

A historical analysis of the theories of money

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Keywords

Money, Monetary Theories, Classical, Neo Classical, quantity theory

Abstract

Money, the most complex idea to understand is labelled a subject of disagreement and a thorough confusion among economists. "Money" has been fortunate enough a topic to receive ample attention from the philosophers. Economic literature is replete with theories concerning the understanding and behavior of money from different historic eras. The present day knowledge of money is very limited when it comes to understanding what actually it can be. Most of the common strata of people believe that the money is something that is determined by the governments. People generally hold the view that citizens have a legitimate duty incumbent upon them to honor the payment systems stipulated by the authorities. This Research Paper aims at bringing together most of the prominent contributions of greatest philosophers of money and clearly demarcates various schools of monetary thought be it the Classical, Neo-Classical or the Heterodox. The aims of this chapter are to review the relevant theories concerning the understanding of money, to present the monetary dogmas of historical times in a proper chronological order, to establish a link between the predecessor and the successor, to elaborate on the most obscure confusions and their causes in an easy to understand parlance and to deviate from the mainstream to discuss the Heterodox yet appealing school of thought.

Introduction

Most of the monetary theories are written in inexplicit language, which not only restricts this discipline to the so called Politico-Economists of the country, but also keeps it hidden from the masses. The inability to understand the complexity of theories has misleadingly led many to believe that money originally started as a government initiative rather than a market phenomenon. It was the "forces of market, its discipline and needs" that led to the invention of money and eventually the evolution got kicked in by the same forces. However this auto evolution came to a halt when governments actively started interfering with respect to what money actually should be. The role of authorities itself changed from "the regulator of the money approved by the markets" to "the creator and issuer of the money coerced upon the markets". Very rarely do we see a reckoning done in this direction by a common man. The literature that should serve as a guiding torch remains blurred with difficult jargon. It is ironic that most reputed text books on money do not touch upon the theories of money; readers are kept off the track by only mentioning "what money can do" rather than "what money is". This has to do with the confusions that interlaced the monetary economics and its theories in the past century. A misunderstanding of the ailment, therefore an incorrect diagnosis and prescription is made. It has never been an easy task for scholars to evaluate monetary theories objectively as the context remains obscure due to lack of clarity, however many attempts have been made to explain the work of monetary theorists, to criticize them and then finally to produce the critique to the criticism. This research paper attempts to list down and explain the monetary theories from Classical to Neo Classical Eras.

Classical Monetary Theories

Classical Economics is understood as the first modern school of economic thought; its developers include Adam Smith, Jean Baptiste Say, David Ricardo, Thomas Malthus and John Stuart Mill. This thought of economics had evolved as knowledge against feudalism into the capitalism that got triggered by industrial revolution. One cannot discuss the Classical economics without delving into its core theory of value. The theory of value recognized that the prices of goods should be derived from the wages to labor that went into producing those products. While Smith called it a Labor theory of Value, Ricardo went even further with some modifications to call it Cost of Production Theory of Value. The monetary aspect discussed by the Classical economists remains no different from that of value theory of commodities. The money to most of the classical economists was a commodity (any good used as money, widely gold and silver) and its value was derived by the same methodology as the common goods traded on the market.

Before presenting Adam Smith's contribution which is considered to be the very first in the time line, a serious urge to report the writings of a not so widely referred to philosopher namely Ibn Khaldun, is felt. This philosopher though long forgotten in the clouds of history had a vivid ideology of what constitutes money and how it can be valued and produced. Ibn Khaldun (A.D. 1332 - 1406) in his Prolegomena (The Muqaddimah), recognized that money served as a standard of value, a medium of exchange, and a preserver of value (Weiss, 1995). To him the exchange value of a good is derived from the value of labor effort (and natural resources) that goes into the production of the good. He emphasizes the value of labor in determining the exchange value of a good (Khaldun, 1377), though not giving his theory a name yet his philosophy of valuing goods goes in symphony with "labor theory of value of money". The money serves purely as the medium of exchange; however the exchange can take place by way of barter also which requires the parties to establish the exchange ratio in accordance with the ratio of labor effort that created the goods. Ibn-Khaldun's era did not see the emergence of paper money; hence he neither commented on the legitimacy nor anticipated the possibility of fiat money. The money that was used to support the payment system existed as Gold and silver, nonetheless Ibn Khaldun clearly outlined the role of the mint to standardize the value of coins by marking them with authentic stamps to guarantee their weight and purity. Ibn Khaldun's writings clearly anticipate the tendency of governments to debauch currencies to finance their extravagant expenditures on building castles and funding mercenary armies, therefore he subscribes to the macroeconomic objective of preserving Purchasing Power of Money i.e. Fighting Inflation. This concept emanates from his quantitative philosophy of money which he states as "*the quantity of money is of no significance for a country's wealth*". For this reason he postulates the preservation of currency's value by mint to be the main economic objective. Therefore Ibn Khaldun's monetary theory essentially remains a theory of value and the Quantity theory of money.

Centuries after Ibn Khaldun, Adam Smith in his book, *An Inquiry into the Nature and Causes of the Wealth of Nations* developed further the theory of money. Adam Smith clearly defined the limitations of barter in trade which gave birth to the use of an intermediate commodity in economic exchange (Smith, 1776). However the problem with such a medium was its value being subject to variations. How would a scale be used to measure value of goods, when its own value was not a fixed parameter? Adam Smith clearly indicated the prime function of money as the medium of exchange. Experiences stood witness to the stability of the value of precious metals, to the favorable physical properties of theirs due, and hence Adam Smith vouched for their use as better money material. Regarding the employability of twin

metals in monetary system, one was labeled as a standard and the ratio of other to the former was fixed either by law or by market forces. The famous Gresham's Law is also touched upon by Adam Smith, as he stipulates that exchange value of the coin is established by its intrinsic value and not the nominally designated face value. It is practically impossible for two classes of money with varied quality to exist in circulation, as people tend to hoard the better kind so the inferior kind would drive the better kind out of the market. Adam Smith's *Wealth of Nations* also referred to the relationship between money and price, "*the value of standard money varies directly with the number of exchanges to be made and the frequency with which they are affected, and inversely with the whole quantity of money in use and the rapidity of circulation*" (Holander, 1911). Regarding the attempts to artificially alter the stock of money, Adam Smith labels the act as useless and mischievous. The variations in the value of money benefit different classes of society differently. The undue appreciation of the currency harms the debtor segment and the depreciation harms the creditor segment of the society. Concerning paper money, Adam Smith's views were no less vivid, as his doctrine outlined that the substitution of paper for gold and silver replaced an expensive with much less costly instrument of which promissory bank notes payable on demand are best known and adapted for the purpose (Smith, 1776).

Another Classical Economist who deserves a mention here is Jean Baptiste Say; Say's law remains a very famous assertion of classical times i.e. aggregate production necessarily creates just equal quantity of aggregate demand. *A product is no sooner created, than it, from that instant, affords a market for other products to the full extent of its own value* (Say, 1834). Say's notion comes from the principal that the producing of goods creates aggregate income that makes an equal way to seek aggregate demand. Say argued that economic agents produced goods and services so that the money earned in producing them is spent on other goods desired by the same agents. His assertion is usually phrased as "*Supply creates its own demand*", though Say did not phrase it this way. A quote from his book explains his claim to a great deal, "*It is worthwhile to remark that a product is no sooner created than it, from that instant, affords a market for other products to the full extent of its own value. When the producer has put the finishing hand to his product, he is most anxious to sell it immediately, lest its value should diminish in his hands. Nor is he less anxious to dispose of the money he may get for it; for the value of money is also perishable. But the only way of getting rid of money is in the purchase of some product or other. Thus the mere circumstance of creation of one product immediately opens a vent for other products*" (139).

David Ricardo: His entire life as economist, Ricardo delved into the theoretical and practical problems relating to the Banking Restriction Period of 1797-1821 and most of his theoretical works are his views in various forms (Sato, Takenaga, 2013). Ricardo's monetary theories though quiet voluminous remain under estimated in comparison to his theories on real economy and international exchange. Ricardo's monetary remarks are considered of temporary nature as these came in response to the peculiar economic conditions of that time. However generalizability from his work can be extended by discussing two major contributions (rather controversies) to monetary economics. Ricardo's monetary theory encompasses two essential aspects of money, one being the value and quantity theory of money and the second the central banking. According to Ricardo, money essentially is a commodity, a precious metal which is directly exchanged with the other commodities. This function of commodity money is because of the perceived stability of the value of precious metals that money maintains the appropriate function of the measure of value (Ricardo, 1951a). Apart from the role of money as a measure of value expressing the value of commodities in common unit, Ricardo appears to be a proponent of commodity exchange through barter where each good is exchanged with the other without intervention of any payment system. Many allege Ricardo of propagating inconsistencies and

contradiction for determination of money prices, as Ricardo argued that both the quantity of money and the value of money derived from the value theory are the determinants of money prices in the economy. Though the underlying assumptions to Ricardian monetary theory that money does not depreciate and the value of the standard is constant, refer to the variations in money prices caused only by the irregularities in conditions of production or income distribution; these assumptions are applicable to only a specific economic condition. It is important to understand that Ricardo's value stands different for gold and for money, as he renders gold not as just money but the standard of money, i.e. a way to measure the value of money.

When Ricardo talks about value of gold, it follows the value theory and cost of production analysis. However the value of money is determined by its quantity and is measured as purchasing power of money over gold, in other words how much gold can a unit of circulating money buy? It is imperative that Ricardo rendered it immaterial whether the circulating medium comprise of whole weighed gold coins, or debased coins or convertible or inconvertible paper money, his theory rendered value of money always determined by the quantity of gold that each monetary unit could buy on domestic and foreign markets, which eventually depended on prices of gold and exchange rates (Marcuzzo, Roselli, 1991). Ricardo has been thought to represent the neutrality of money position i.e. a thought which says that changes in the nominal quantity of money will impact the nominal variables like wage rates, exchange rates, prices only and not the real variables. He held the view that the increase in the quantity of money would have no permanent impact on production employment and interest rates. These variables are determined by the level of capital accumulation and rates of profit of the economy. Though Ricardo strongly backed the opinion of quantity of money being responsible for changes in the prices, the reverse was not considered true. He never thought that any changes in prices necessarily implied the changes in the quantity of money. Price increases could be initiated by other factors like decrease in the value of the standard, a rise in wages or tax increases (Ricardo, 1951b). Ricardo stressed proportionality only between the quantity of money and price of gold, as any increase in the quantity of money above natural level (the level at which money specie is exactly backed by the gold i.e. mint par) would result an exactly equal decrease in its purchasing power in terms of gold. Ricardo has stressed at many places that the existing price of gold compared to the mint par could act as a barometer to evaluate the reduction in the quantity of money needed to bring the price of the gold back to the par level (Vol III, P 123).

John Stuart Mill: Mill is credited with contributing a profound economic analysis to classical monetary theories. His monetary theory remains clear and simple; he regarded money as commodity whose value could be found like any other commodity in the market. His main distinction was the value determined temporarily by demand and supply forces (in the short run) and the permanent value which resulted from the cost of production (in the long run) (Mill, 1848a). Mill explicitly contributed to the theory of money supply, which has a greater similarity with the modern theory of money supply, even though his theory remains restricted to monetary gold only. The supply theory of money given by Mill was the first theory to identify the public's demand to hold gold in non-monetary forms. According to Mill it is the labor and material cost expended in producing the commodity of money that makes up its cost. This is equally applicable to countries which acquire money not by producing but by acquiring through trade with the rest of the world. In that case the cost of money would be the cost of labor and material expended in producing goods that are exchanged against it (pp 498-506). Mill recognized that the value of money like any other commodity varies in the short run from

its value in the long run. Mill explained the short-run fluctuations in the value of money by virtue of Quantity theory. Mill's supply of gold in the short run was not fixed as per the existent gold stock (p554). He identified that gold had varied usage other than money. It was also hoarded as a store of value; therefore the stock of gold could be affected either by melting or exporting it. As market value of money increased in the short run, non-monetary hordes of gold were melted down to convert them to the monetary stocks of gold.

The Neo-Classical Monetary Thought

The line that demarcates Classical Economic Theory from Neo-Classical one is the value determination itself. Classical economists rendered the value of goods as the value of inherent property in them, but many economists at different places realized simultaneously that value of goods in markets differ from the value of the matter they hold. The value of goods depended more on a network of relations between its cost of production and a much subjective interplay of marginal utilities, called the demand and supply forces. This is referred to as the Marginality revolution in the history of economic thought. The monetary theory of classical era remains essentially a theory of value and the quantity theory of money. Both of the classical monetary theories endeavored to explain the value of money; however the approach adopted was different by different economists. Before we discuss how the Neo-classical faction of monetary theories came into being, it becomes imperative that an elaborate explanation of Quantity theory and its evolution of thought is presented.

Quantity Theory of Money

The theory that implies that the prices move directly and proportionately with money supply is called the Quantity Theory of Money. As the money supply increases, it leads to the proportionate increase in prices. Quantity theory's origin dates back to early thinkers like Copernicus, Ibn Khuldun and Henry Thornton who realized the increase in the price level of a country with the import or influx of gold and silver coins used as money coins from other parts of the world (Volkart, 1997). Developed from Hume, John Stuart Mill first time advanced the concept for equation of exchange. He explained the vivid difference between money and price, which was a concept usually confused among other Classical economists. He clearly explained that any increases in the money can lead to proportionate increase in prices (Mill, 1848b). Though Mill laid the foundation for equation of exchange, it was Fischer who for the first time developed a mathematical equation of the same. The main idea behind Fischer's quantity theory was that the inflation is primarily caused by the expansion of money or credit by banks (Fischer, 1922). He took the equation of exchange developed as an accounting identity by Simon Newcomb in 1885 and turned that into a theory. The equation in its original form was

$$MV = PT,$$

M = Quantity of money in circulation

V = Velocity of money, or annual turnover of money

P = General Price Level

T = Total number of transactions of goods and services during the year.

The given equation of exchange developed initially as an accounting relation between money and real side of the economy. The right hand side of the equation shows the money transfer and the left hand side shows the goods transfer in an economy. The total value of transactions, which is given as the product of *price* and *total number of transactions* should be equal to the product of the *quantity of money* and the *velocity with which money changes hands*. The dollar amount of goods and services produced and sold in an economy should be equal to the money usage for the same. Fischer developed this equation of exchange into a theory, by

assuming V (velocity) and T (Transaction number) to be stable. This introduction of constants establishes a direct and proportional relationship between the quantity of money and price. His theory stipulated that changes in the prices are directly caused by changes in the money supply. As Fischer stated: *"The level of prices varies in direct proportion with the quantity of money in circulation, provided the velocity of circulation and volume of trade which it is obliged to perform are not changed"*.

Another assumption of Fischer's Quantity theory of money is that money supply is determined irrespective of the aggregate income (PT). So, there exists only a one-way causal relationship between M and PT . Money supply (M) is rendered exogenous, it does not get affected by the changes in PT . In other words, changes in money supply cause changes in nominal income and not the other way round. Mises' approach to explaining Quantity Theory of money was different from that of Fischer, he contended that the variable M (Quantity of Money) is a culprit and is an exogenous variable that not only drives changes in P , the price level but also brings variations in V and T (V and T were rendered stable by Fischer). Therefore he thought that money is a variable that is likely to create havoc in the economy by not just raising prices but also creating structural imbalances in the economy. Mises said that money is never neutral, a change in quantity of money affects all other variables in Fischer's equation (i.e. V , T and P) therefore the relationship between M and P might be direct but is scarcely proportional. Mises wrote *"Fischer's proposal of stable price index could not in any way ameliorate the social consequences in the value of money"* (Mises, 1953a). Mises and other Austrian Economists were the adherents of Gold standard and their contribution is widely discussed in other section of this paper; however their approach to deal with the crises was to "Wait" until economy corrects itself. This approach was not feasible for coming out from the grips of Great Depression of 1930s as it was taking too long, a revolutionary economist namely John Maynard Keynes approached Quantity Theory from a different perspective. Keynes strongly refuted the extreme monetarism of Irving Fischer that claimed monetary inflation has no ill effects in the long run, it only raises prices. Keynes said, *"Now in the long run this might be true, but this long run is misleading guide to current affairs. In the long run we are all dead"* (Skuosen, 2006).

Keynes is said to have turned the classical quantity theory of money upside down, his economics rejected the orthodox understanding of money. Keynes rejected the very famous classical dichotomy that said the nominal variables in an economy are determined by nominal factors and real variables by real factors. This dichotomy essentially was between the relative price level (determined by demand and supply of goods) and the absolute price level (determined by demand and supply of money). Keynes argued that the velocity of transactions given stable in classical economics is not constant. In times of economic slowdown, the money changes hands very slowly, as people are less willing to spend due to low incomes, especially during the Great Depression. Therefore, Keynes was of the view that velocity of transactions cannot be a fixed variable. Consumer and business confidence, seem to influence the velocity to a great extent, however these variables themselves are highly volatile.

The notion that turned Quantity theory of money upside down was Keynes' reasoning on Output (T). Keynes argued that it is not reasonable to assume output (T) to be constant. As opposed to the classics who believed that output of a country is determined by the level of employment used in producing the output, and since the economy is always at full employment, the output level can be treated as constant. Keynes believed that it is possible for equilibrium to exist even when resources are not fully employed. Therefore, Keynes's analysis was a complete reversal of the causal relationship that employment determines output and took the form for him output determines employment. Since the economy is not always at full

employment, which shows that output levels are unstable and not constant. This was the first time to look at the output of an economy from Demand side as opposed to supply side (Trevithick, 1992).

Keynes also argued that people tend to hold money not just for transactions only. He put forward his theory of Liquidity Preference. Liquidity preference theory states that money is a store of value, a standard of deferred payment and the usual medium of exchange. Apart from transactions need, people hold money for precautionary purposes also. Precautionary needs come into play when people are uncertain about the future, expect lower levels of income in future due to economic slowdown, will tend to save and hold more money balances as a security for bad times in future. Additionally, Keynes believed that people also hold money for speculative purposes. And for this Keynes introduced role of interest rates in determining the speculative holdings of money. He explained that the expectation of future interest rates are key to determining the current demand for money as economic agents tend to get rid of their bond holdings as they expect rise in the interest rates (which may be due to low current interest rates). As rising interest rates deteriorate the value of bonds so the investors are more likely to sell their bonds and increase the current liquidity i.e. money. The classical dichotomy was rendered irrelevant, as Keynes related a real variable (interest rate) in determining a monetary variable (money demand) (Johnson, 2001).

Presenting a rebuttal to Say's law, Keynes argued money could be hoarded. Rather than investing money in interest bearing assets, people may choose to hold idle balances of money based on their speculative needs. The speculative demand for money is an unstable function of the interest rate. Keynes was of the view that consumption and savings are not the determinants of the interest rate, Instead the interest rates are determined by the money market. Keynes reformulated the Classical Quantity Theory and laid down new assumptions, which stipulated that the relationship between Money Supply is neither direct nor proportional, instead money changes affect the prices indirectly by changes in interest rates. According to him when Quantity of Money increases the first impact is felt by interest rates which are going to fall. The falling interest rates will spur Investment activity which will tend to kick in the multiplier hence affecting the effective demand thereby increasing income, output and employment. Output and employment tend to increase in the same proportion as effective demand, and the effective demand also increases in the same proportion as the quantity of money. But, once full employment is reached, output refuses to respond at all to changes in the supply of money. The elasticity of supply of output in response to changes in the supply of money, which was infinite when there was unemployment, falls to zero. Therefore the supply of money exerts its pressure in entirety on prices, which tend to rise in exact proportion with the increase in effective demand. Keynes' Quantity Theory says, *"so long as there is unemployment, output will change in the same proportion as the quantity of money, and there will be no change in prices; and when there is full employment, prices will change in the same proportion as the quantity of money"*

Milton Friedman a relatively modern economist in 1956, in his article, *"The Quantity Theory of Money: A Restatement"*, shifted the focus of the quantity theory of money, though he tried to incorporate the major developments carried forward by Keynes and post-Keynesians. Friedman argued that the changes in the money supply can cause changes in the nominal variables as well as the real variables like output and employment sometimes. Friedman's restatement of the quantity theory was essentially a theory of demand for money, where money is treated like any other asset (Handa, 2009). Economic agents (individuals, firms, governments) tend to hold a specific quantity of money in real terms called as real money balances. During times of higher inflation the purchasing power of the unit of account gets eroded, economic

agents will adjust the nominal balances of money to maintain the same quantity of the real balances, keeping real balances constant. Friedman argued, the level of real balances held by people depended on permanent income (the Present discounted value of all expected future income), the relative expected return on bonds and stocks versus money, and expected inflation. Therefore Friedman's equation of exchange can be expressed as a demand function of money given as:

$$M_d/P: f(Y_p <+>, r_b - r_m <->, r_s - r_m <->, \pi^e - r_m <->)$$

Where

M_d/P = demand for real money balances (M_d = money demand; P = price level) f means "function of", Y_p = permanent income $r_b - r_m$ = the expected return on bonds minus the expected return on money, $r_s - r_m$ = the expected return on stocks (equities) minus the expected return on money, $\pi^e - r_m$ = expected inflation minus the expected return on money

<+> = increases in

<-> = decreases in

"So the demand for real money balances, according to Friedman, increases when permanent income increases and declines when the expected returns on bonds, stocks, or goods increases versus the expected returns on money, which includes both the interest paid on deposits and the services banks provide to depositors" (Wright, 2009).

The modern quantity theory formulated by Milton Friedman is considered superior to Keynes's liquidity preference theory because of its inclusion of other asset types like bonds, equities, goods as opposed to just one asset (bonds). Friedman did not assume that the return on money is zero, or even a constant. In Friedman's theory, velocity is no longer a constant; instead, it is highly predictable and, as in reality and as formulated by Keynes velocity is procyclical meaning rising during expansions and falling during recessions. Finally, unlike the liquidity preference theory that claimed a huge impact on money demand due to changes in interest rates, Friedman's modern quantity theory predicts that interest rate changes have meagre effect on money demand. The reason for this is that Friedman believed that the return on bonds, stocks, goods, and money are usually positively correlated, they move together leading to little or no relative changes of $r_b - r_m$, $r_s - r_m$, or $\pi^e - r_m$ as both sides would rise or fall about the same amount. This very insight essentially reduces the modern quantity theory to $M_d/P = f(Y_p <+>)$.

The very premise that sets Friedman's quantity theory apart from Keynes' is his assertion that both money demand and velocity are very stable and could be easily predicted. This went opposite to Keynes view who thought velocity and money demand are very volatile and unpredictable. This difference of opinion had a significant policy implication, as Friedman's analysis supported monetary policy to be an effective tool to gear the economy. While Keynes due to his view of unpredictable money demand and velocity thought that Fiscal policy was the most appropriate and reliable stabilization policy.

Economic Analysis of Classical and Neo-Classical monetary thought

The analysis of Classical Monetary theory: The classical monetary theory essentially was an extension of classical value theory, with no doctrinal dichotomy what so ever. Since money was a commodity in classical analysis, therefore its value was simply explained by the same value theory that explained the prices of other commodities. As John Stuart Mill observed, *"The introduction of money is a mere addition of one more commodity, of which the value is regulated by the same laws as that of all other commodities"* (Mill, 1871a). The difference that sets the classical

money theory apart was mainly in the peculiarity of supply and demand functions of money. Classical money supply function as in modern times was directly related to its value ($1/p$) and was quite inelastic. Mining gold, which otherwise was an unprofitable business, gained momentum when gold money's value rose in terms of buying goods and services, i.e. the price of all other goods and services declined in terms of gold. Both the elasticity and location of the money supply curve in classical monetary thought are accounted for by the real adjustments to real changes.

The elasticity of the classical money supply function was due to two factors that brought changes in the value of money (reciprocal of the price level): (1) conversion of money into plate and vice versa, and (2) expansion and contraction of marginal domestic mining of precious metals, if any. Having explained the elasticity, the position of the implicit classical money supply curve, was accounted for by the cost of producing the metal specie from mines or acquiring it through trade. A positive shift in the money supply curve resulted due to the reduction in the cost of producing the precious metals, or the increase in exports by which they might be obtained. Similarly, the unitarily elastic demand for money shifted directly with the output of domestically used goods (due to the reduced cost of production of domestic goods) and inversely with the volume of credit (including the substitutes for "money" in the performance of its medium of exchange function) (Mill, 1871b). What makes Classical Monetary Theory unique is the inclusion of cost of producing things other than money in positioning of money supply function. Further to clarifying the uniqueness of classical monetary theory, the following elaboration may suffice. The demand function for money in classical monetary theory, shifted simultaneously, and in the same direction, with the changes in the money supply function. For instance, positive movements of the money supply function that could result from improvements in the productive capacity of domestic gold mines (if any) or of other commodities including agriculture. Such a technological improvement would result in a significant concurrent rise in both the demand for money (through increased aggregate production of goods exchanged for money) and the supply of money (through the increased inflow of gold corresponding to export balance of trade initiated or augmented by the innovation) (Mill, 1871c).

The analysis of Neo-Classical monetary theory: Neo-classical monetary theorists are the Anglo Americans who professed to interpret the classical monetary theory but inadvertently turned it upside down, without even realizing or detecting the inversion they caused to the doctrine. The commodity and quantity theories of money complemented each other in explaining the value of money in classical monetary analysis; however these theories were presented as competing theories in neo-classical analysis, interpreted as half-truths. The controversy that initiated between the commodity and the quantity schools of monetary theory in post classical era, originated due to the ignorance of the classical distinction between the long-run and short run values of money. Post classicals tried to incorporate one aspect of classical monetary theory, while excluding the other (Agger, 1941). The clashes associated with the Bimetallic controversy basically witnessed the annihilation of the commodity theory faction of the neoclassical school that happened to succumb to the Quantity theorists, who in their attempt to preserve and explain classical quantity theory inverted it (Mason, 1963). Neo classical monetary theory emerged as a quantity theory which was very different from its classical counterpart. This inadvertent inversion resulted from extending the application of classical short run analysis of Quantity Theory to the long run, and then burying its short run formulation forever.

The exclusive emphasis on long run relevance of Quantity Theory was conserved due to the negligence on part of the neo classists regarding *ceteris paribus*, who failed to recognize this as an abstract methodological condition rather than a necessary condition that must be fulfilled in practice. Fulfillment of this condition was achieved by rendering the velocity of money constant, which is a condition that could be accomplished only in the long run, hence the long run garb was given to the otherwise short run implication of the Quantity Theory. This morphisms in methodology contributed generously in blurring the line of discrepancies between classical and Neo Classical monetary doctrines.

The Austrian School of Monetary Economics: A Heterodox Economic Thought: Austrian School of Economic thought originated in Austria in late 19th century; its early contributors remain of Carl Menger, Eugen von Böhm-Bawerk, Friedrich von Wieser, and others (Schumpeter 1954). Austrian Economics is credited with contributing important theories to early economics, which include the Subjective Theory of Value, Marginalism in Price Theory, and the Formulation of the Economic Calculation Problem, these contributions remain an integral part of mainstream economics (Birner, Van Zijp, 1994). Mainstream Economists are critical of Austrian economic thought, for reasons related to Austrian rejection of Econometrics and other macroeconomic analysis and consider them outside the mainstream economics, hence heterodox (Boettke, Peter, 1994). Of all the theories and explanations of money that various Economists brought forward, none served as a clear guideline to a statesman. Professor Ludwig Von Mises of Vienna, in his book, "*The Theory of Money and Credit*" (1912) has done justice to a greater extent by systematically dealing with the major propositions of theory of money and credit, by establishing its relationship with main analytical economics and with the major problems of contemporary economic policy structure

In the very first chapter "the Functions of Money", of his book, Mises provides a step by step process of the origin of money. Mises significantly acknowledged the contribution of his reference Carl Menger 1871, who is designated as a founder of Austrian Economics and gave for the first time a satisfactory explanation on the origin of money. Menger contrived a step by step evolution of money rather than assuming it a decree or an edict from a king or a government (Mises, 1953b). Mises and his Austrian predecessors, whom he refers to generously, worked out a logical explanation to the measurement of value. Referred to as Subjectivist/Marginal Revolution, Mises and others explained the prices of commodity goods by the interplay of subjective valuations in the market, which in turn explained the prices of producer goods that are required to produce them. This was a breakthrough in valuing commodities as it negated the classical economists' labor theory of value, which explained the price of a good by the amount of labor used in its production or cost of producing that good.

Mises goes forward in explaining that a government can never force a particular good (be it the commodity money or fiat money) to command a specific purchasing power in the market. If the government alters the value of the circulating money, the market will react by altering prices in the opposite direction (Mises, 1953c). Mises was the first one to discuss the social consequences of changes in the value of money, he discussed that inflation or monetary value reduction can make businesses overestimate their profits which eventually lead to *Capital Consumption*. The increased influx of money of any kind (be it gold or fiat currency) does not make the society richer, its circulation spreads unevenly, benefiting only certain circles of the society which remain primary beneficiaries on whom the money is spent first of all. Other segments of society stand at the losing end, as they do not directly see increase in the income instead the value of their savings is already deteriorated due to falling value of the money (Mises, 1953d).

Mises a strong opponent of the inflationism; dedicated his career to make its ill effects evident to the rest of the world. He stressed that the only technical definition of inflation is the increase in the supply of money. The consequences that follow the inflationism like Price Controls and Currency Speculation are well tackled by Mises. He clearly demonstrates how price controls are an ineffective measure to keep masses unaware of the consequences of inflation. This leads to either shortage or removal of goods from markets that are price controlled (Mises, 1953e). The most valued contribution of Mises is his explanation related to expansion of fiduciary media causing Business Cycles. Mises relied on Bohm-Bawerk's capital theory to explain the boom bust cycles. Böhm-Bawerk viewed interest rates as a reflection of the community's preferences for the consumption and its timing. Not only that, it also reflected the technical opportunities available for increased output resulting due to lengthening of the methods of production. Mises explains how banks by issuing fiduciary media artificially lower the interest rates, which in turn induces entrepreneurs to believe that subsistence fund has increased, when in reality it has not. Entrepreneurs tend to borrow more at the suppressed rates. Businesses in an attempt to invest in their so perceived productive ventures hire workers, and try to bid away resources from others to begin longer-term processes. This period of optimistic economic sentiment is called a boom and is believed to be the period of prosperity. Yet because the society did not become rich actually due to the issue of fiduciary media, the boom eventually meets its end. The reality is that there are physically not sufficient savings to help society go forward, until the time when these investment projects start yielding their final consumption goods. A bust or recession sets in, when the output of consumption goods declines pushing their prices up. Entrepreneurs come to their senses, realizing their mistake; they discontinue the projects that had appeared profitable to them due to the false interest rate. In reality the bust is triggered by bank's lowering the rate of credit expansion causing the money rates to rise towards their appropriate level. The growing supply of money pushes the prices up, and lenders tend to demand higher inflation premiums in the contractual rate of interest. No matter how long banks try to hold the money rates below the natural rate, eventually a worse crisis becomes inevitable (Mises 1953f). Mises stands as a strong proponent of the gold standard; he argues that the long term woes of inflationism outweigh its short term apparent benefits. He strongly believed that governments caused the failure of gold standard and continuously stand to object the common man's choice of sound money.

Fredrick. A. Hayek: It would be unfair to conclude the Austrian school of Economic thought without making any mention of Fredrick. A. Hayek, his contributions added a profound insight to the Austrian economics. Hayek puts the Capital theory, the monetary theory and the price theory together to formulate the Austrian Theory of Trade Cycle. Hayek believed that changes in prices communicate information which eventually leads economic beings to co-ordinate their plans (Skuoson, 2006). Hayek is of the view that the increase in money supply (mainly due to credit expansion) can lead to inter-temporal dis-coordination of economic activities initially characterized by a boom, which eventually turns into a bust and necessitates certain adjustments by money induced disco-ordination which is called the recovery. Hayek used from Bohm Beware of the idea of interest rate being the reflection of saving propensities which affects not only the magnitude of investment but also its pattern. A lower interest rate is said to encourage a longer term investment which might not have taken place, had interest rates remained a little higher. Therefore, under normal circumstances, it is the interest rate that sets the preferred time pattern of consumption activity which gets translated into a corresponding time pattern of investment activity. That is why interest rates are said to coordinate the two kinds of activities inter-temporally. The inter-temporal

coordination is disturbed when interest rates are artificially lowered due to injection of money. The misleading interest rates let capital goods be invested for a relatively longer or time-consuming structure of production. This happens at the expense of capital goods which are more compatible with the current, less time consuming, structure. A net increase in economic activity led by credit financed capital structuring comes into being, which is very well mistaken for a boom. As time passes, the capital restructuring which is not yet complete does not conform to actual resources available. The resources that are not yet contracted for still are needed for capital restructuring, get scarce and hence pricy, requiring a further demand for credit. These increased costs lead to the liquidation or abandonment of misallocated capital. Labor units which were complementary to the misallocated capital, once abandoned become unemployed. The result is a bust a sluggish economic activity, which is followed by a recovery in terms of market adjustments in relative prices and wages, which eventually leads to the reabsorption of unemployed capital and labor into the structure of production (Garrison, 1986). Hayek said, "*The past instability of the market economy is the consequence of the exclusion of the most important regulator of the market mechanism, money, from itself being regulated by the market process*" (Hayek, 1932).

Conclusion

Money remains the most talked about and discussed entity of the historic times; however its value determination theory took a roller coaster ride from Classical to Neo Classical eras. Though there is no universal taxonomy to separate the two, however an attempt is being made here to follow what majority of scholars have to prescribe with respect to the same. It is an established fact that the models vary mostly in assumptions and implications, hardly have they showed any variations in interpretation. This research paper has established a clear delineation between the assumptions, implications and interpretation of Classical and Neo-Classical monetary thoughts. Classical monetary economists rendered value determination purely based on cost of production in the long run and by the forces of demand and supply in the short run. Neo-Classical in an attempt to interpret the classical monetary thought turned it upside down by extending the short run application of Quantity theory to the long run and excising its actual applicability. Neo-classical monetary theory remains essentially a quantity theory in a long-run context and this is the theory that dominates the mainstream economics now a days. While Fischer, Keynes, and Friedman all recognized the importance and implication of Quantity Theory, they each placed different emphasis as to which variable was the driver in changing the prices. Fischer emphasized Money and credit, Keynes income and demand, and Friedman the quantity of money (but with a different Causality). In contrast to mainstream monetary economics a heterodox school of economic thought, the Austrian School considers the in elastic nature of gold and commodity money, a virtue and not a vice and vouches for the gold standard as the most preferred money standard to achieve economic stability. The economists of this school explain how trade cycles are exacerbated by the extension of endless credit. The only way trade cycles can be nipped is to curb the credit expansion, which definitely would limit the booms but would also free the economies from ugly busts. They propose the return to the gold standard.

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