

THE NON-NEUTRALITY OF MONEY: A RESPONSE TO DR. HUMPHREY

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«I wish to emphasize that in a living and changing world, in a world of action, there is no room for neutral money. Money is non-neutral or it does not exist.»

LUDWIG VON MISES (1990)

Resumen: El presente artículo contesta la tesis del Dr. Humphrey según la cual las diferencias entre austriacos y monetaristas son ficticias pues algunos de éstos también reconocieron los efectos distorsionadores del crecimiento monetario sobre los precios relativos. El artículo demuestra que la teoría austriaca considera que el dinero no es neutral ni a corto, ni a medio ni a largo plazo y ello contrasta con el enfoque monetarista que solo reconoce la no neutralidad a corto plazo y por razones equivocadas al carecer de una verdadera teoría del capital.

Palabras clave: Ciclo económico, neutralidad del dinero, corto plazo, largo plazo, teoría del capital.

Clasificación JEL: B53, B49, D01, K13.

Abstract: This article answers Dr. Humphrey contention on the similarities between monetarist and Austrian approaches to the neutrality of money.

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Monetarists at most only concentrate on short term non neutrality while Austrians base their analysis in short, medium and long term non neutrality. For the more, monetarists lack a true theory of capital that could let them understand that even with flexible markets money would not be neutral in the short term.

Key words: Economic cycles, neutrality of money, short and long term effects of money, capital theory.

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I INTRODUCTION

Giraldo Palomino (2005) summarized the important debate over the neutrality of money in terms of the different positions held by the various schools of economic thought: classical economics, Keynesians, Monetarist, neoclassical, real business cycles, new Keynesian, post-Keynesian and Austrian.

The work presented here deals specifically with the Chicago or Monetarist School and the Austrian School. These represent two distinct interpretations of the effect monetary policy has on economic activity and employment. On the one side stand the majority of the classical economists and the Chicago School who present an aggregated treatment of this phenomenon. This tradition originates in the work of John Locke and David Hume. On the other side, the Austrian School offers a disaggregated treatment of the process that has evolved from the *Essays* of Richard Cantillon and the work of John Elliot Cairnes, who was perhaps the last classical economist (Ravier, 2008b).

Norman Barry has summarized the Monetarist position in the following terms: «[o]rthodox monetarists concentrate on changes in the general price level brought about by monetary expansion or contraction; all prices are assumed to move up or down uniformly. This is maintained partly because holistic magnitudes such as the general price level are easily observable, and partly because money is always assumed to be neutral» (Barry, 1981: 23).

In contrast, the Austrian tradition emphasizes the non-neutral effect of monetary policy as reflected in the effect monetary

shocks have on *relative* prices. This is the basis for the Austrian preoccupation with distortions of economic activity at the disaggregated level caused by monetary policy.

In the same vein, Gerald O'Driscoll and Sudha Shenoy argue that in contrast to Austrians, Monetarists,

«ignore the real side of the economy and hence the real maladjustments brought about by a monetary policy that interferes with the coordination of economic activities. [They] implicitly assume that the real side of the economy is always in some sort of long-term equilibrium, in which money influences only the price level or money income and not the structure of relative prices or the composition of real output [...] [M]onetarists appear to be unaware of the real effects of money on the economic system—money's effect on individual prices and price interrelationships and hence on the whole structure of outputs and employments» (O'Driscoll y Shenoy, 1977: 185).

These distinctions are challenged by Thomas Humphrey, who concludes on the basis of excerpts from the work of six prominent economists of the «Chicago tradition» (1) that the Barry and O'Driscoll & Shenoy references cited above are inaccurate; (2) that Monetarists do *not* neglect non-neutral relative price or real economic effects of monetary shocks; (3) that, on the contrary, they (or at least some of them) fully incorporate these elements into their analysis of the monetary mechanism; (4) that, in fact, their concern regarding these effects is what motivates their advocacy of stable monetary policy; (5) that, if anything, they may recognize an even greater number of relative price or relative yield effects than the Austrians; (6) that, with the possible exception of the singular Austrian concern for the composition (as opposed to level) of real output, there is little difference between these two views of the monetary mechanism; and finally (7) that, consequently, the notion that the Austrian view is unique is a myth.

Although by the end of his article it would seem that Humphrey has fulfilled his objective, it is our goal to demonstrate that the veracity of these seven statements is more apparent than real: Humphrey misinterprets the Austrian critique of Monetarism and his arguments fail to support his case.

It is important to respond to his 1984 article because developments in monetary theory and policy since its publication—particularly those involving the «rules rather than discretion» (Ravier, 2008a) and the slope of the Phillips curve (Ravier, 2009; Ravier, 2010)—have serious implications for the debate over monetary policy.

II

THE CONTRIBUTION OF THE CHICAGO TRADITION TO HUMPHREY'S ARGUMENT

Humphrey's article focuses on the consequences of monetary policy which derive from the principle of the neutrality of money in combination with the mechanistic quantitative theory of the Chicago tradition. More precisely, Humphrey explains that his objective is to rebut the Austrian School's misconception that Monetarists invariably ignore the real and non-neutral influence of monetary policy, first on relative prices and subsequently on economic activity at the micro level. We begin with a summary of the arguments Humphrey attributes to these six thinkers.

1. Alexander del Mar (1836-1926)

Del Mar was the first director of the *Bureau of Labor Statistics* of the United States and author of important works on monetary theory and history around the end of the nineteenth century. Humphrey argues that del Mar contradicts the Austrian arguments outlined above, basing his argument on some of the principle ideas he set out in his book *The Science of Money* (1896):

Alexander del Mar (1896) distinguishes between a static equilibrium analysis (in which all prices vary equi-proportionally with money so that neutrality prevails) and a dynamic disequilibrium analysis (in which individual prices adjust non-uniformly such that money exerts a temporary non-neutral impact on real variables). Static equilibrium analysis teaches us that «a doubling

of the sum of money will result in a doubling of price» when the neutrality principle applies. In contrast, dynamic disequilibrium analysis suggests that when the money stock is altered «prices do not move together, and the change from a large to a small currency, or vice versa, is by far the most important economical circumstance that can influence the [real] affairs of a nation.»

Del Mar (1896) also points out that because prices do not adjust uniformly, monetary shocks necessarily distort the relative price structure, thus affecting production and «un-coordinating» economic activity.

Consequently Humphrey concludes that one of the first Monetarists recognized the real effect that monetary policy produces on relative prices and production, thus contradicting the assertions made by Barry and O'Driscoll & Shenoy. He adds that it was identification of these distortions led del Mar to recommend that money's growth be stabilized at a constant rate equal to the trend growth rate of real output, estimated by him to be 3.3 percent per year (Tavlas & Aschheim, 1985).

Finally, although Humphrey admits that Del Mar, unlike the Austrians, did not explain how monetary expansion alters the inter-temporal structure of production and provokes an over-investment of capital, he *did* point out that new money temporarily pushes the real interest rate below its equilibrium level, thereby lowering the real cost of borrowing relative to both the value of the final product and the expected return on investment.

2. Irving Fisher (1867-1947)

The next Monetarist considered by Humphrey is Irving Fisher (1922), who formulated the quantitative equation theory of money and was a pioneer in the use of econometrics. Humphreys claims that careful reading of his work reveals he did not deny the non-neutral effect of monetary policy on relative prices. On the contrary, he affirmed that these effects are inevitable during periods of adjustment, periods in which individual «prices never do move in perfect unison» with each other or with the money stock.

Fisher (1922) distinguishes between long-term neutrality and short-term non-neutrality and explains that if the adjustment is not necessarily uniform, meaning that some prices (p 's) in the quantitative equation $E_p Q$ do not rise as much as this proportion, others must rise more.

His central argument for short-term non-neutrality is the existence of certain inhibiting factors, such as contractual restraints, legal prohibitions, and the inertia of custom, which render individual prices «sticky» insofar as they adjust at different speeds to monetary shocks. This theme was reiterated in his seminal 1926 article in which he first introduced the concept of the Phillips curve. There he explained that nominal wages (on occasions rigid due to the existence of long-term contracts) tend to adjust to currency shifts more slowly than product prices, confirming his expectations regarding the non-neutral effect of monetary policy on employment and wages in the short run.

Even more important are Fisher's references to the effect monetary policy has on the real interest rate and which he regards as the pivotal point in his theory of economic cycles. In effect, Fisher argues that monetary policy exerts downward pressure on the interest rate when not anticipated by economic agents, pushing it below its equilibrium level. Eager to seize the opportunity presented when interest rates drop below their equilibrium level, demand by entrepreneurs for loans increases. Assuming that banks finance these new projects only thanks to the new money created, we observe increased employment and mobilization of other resources. The resultant increase in production denotes the expansion phase of the cycle.

According to Fisher, this expansion ends when nominal prices finally adjust completely to the price increase and the real interest rate returns to its equilibrium level. At this point, however, the economy has not stabilized. Fisher also describes the events that follow the subsequent and inevitable increase in the real interest rate: difficulties renewing loans on the original terms, thus leading many companies into bankruptcy; banks lose liquidity due to a sharp increase in loan losses and uncertainty regarding the ability of borrowers to fulfil their obligations increases, putting upward pressure on rates; additionally, a decrease in the volume of bank

deposits further elevates the interest rate, provoking still more bankruptcies; the cycle enters the phase of depression, which precedes crisis and panic.

On the basis of the aforementioned references and analysis, Humphrey claims Fisher anticipated an important component of Austrian Business Cycle Theory (ABCT). In his words: «For, contrary to the Austrians' contentions, such comparison reveals that Fisher's monetarist theory of the cycle is virtually the same as the Austrian theory in several key respects» (Humphrey, 1984, 16-17). Fisher observes (1) that the expansion of money and credit is the cause of the business cycle; (2) that this expansion distorts relative prices; (3) that it also manipulates the interest rate, which un-coordinates production; and (4) that, in consequence, it alters the inter-temporal structure of production.

Finally, Humphrey points out that Fisher's work coincides in two particulars with the modern Austrian School: first, with their belief that the economy is virtually always out of steady state equilibrium, and second, with their emphasis on equilibrating processes rather than with the equilibrium position *per se*.

Humphrey considers these similarities to preclude any distinction between Fisher's cycle theory and that of the Austrian School. If this is in fact the case it would prove Humphrey's assertion that this interpretation of the monetary mechanism is not a characteristic unique to the Austrian School.

3. Clark Warburton (1896-1979)

During the Keynesian revolution of the 1960s and 1970s it was Clark Warburton who defended the quantity theory of money and its corollary respecting the long-term neutrality of money.

Yet Warburton admits, as did Fisher, the temporary effect of monetary policy on relative prices,

«[C]hange in the level of prices is a process which takes a period of time, and affects prices of various items sequentially rather than simultaneously. [This sequential adjustment occurs because] some prices are greatly influenced by custom or contract and move less

readily than other prices; specifically, wages and contractual elements in business costs tend to be sluggish relative to price of output. [The result is that] the process of adjustment to the new price level required by the changed quantity of money [...] produces price differentials, which increase or reduce the profitability [and hence production incentives] of business.» (Warburton, 1966, 28).

Furthermore, notwithstanding the view of some Austrians that Monetarists ingenuously believe money is surreptitiously injected into the economy via a mechanism such as Friedman's helicopter-money schema, Warburton (1966, p. 85) apparently shows otherwise. Monetary stimuli «are felt, first, in some particular part of the economy and spread from that part to the rest of the economy through the medium of price differentials created at each stage of adjustment.»

He later explains his monetary proposal: «monetary deficiency [...] is the major cause of business depression and declining employment. Monetary expansion at a more rapid rate than economic progress, on the other hand, is the major cause of business recovery and increasing employment.» (Warburton, 1966, 87).

4. Milton Friedman (1912-2006)

Up to this point Humphrey may well have proved that previous generations of Monetarists recognized the non-neutral and temporary effect of monetary policy on relative prices and economic activity. Among modern Austrians, however, the idea persists that the current generation of Monetarists overlooks these effects. In fact, in the article by O'Driscoll & Shenoy mentioned earlier, the authors characterize Milton Friedman as an economist whose vision on the monetary mechanism «entirely ignores the micro-economic pricing process» and totally neglects «money's effect on individual prices and price interrelationships.» (O'Driscoll y Shenoy, 1977, 191-192).

Humphrey nevertheless explains that this accusation is refuted by an explanation provided by Friedman (1970) himself regarding the effects of monetary policy:

An increased rate of monetary growth [...] raises the amount of cash that people and businesses have relative to other assets. The holders of the now excess cash will try to adjust their portfolios by buying other assets [...] However, as people attempt to change their cash balances, the effect spreads from one asset to another. This tends to raise the prices of assets and to reduce interest rates, which encourages spending to produce new assets and also encourages spending on current services rather than on purchasing existing assets. That is how the initial effect on balance-sheets gets translated into an effect on income and spending (Friedman, 1970, 24-25).

Still, Humphrey goes even further by stating that Friedman also stresses an additional effect, «ignored by Austrians», which is *the consequence of monetary policy on real wages and employment*. Indeed, in his famous speech in 1967 as President of the American Economic Association Friedman indicated how the effect of unanticipated inflation over wages temporarily alters real wages, and consequently the level of employment. Humphrey therefore concludes that, «far from ignoring relative prices in the monetary mechanism, Friedman recognizes more of them than do the Austrians» (Humphrey, 1984, 18).

5. Karl Brunner (1916-1989) y Allan Meltzer (1928-)

Other modern Monetarists who —like Friedman— recognize this non-neutral effect are Karl Brunner and Allan Meltzer. They argue (1) that a monetary expansion initially lowers the implicit convenience of, and the security yield on, real cash balances relative to the returns on other assets; (2) that this fall in money's relative return induces a substitution of a broad range of non-cash assets for cash balances; (3) that the resulting increased demand for those assets lowers their yields and raises their prices; (4) that, in particular, such substitution raises the price of existing real capital assets and consumer durable goods relative to the cost of producing them new; and finally, (5) that this price-cost differential encourages production of those real assets (Laidler, 1981).

In this way, monetary impulses affect the relative price of assets, altering the real structure of production and the composition of demand. Humphrey concludes, on one hand, that the arguments presented so far are sufficient to justify the assertion that Monetarists do not deny the non-neutrality of money but do recognize the impact on relative prices; and on the other, that given the similarity between the Austrian and the Monetarist approaches, they should be considered complementary instead of competitive interpretations.

III

REBUTTAL OF THOMAS HUMPHREY'S ARGUMENT FROM AN AUSTRIAN PERSPECTIVE

The most important conclusion we should draw from the summary of Humphrey's work outlined above is that it refutes the notion that the Chicago tradition understands monetary stimulus as a process whereby liquidity is injected into the economy via a device analogous to Friedman's «money-helicopter». Humphrey shows us that Monetarist approach is much more sophisticated than usually portrayed in the majority of Macroeconomics texts and courses.

Despite this concession, we now demonstrate that the seven conclusions Humphrey derives from his analysis are incorrect.

1. The references of Barry and O'Driscoll & Shenoy presented above are correct when we concentrate on long term effects

Just as the work of Keynes is often associated with the short-term consequences of monetary policy, Monetarist thinking is usually linked with its long-term effects. As we have illustrated, this does not imply that the Chicago School ignores the short-term effects of any economic policy, but we safely state that they do emphasize the importance of its long-term effects.

The Barry and O'Driscoll & Shenoy references do not, however, ignore the short-term effects of monetary policy that some

monetarists acknowledge; instead they critique the aggregate equilibrium approach Monetarists adopt in the long-term. *Monetarists do not explain the mysterious reason why the same equilibrium that existed before the monetary expansion took place re-emerges from the short term distortions described in the first part of this article.*

While it is true that after monetary and credit expansion the economy booms as Fisher described, a market adjustment inevitably counteracts the «artificial» downward pressure on interest rates resulting from monetary stimulus. It is also true that widespread bankruptcies, characteristic of the depression phase, return the economy to a stable position relative to the underlying economic realities. However the congruence Monetarists anticipate between post- and pre- stimulus equilibria is highly unlikely. On the contrary, it appears probable that the underlying economic reality would have been modified by the expansion and depression processes. Furthermore, Austrian Business Cycle Theory does *not* expect the economy to return to the same equilibrium point that existed before the expansion of fiduciary media, and to state that it does simply misrepresents the Austrian interpretation.

Support for this assertion depends on an understanding of two different—but complementary—processes which occur during the stage of crisis and depression. First of all, the phases of crisis and depression lead to widespread unemployment of human and material resources, which represent a retreat from the Production Possibilities Frontier (PPF). It would be fair to say that there is widespread consensus on this point.

In addition, and this is the most important aspect during the expansion process, numerous investment projects requiring substantial financial resources are initiated. When the interest rate subsequently rises and many of these investments are abandoned and a wave of bankruptcies occurs, we must acknowledge that a *partial destruction of the accumulated capital* is occurs. Considerable resources cannot simply be reallocated to alternative uses *due to their inherent characteristics*. For this reason the economic potential of the economy frequently declines relative to its former level. This phenomenon is represented as a contraction in productive capacity or the potentiality of the PPF. (Huerta de Soto, 2009, pp. 413-415).

Moreover, the central aspect of the Austrian perspective is that even if the economy did actually return to the same level of production prevailing before the monetary and credit expansion, it is crucial to admit that the *composition* of that «production level» will have suffered an alteration, not just in the short term, but also in the long term. In short, the Monetarist claim that money is neutral in the long-run is not justified.

2. Monetarists deny the effects that a monetary shock exerts over relative prices and real economic variables in the long-term; furthermore, the effects they do recognize in the short-term are founded on mistaken arguments

Having explained the Monetarists' error insofar as their interpretation of the events following a monetary shock in the long-term are concerned, we now turn our attention to the arguments they offer regarding the short-term effects.

From our perspective it seems that the arguments of the six prominent Monetarists selected by Humphrey regarding the non-neutrality effects on economic activity and employment in the short run rest entirely on «contractual restrictions and legal prohibitions» which delay the adjustment process and create opportunities for monetary policy to generate «unanticipated consequences».

However Austrians show that even with flexible contracts the effects of monetary policy would still not be neutral. Moreover, it is impossible to neutralize these effects because, as Warburton correctly indicated, economic agents do not possess the necessary knowledge to anticipate in detail the sequential effects provoked by monetary policy. In other words, it is impossible to avoid the «unanticipated consequences» of monetary policy.

In contrast with this argument, the Rational Expectations School, also known as the New Classical Macroeconomics continues in the Chicago tradition. According to this School, lead by Robert Lucas and Thomas Sargent, economic agents, although lacking perfect knowledge, possess sufficient relevant information to allow them to avoid committing systematic mistakes. John Muth (1961), father of the Rational Expectations concept in the sixties,

states that we must suppose that people form their expectations on the basis of a correct interpretation of monetary theory. Although they will not succeed in each individual case, over a prolonged period of time they will, on average, succeed.

If prior to consideration of the relatively recent «Rational Expectations» perspective we acknowledged that the only way to generate real effects was by «surprising» economic agents, this argument is easily undermined. Any systematic rule of economic policy that attempts to reduce unemployment will itself be a result of information already taken into account and efficiently used by economic agents who, on the basis of «rational» expectations will inevitably adjust their behavior in light of that information, thereby sterilizing the effectiveness of the policy measure. In other words, the effect will always be neutral, even in the short term.

Rational Expectations researchers prompted a reaction within the Austrian tradition that pointed out that this new approach is also fatally flawed. Not only is it fallacious to suppose that economic agents possess all the «relevant information» in order to decide and anticipate the effects of monetary policy, but even if this *were* the case, the effects would never be neutral. Gerald O'Driscoll and Mario Rizzo argue that

...though entrepreneurs understand this theory at an abstract (or macro-) level, they cannot predict the exact features of the next cyclical expansion and contraction. That is, they do not know how the unique aspects of one cyclical episode will differ from the last such episode or from the «average» cycle. They lack the ability to make micro-predictions, even though they can predict the general sequence of events that will occur. These entrepreneurs have no reason to forswear the temporary profits to be garnered in an inflationary episode (O'Driscoll y Rizzo, 1985, 222).

In short, the Austrian tradition demonstrates that although there is a match between the Austrian and monetarist approach concerning the non-neutrality of money in the short-term, this similarity is due more to coincidence than causality. If monetary policy has real effects in the short-term, these arise not because there are rigidities in the labor market but rather from the inability of traders to predict the sequential effects it causes.

3. Monetarists fail to completely and correctly incorporate these elements into their analysis of the monetary mechanism

The arguments put forward so far lead us to affirm that the combination of an incorrect treatment of knowledge and information and an aggregate equilibrium methodology fatally obstructs the complete and correct incorporation of these elements into Chicago School analysis.

It should be noted that Alexander del Mar correctly distinguished between «static equilibrium» and «dynamic disequilibrium» analysis. However, despite their recognition of the important differences between the two processes, neither Alexander del Mar nor any of his followers rejected static equilibrium analysis in the long-term, but applied dynamic disequilibrium analysis only to the short term case. This is inconsistent.

4. They incorrectly conclude that stable monetary expansion precludes inflation completely rather than just failing to create conditions under which it might occur

Early in 1912 Ludwig von Mises defined inflationism as «monetary policy that seeks to increase the quantity of money.» (von Mises, 1997 [1912], 194). And the fact is that however large or small its effects, we cannot fail to recognize that any increase in the money supply will distort relative prices and consequently the structure of production.

It's true, of course, that a policy that expands the money supply at less than 5 per cent will likely have less harmful effects than expansion at higher rates, but in the academic environment it should be clear that the creation of fiduciary media is always damaging. According to the Austrian school, whenever government opts for monetary expansion it is implicitly communicating to society that an inflationary process will follow.

The Chicago tradition adopts from David Hume and other classical theorists the idea that it is possible to exploit money's non-neutrality in the short term as an anti-deflation tactic. We are

referring specifically to the idea that monetary expansion animates economic activity and employment in the short-term which leads to a steady but moderate increase in the money supply being considered enlightened government policy. In the words of Hume,

The good policy of the magistrate consists only in keeping [the money supply], if possible, still increasing; because, by that means, he keeps alive a spirit of industry in the nation, and encreases the stock of labour, in which consists all real power and riches. A nation, whose money decreases, is actually, at that time, weaker and more miserable than another nation, which possesses no more money, but is on the encreasing hand (Hume, 1752, 37-38).

In contrast, the Austrian tradition considers it a serious error to try to avoid the price deflation process through expansive monetary policy, because by doing so the economy will necessarily be forced into a new business cycle.

In order to better understand this issue we must first be clear regarding an important distinction. First, we have the deflation process that accompanies a healthy growth process, wherein the productivity of the economic process raises, the prices of assets and services fall, and real wages increase.

In *Prices and Production*, Hayek (1931) argues that in the thirties there was some consensus on this point: «That there is no harm in prices falling as productivity increases has been pointed out again and again, e.g. by A. Marshall, N.G. Pierson, W. Lexis, F.Y. Edgeworth, F.W. Taussig, L. Mises, A.C. Pigou, D.H. Robertson and G. Haberler.» (Hayek, 1931, p. 106)

Second, we have price deflation in the final stage of the business cycle that facilitates the correction of those errors provoked by a process of monetary and credit expansion.

We must stress that both adjustments are favorable to economic activity. However, while the first is well received because it implies an increase of real wages, the second is not because it entails a dislocation of production and an adverse impact on the population. It is in the latter case that a re-adjustment of prices and the employment of resources necessary to the «underlying economic reality» occurs. We must emphasize that in this case no other

alternative is possible: once the government initiates expansive monetary policy, the consequences are inevitable.

5. It is incorrect to deduce from Friedman's analysis of the effect of monetary policy on employment markets that Monetarists recognize a higher number of effects on relative prices than Austrians

Humphrey seriously misrepresents the Austrian tradition when he claims it has ignored the study of the effects that monetary policy generates over real wages and employment. On the contrary, Austrian literature on this subject is abundant. (Ravier 2009, Ravier 2010).

We cite only two prominent examples: first, the well-known Austrian theory of the business cycle by Ludwig von Mises and Friedrich A. von Hayek. This theory demonstrates, alongside with a number of other important significant conclusions for economic analysis, that the long term effect of expansive monetary policy is crisis and depression accompanied by a reduction of the levels of employment and real wages. It is Humphreys' apparent lack of awareness of these basic conclusions of the Austrian Business Cycle Theory that leads him to equate Fisher's theory on the subject with those of Mises and Hayek.

Secondly, and in line with arguments explored above, Hayek—in the section titled «Inflation's Path to Unemployment» in *The Campaign against Keynesian Inflation*—states that many people fail to see the grave danger caused by inflation:

This persuades most people who do not see the grave harm which inflation does. It might seem—and even some economists have maintained—that all inflation does is bring about some redistribution of incomes, so that what some lose others will gain, while unemployment necessarily means a reduction of aggregate real income.

However this disregards the chief harm which inflation causes, namely that it gives the whole structure of the economy a distorted, lopsided character which sooner or later makes more extensive unemployment inevitable than that which that policy

was intended to prevent. It does so by drawing more and more workers into {those} kinds those jobs which depend on continuing or even accelerating inflation. The result is a situation of rising instability in which an ever increasing part of current employment is dependent on continuing and perhaps accelerating inflation and in which every attempt to slow down inflation will at once lead to so much unemployment that the authorities will rapidly abandon it and resume inflation.» (Hayek, 1972, pp. 192-193).

From this we can deduce that, even without having plotted it, Hayek would defend the case for a Phillips curve having a positive slope (Ravier, 2010).

6. The preoccupation of the Austrian School regarding the composition (instead of level) of real production is not a minor issue in this debate, but rather lies at the heart of the differences between the two approaches regarding how the monetary mechanism functions

Humphrey's dubious statement that, «with the possible exception of a singular Austrian concern for the composition (as opposed to level) of real output, there is little difference between the two views of the monetary mechanism» allows us to further expose the—in my opinion, enormous—difference that exists between Fisher on the one side and Mises and von Hayek on the other, regarding the causes of business cycles.

Apart from the items pointed out above which separate Fisher's approach from that of Mises and Hayek, the latter are known for their contributions to the development of a theory of capital that is quite different from that to which the Monetarists adhere, namely a theory of capital in which there is a clear distinction between «capital assets» and the «concept of capital». The first are an accumulated conjunction of three essential elements: natural resources, work and time, all combined throughout a process of business action created and undertaken by man. The «concept of capital» is rather an instrument of economic calculation, that is to say, an estimation or subjective judgment of market value that businessmen think capital assets will have, and on the basis

of which they constantly buy and sell, trying to obtain profits from each transaction.

The theory of capital which Fisher adopts is based on the theory of John Bates Clark who, according to Jesús Huerta de Soto, exhibits a «strong anti-subjectivist reaction in the area of capital and interest theory continues even today to serve as the foundation for the entire neoclassical-monetarist edifice.» (Huerta de Soto, 2009, p. 544)

It is not possible to maintain that both theories of the business cycles are similar when the Austrian subjective theory of capital is rejected in the Monetarist alternative. The theory of capital to which Mises and Hayek subscribe represents, essentially, the core element of Austrian Business Cycle Theory.

7. Consequently, that the notion that the Austrian theory is unique is true

Following Mark Skousen (2005) and Osvaldo Schenone (2008) we have pointed out what we consider coincidences between the Austrian and monetarist approaches. Both champion the sanctity of private property as the basis of exchange, justice and progress in society. Both defend *laissez-faire* capitalism and believe in Adam Smith's «invisible hand» doctrine, namely, that self-motivated actions of private individuals maximise happiness and society's well-being, and that liberty and order are ultimately harmonious. Both are critics of Marx and the Marxian doctrines of alienation, exploitation and other anti-capitalist notions. Both support free trade, a liberal immigration policy and globalisation. Both generally favour international borders that are open to the movement of capital and consumer goods, labour and money. Both oppose controls on exchange, prices, rents and wages, including minimum wage legislation. Both believe in limiting government to defence of the nation, enforcement of the property rights of individuals, and selective public works. Both favour privatization, deregulation and denationalization. Both oppose «corporate welfarism» and special privileges. Both reject socialistic central planning and totalitarianism. Both believe that poverty is debilitating but that

natural inequality is inevitable, and they defend the right of all individuals, rich or poor, to keep, use and exchange justly acquired property. Both refute the Keynesian and Marxist interventionists who believe that market capitalism is inherently unstable and requires big government to stabilize the economy. Both are generally opposed to deficit spending, progressive taxation and the welfare state, and favour free market alternatives to Social Security and Medicare. Both favour market and property rights solutions to pollution and other environmental problems.

Yet in the sphere of macroeconomics, grave differences appear. The Chicago and Vienna Schools concur neither regarding monetary theories, nor on the consequent effects of monetary policy. Neither do their theories on capital, nor in their comprehension of the causes of business cycles correspond; nor do their recommendations regarding the monetary policies prescribed to curb inflation coincide. Consequently, and especially in this area of their studies, it is truly difficult to maintain that both research programmes are more complementary than substitutes.

IV CONCLUSIONS

The quantity theory of money advanced by the Chicago School gives rise to the expectation that the general level of prices will rise when the amount of money in circulation increases. This is not a theory of relative prices, and we cannot ask of it more than what it offers.

Here we have pointed out that the Austrian School, with its emphasis on disequilibrium-analysis of the economy at the disaggregated or «micro» level has considerable potential to shed light on the «murky corners» created when the Chicago School ignores the non-neutrality of money, as it *frequently* does in its analysis of the short-run effects and *always* does in its analysis of the long-term effects of monetary policy.

Frédéric Bastiat (1995) stated in a classic 1850's essay that the difference between a bad economist and a good one is that while the first «confines himself to the *visible* effect», the second takes

into account «both the effect that can be seen and those effects that must be foreseen.» It would seem that monetarists ignore the non-visible effects of monetary policy. In short, we believe this is Humphrey's chief error.

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