul M. Romer (1991), Romer, Paul M. (1992), Romer, Paul M. (1993), Sala-i-Martin, Xavier (1990), Sala-i-Martin, Xavier (2003a), Sala-i-Martin, Xavier (2003b), Samuelson, Paul A. (1958), Schumpeter, Joseph A. (1934), Segerstrom, Paul S. (1991), Solow, Robert M. (1969), Lehner, Franz (1988), Cardan, Pierre. (1974) and Daly and Herman E., and Jonathan Cobb. (1989).



dimensions.⁵⁴ There are many various conflicts on growth between other schools of economic thought. The source of growth, focuses, priorities, side-effects, and even a severe and ongoing argument about "if it should be the priority or not?" in economics. But there is a stubborn fact that growth is necessary for Capitalism and the market economy.⁵⁵ Practically Capitalism raises "growth" and also "growth expectations"... "For most of history, the economy stayed much the same size. Yes, global production increased, but this was due mostly to demographic expansion and the settlement of new lands. Per capita production remained static." (Harari, 2014:556). And generally, growth always has been the main focus of Neoclassical macroeconomic studies. There are two well-known criticisms on "growth concept of Neoclassical Economics" the first one

consequences of growth and the second one *obsession on growth*. The first critique has different approaches. The classical system is more related to imperialism theory, which focuses on significant countries' growth and creating poverty in the periphery. The new process is more related to growth and inequality focuses and ecological destruction of growth.⁵⁶

As a concept, there is another unclear and debatable subject in economics; (9) "certainty"⁵⁷ (and also "uncertainty") which is already a problematic and uncertain concept even internally in the school of economics thoughts.⁵⁸ Certainty itself is a profound polemic subject in Neoclassical economics, which is also significantly related to "rational expectations."⁵⁹

And the last one is (10) "money and monetary policies,"⁶⁰ which is also significantly

Another important difference between pure Orthodoxy and Heterodox economics is role of "savings", "investments" and "yield concepts" which are another debate areas. The differences are not just limited by itself of the growth and catalyzers of the growth but also effects of the growth.

Also, one of the main and modern critique is impoveritization effects of growth and effect of development on classes, freedom and individuals. For more information on impoveritization effects of growth; Sen, Amartya (1999), Sen, A.K. (1980), Sen, A.K. (1985), Sen, A.K. (1973).

⁵⁴ Growth has many different dimensions and meanings. The most focused "growth" concept is overall growth (growth of economies); but generally, growth of specific markets, industries and even corporations are as important as overall growth and there might be tradeoff between growth of industries and specific markets. So, it is not a homogeneous concept.

⁵⁵ Growth is also related to financial economics. Money, strong and working credit mechanism, banking network, working monetary structures are main necessities of growth.

⁵⁶ For the readers who is not familiar for the economics, growth defines the percentage changes in GDP. For simpler explanation growth is the change of Yield comparing previous time frame (generally

growth analysis calculated by annually or quarterly) as $g = \frac{Y_t - Y_{t-1}}{Y_{t-1}}$ Here Y represents Yield.

⁵⁷ Just like rationality; Certainty is also a problematic dispute between both camps and highly related to studies of other social disciplines. Also, risk perception and decision making are other - related - debates in economics and there are different conflicts not only between Orthodoxy and Heterodoxy but also in different school of economic thoughts in Orthodox Economics and Heterodox Economics. For more information reader can look related studies in the literature; Breeden, Douglas T. (1986), Dreze, Jacques, Mand Modigliani, Franco (1972), Reyna, V. F., & Farley, F. (2006), Von Neumann, J., & Morgenstern, O. (1964), Kahneman, D., & Tversky, A. (1979), Krauss, D. A., Lieberman, J. D., & Olson, J. (2004), Reyna, V. F., & Ellis, S. C. (1994), Olson, Mancur, (1982)

⁵⁸ As an example, "time" and "uncertainty"; always have been debatable subjects of economic models. Especially uncertainty is one of the key issues in econometrics too.

⁵⁹ As mentioned earlier; "uncertainty" is one of the important focuses of modern labor economics. Especially by Guy Standing it has been argued as main phenomenon behind "precariat".

⁶⁰ The role of money and monetary policy is one of the most popular debates in economics especially

related to "finance and financial economics." There are deep financial economics conflicts between Heterodoxy and Orthodoxy and discordances between both approaches. The most well-known conflict is on "dichotomy." Classical economists (and even Neoclassical and Marxist economies) accept dichotomy, unlike Post Keynesianism. And there are ongoing discussions and disputes on the role of monetary policy in the mainstream (especially between Monetarist School and Classical Keynesian Schools).⁶¹

As mentioned earlier, ongoing disputes are not limited by these (ten) annotated – main – disputes, but these are the most well-known and deep debates.⁶² Still, there is no standard agreement on any of it, and even modern schools (such as prefixes as "New," "Neo," "Post," etc.) bring a new approach to old problems; but each process creates its disagreements.

independency of central bank, political economy of monetary policies, priorities of central banks, etc. For more information reader can check some of the essential studies such as like; Friedman, M. (1956), Hahn, F. (1971), Hicks, J. R. (1937), Kasumovich, M. (1996), Marshall, A. (1871), Adalid, R., and C. Detken (2007), Assenmacher-Wesche, K., and S. Gerlach (2006), Borio, C., and P. Lowe (2004), Fischer, B., M. Lenza, H. Pill, and L. Reichlin (2008), Ireland, P. (2004), Kelly, L.J., W.A. Barnett, and J.W. Keating (2011), Woodford, M. (2003), Mishkin, F. (2010), Goodhart, C. A. E. (1999).

⁶¹ Theory of Money, Monetary policies, financial approaches, central banking and monetary systems are highly political subjects in economics. These and related subjects are not only debates between Orthodoxy and Heterodoxy and also very sensitive, touchy and disputed enclaves in Orthodoxy (and of course in Heterodoxy) too. As briefly explained dichotomy is one of the main and very well-known old conflicts. But one of the hottest subjects is the tradeoff concept between inflation and unemployment. It is not only debate as concept (if it is existed or not) but also very dominant and important subject in business cycle theories. Importance of monetary policy is based on its meaning. It is highly related to microeconomic and macroeconomic theoretical differences. There are many valuable studies which provided serious

While (even) the definitions of the disputes are not agreed upon and smooth, the perspective behind the conflict is pretty solid. All the disputes are outcomes of political and philosophical differentiation between different approaches. And the views and privatizations are as crucial as methodology disputes and differentiation.⁶³

3. The Roots of the Schism

Unlike common ideas and, contrary to common opinion, the disputes are not related to (or limited to) methodologies but have deeper roots that go to different perspectives. Unlike generally accepted statements, the main conflicts started before the 19th Century.

As a well-known example, before Marx and Senior dispute, there was Owen – Hone dispute.⁶⁴ And even Owen has been criticized by

contributions to literature about it. If the reader wants to check and have advanced reading especially Friedrich Lee (1969) and Kregel (1975) will provide deeper information and perspectives. Some of the sources for further reading are; Belloiore, Riccardo (2013), Carlino, G.A. (1982), Costabile, L. (1997), Eichner (1987), Fisher, I. (1930), Fisher, S. (1979), Fisher, S. and F. Modigliani (1978), Friedman, M. (1953), Friedman, M.(1968) Kregel, J. A. (1975), Kurz, H. D. and Salvadori, N. (1995), Lavoie, M. (1992), Lee Friedrich, (2005), Lipsey (1978), Lucas, R.E. (1979), Robinson, J. and Eatwell, J. (1973), Stein, J.L. (1969), Tobin, J. (1965), Wilson, T. (1980), Wolff, R. D. and Resnick, S. A. (1987), Cagan, P. and R.E. Lipsey (1978),

⁶² Each "conflict" is also related to others. The ongoing dispute and unending debates between Heterodoxy and Orthodoxy is not just related to methodology but also related to perspective and prioritizations.

⁶³ Even methodologies have deep background of political and philosophical perspectives.

⁶⁴ William Hone criticized Robert Owen especially based on role of people in economics. He claimed that Robert Owen does not understand nature and role of people.



Classical Socialist economists (Karl Marx and Friedrich Engels).

Primarily the history of economic thoughts focuses on the comments of Marshall and Solow on Marxist approaches and claims that after the 1980s, Heterodoxy has been completely ignored (and also disregarded). But in reality, after 1980, the basic concept of disputes has transformed from Heterodoxy – Orthodoxy conflicts to Orthodoxy – Orthodoxy conflicts.⁶⁵ Both books ([Marshall, 1890](#); [Samuelson, 1948](#)) were main textbooks of the economics education and for many years economics education adopted Marshallian perspective.⁶⁶

But in reality, the disputes were highly related to the original roots of the main conflicts, such as the like role of the state, market mechanism, money, etc.

After hundreds of years, it is possible to see reflections on the roots of the disputes, which are related to "chooses of economics" (and, unlike common opinion, not related to methodology so much). After two hundred forty-six years⁶⁷, the state's role and market functionality are still parts of the arguments. These are highly related to the methodologies and focuses of the new studies.

4. The Ontology of the Schism

⁶⁵ Especially after 1970s Keynesianism became main target.

⁶⁶ Especially until 1970s.

⁶⁷ Considering the first publications of "The Wealth of Nations" in 1776

⁶⁸ One of the main divine disputes is "sterile and politics free economics" which is also related to (5) scientificity. But in reality, nature of economics does not allow pure apolitical "economics studies". Analysis methodologies might be pure, apolitical and

The conflicts did not grow out from inside economics or the studies (of pure economics). Contrarily there existed – long – before "economics." The disputes just became apparent when the facts became non-negligible. This also means all the controversies and "the battlefields" have profound historical backgrounds, points, and reflections in real (and daily) life.⁶⁸

And another essential characteristic of the disputes is interpenetrating and enmeshed relations between each other. Which (also) means one is the reason and result of other(s) at the same time. This is also one of the critical factors in relations between the school of economic thought.

Ontologically meanings of disputes are not independent of related arguing schools of thought. For example, dichotomy cannot be defined without Neoclassical economics, or the role of money or monetary policy cannot be defined and argued without Monetarism. In this concept, every dispute also has its own "zeitgeists" and cannot have sterile meanings independent from it.

Ontological roots of the schism include cultural, ethical, political, social, and even theological origins, which have been fermented since the 15th Century⁶⁹ and are based on mental transformation (and, of course, social changes). And the disputes cannot have sterile

even unbiased) from effects of any school of economics. But any conclusion is completely political (and cannot be apolitical) by nature.

⁶⁹ As briefly explained in "(3) *invisible hand*" the self-benefit driven social benefit is just a reflection of post Protestant Revolution. Accumulation of capital, wealth and "benefit" are not accepted concepts by classical Catholic Christianity. Regarding the disintegration of feudal relations, a new ethic concept could borna and earn legitimacy.

meanings. The ontological roots of the schism follow the paths of the perspectives which originate through "class consciousness."

5. Conclusion

Unlike common ideas, *economics did not branch off between two main approaches*.⁷⁰ It has built on a systematic thought after the divergence between two main perspectives. And unlike general acceptance, the schism was not between Orthodoxy and Heterodoxy. And it was between *political economy* and *economics*. The issue always has been more about "perspective" than just "methodology."⁷¹ Methodology always has been a secondary issue unless it became a criterion for "scientificness," which also brought "legitimacy" to economics. Methodological approaches are limited mainly by Popperian – Marxist conflict, but there were also deep methodological disputes. And before Karl Popper's "falsification theory,"⁷² there were "scientificity criteria" of Nassau William Senior⁷³ against the conventional formation of Heterodoxy (which was mostly inherited from Political Economy).

More openly, separation of the economy has been come true long before modern Orthodoxy – Heterodoxy breakdown. The schism had occurred when the "Marginal Revolution" took over economics and pulled over Political Economy to the side.

⁷⁰ The term "two main approaches" means; Orthodoxy and Heterodoxy.

⁷¹ As mentioned in "The Ontology of the Schism" methodology mostly related to legitimacy (via (5) scientificity).

⁷² While Popperian concept brings "hypothesis" and "falsification" to social sciences Marxism busts "Dialectic". But the main focus of the/this article is limited with "ontological roots" of the schism and the

Since the schism, there have been ongoing transformations in economics (also called the evolution of mainstream economics). Still, in reality, it is more reaction of economics to empirical facts subjected by Political Economy since the late 16th Century.

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methodological conflict between Popperian Approach and Marxist Approach is much bigger than coverage of this article. So, it was just mentioned as a simple detail but it is a serious and very bold dispute.

⁷³ Nassau William Senior defines wage and profit concepts in Political Economy as "dictum de omni et nullo" in Logic "just like gravity in Physics". In Political Economy (p. 28) which was later published as second edition in 1858.



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