Economics of Economic Development: Endogeneity of Rate of Interest &Prices

Satya Prasad Padhi

This paper discusses how economic development processes incorporate Keynes's insight into a monetary production economy and the related analytical tools. Money supply has to be endogenous, in response to demand conditions; though it provides an understanding different from the one underlying the existing post Keynesian thesis. The present paper focuses on a different translation of the liquidity preference-led determination of rate of interest. Higher growth phases, associated with higher growth of endogenous money supply do not have any inflationary bias. Inflationary pressures then should be ascribed to improper development biases i.e. economic development problems. This understanding provides a counter-narrative of the Taylor rule; understanding evolutions of real forces for the purpose of understanding the pressures on rate of interest and inflation should be the basic policy focus.

Satya Prasad Padhi is Professor, Department of Economics, Punjab University, Chandigarh 160014. E-mail: satyaprasadpadhi@gmail.com

Introduction

Central banks are increasingly adopting some version of Taylor's rule to manage monetary prospects. The rule relies on an upward sloping Philips curve; transitional adjustment of output to potential output comes with some inflation, but there is the notion of the normal output-based real rate of interest (that corresponds to the marginal productivity theory). If the actual rate is lower, it results in Wicksellian endogenous growth of money which creates monetary instability in terms of an induced higher inflation rate. Here, also, the neutrality of money is cited: the endogenous growth of money results in increased aggregate demand that outpaces a given supply potential and results in inflation. More impor-

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tant perhaps, according to these hypotheses, the inflation outcome can promote further endogenous growth and results in the adverse effect on savings. The rule stipulates that there is a normal output and inflation configuration, and the central banks should intervene (i.e. rate of interest adjustment) to control endogenous money if aggregate demand is outpacing such normal output (and inflation).

There is some basic post Keynesian critique, which also holds on to an upward sloping Phillips curve (Setterfield, 2004). If such endogenous money-led aggregate demand outpaces the existing normal output, it can also be normal when it anticipates (and actualizes) higher growth prospects. That is, evolution of better supply responses necessitates a condition where aggregate demand should necessarily outpace existing supply condition (Lavoie, 2006). In this point of view, endogenous growth of money is a phenomenon that has to be "promoted" (or, to be acquiesced by the central bank), to support transition to higher growth phases.

In this critique, Taylor's rule negates the possibility that realized output would be associated with some endogenous money-led excess aggregate demand, which otherwise permits further expansion of output and employment. There is then the implicit suggestion of a permissive (read, low) rate of interest that induces the transition to higher growth phase (with some inflation). However, the existing post Keynesian literature belongs to a different universe of discourse. In the existing post Keynesian, mainly horizonatalism literature, the extent of the endogenous money supply, in response to demand originating in production, takes place at *a given rate of interest*; the central bank's accommodating stance is with respect to adjustments of reserve requirement when "commercial banks" extend higher credit that is independent of savings deposits (Kaldor, 1970; 1983; Lavoie, 1984; Rochon, 2004). However, a coherent story of such endogenous money supply thesis can permit an alternative aggregate demand framework that can undermine Keynes's analytical tools (Moore, 1988; 1994); there is much debate and dissents within these post Keynesian schools on the issue of relevance of Keynes's insights in to the endogenous money thesis (for example, Cottrell, 1994; 1994a); (however) the present paper has no comments to offer, unless they relate to the rate of interest issue.

Why not incorporate the suggestion of a low interest rate, or interest rate as a variable, in the post Keynesian perspectives? Why not study and specify a process that endeavors to achieve higher development status, study whether it enjoins endogeneity of money in a fundamental sense, and study the implications to see whether it provides an alternative to the Taylor's rule? The present paper proposes that the post Keynesian challenges to the Taylor's rule should focus primarily on the study of economic development processes that underline the non-neutrality of money. The latter indicates a fundamental endogenous money thesis that forms a broader interpretation of Keynes's independent investment (i.e.

independent of savings and such bank deposits) that enables the income determination process. The role of money shows that it by definition comes forth in response to demand originating in production i.e. its supply is endogenous (Keynes, 1937; Davidson, 1986). The present paper would argue that an economic development process would also incorporate Keynes's insights and analytical tools, in a fundamental sense. Such a thesis would hold that monetary prospects should determine the rate of interest; if so, a consistent post Keynesian understanding would be that changes in monetary prospects in different phases of economic development process would induce corresponding changes in rate of interest, so that (endogenous) money supply is attuned to the development prospects.

An argument could be: in endogenous money thesis, if supply adjusts to demand, there is no scope of liquidity preference (and so a discussion of Keynes's monetary prospects-led rate of interest adjustment is en passé). However, the present paper's counter argument could be: Keynes's insight into liquidity preference, or conversely, willingness to hold bonds, should not be undermined in an endogenous money thesis. If agents hold on to favorable future growth expectations, the implicit pressure on liquidity preference is low (or desire to hold bonds is high), and therefore, a low interest rate (guided by these expectations) induces higher endogenous money that is in line with higher current demand for money (or higher expected production), which conforms to Keynes's short run logic. Conversely, when expectations are unfavorable, and current production related demand for money is low, a high rate of interest would keep the supply (of money) in line with the low demand. Therefore, if changes in rate of interest are guided by changes in expectations (and the implicit pressure on liquidity preference), rate of interest plays the key role in bringing the (endogenous) supply of money in line with the demand.

If so, the logic demands, and the insight into the process would hold that a low rate of interest permits higher extent of money supply that provides the permissible environment for high investment-led high growth phases (i.e. there should not be any coordination mismatch between the real and the money aspects – in a monetary production economy). A related point is central banks' policy rate should play an accommodating role, guided by the underlying favorable expectations, held both by agents of production and banks. The present paper is an elaboration of these themes.

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It should be stressed that in the existing (post Keynesian) literature, there is no attempt to discuss the issues of whether kick starting a development process fundamentally depends on non-neutrality of money per se, how exactly the monetary prospects peter out, and whether the pro-

cess as a whole provides a critique of the basic assumptions underlying Taylor's rule. The present paper in fact would take a lead to show that economic development has to emphasize Keynes's fundamental non-neutrality money axiom and can incorporate most of the analytical tools that are follow-ons. This exercise can be important if the issues are: would the evolution of interest rate be pro-cyclical or anti-cyclical in the economic development process? Does this interest rate formation provide the challenge to the marginal productivity theory-based interest rate formation underlying the Taylor's rule? There are in fact no exiting post Keynesian discussions on these issues.

Similarly, should inflation be viewed a monetary demand-led outcome per se? In the above post Keynesian critiques, for instance, the possibility of credit-led inflation, and growth-inflation trade-off, is acknowledged. However, it would be argued later that inflation would be manageable; the induced better supply responses would dampen any inflationary expectations. So, what is the basic source of inflation that is more problematic? Can it be traced to improper development processes (Kaldor, 1976) – alluding at real factors as the basic cause, as compared with that of the Taylor's rule emphasis on inflation as always a monetary phenomenon? An added inquiry could be: does improper development induce monetary mismanagement that in turn results in inflation (that comes with higher inflationary expectations)?

Further, if money is important in the economic development process, the issue of stability of money (and financial system) is also important. Here, again, the existing post Keynesian literature on endogenous growth of money remains silent on this issue - because the growth entails certainty of profits (and savings). However, does every expansion, embedded in the credit nature of money, ensure certainty? Does sometimes the nature of induced development process create the problems? Does the hyper-inflation possibility emanating from real factors is the issue/cause?

Given these understandings, the purpose of the present paper is to illustrate a "post Keynesian" economic development process to study the underlying evolution of the monetary prospects of rate of interest and price level. The issue is: how the economic development perspective provides an alternative monetary policy focus.

The present paper does not start in a vacuum. There have been earlier discussions of the economic development processes that form the genesis of a monetary production economy. First, Schumpeter (1934) provides such an account, determining in turn the monetary economy conceptual entities, such as rate of interest, savings, and inflation. However, though Schumpeter's stress on the departures from static adjustments is what inspires the present paper, and is illuminating, the Schumpeterian determination of the interest rate, in a pure dynamic setting, has its limitation. A more satisfactory discussion of innovation-led economic development processes can be traced to Young (1928), a context that

Kaldor (1972) shows has to be embedded in a monetary production economy framework. However, Kaldor never carried forward the analysis, for the purpose of determination of rate of interest and inflation in this process. In this context, acknowledging the insights into development processes by these attempts (discussed later in the paper), the present paper develops the Youngian economic development process, giving particular attention to the necessity of it being the base for a credit based monetary economy that highlights Keynes's General Theory insights; how it permits the endogenous rate of interest and inflation outcomes.

Schumpeterian Tradition

Schumpeter (1934: 6-7) proposed that one can specify a traditional economy, based on some unchanged state of technology, where producers know by experience how much to produce in a system of traditional mutual dependencies; producers know what to produce and how much (i.e. circular flow economy). This would reflect a static economy that, by definition, obeys the Say's law, and permits no dynamism i.e. no impulses of economic development that can make a transition to higher standard of living (a definition that is maintained throughout the paper); there is no need for credits, and the existence of interest rates, per se (in a fundamental sense). For him, their existence arises from the impulses of economic development led by innovations that forever alter and displace the above static picture (1934:64). Here, innovation is guided by positive profits that lead to the existence of rate of interest; then it is another equilibrium that fundamentally differs from the conception of static equilibrium that does not require the existence of rate of interest.

According to him (1934:192-5), economic development, arising from innovations and that targets positive profits, induces (justifies) a demand for purchasing power that has to be counterbalanced by the sacrifice made to part with these purchasing power (in the context of a money market), which in turn determines the rate of interest. In this formulation, such determination cannot be seen as a savings investment formulation of rate of interest because it is economic development process, as a monetary phenomenon, that generates savings; credit (and the accompanying rate of interest) that serves industrial development (Schumpeter, 1934: 102) has to be determined prior to that of the determination of profits/savings, etc. If so, Schumpeter provides the understanding that the economic development processes define the forces that explain the genesis of modern money market, making clear the determination of rate of interest.

Schumpeter's thesis has generated a lot of debate, especially drawing comparisons with other perspectives on rate of interest. But if one closely follows Schumpeter, there are drawbacks. His thesis of the prior existence of the hoardings (Schumpeter, 1934: 194-5), to kick start the credit-based development, is not satisfactory; there is no discussion of the origin and the justification of hoarding, which otherwise can define the marginal

costs of parting with them. In fact, in Schumpeter's static circular flow, where production obeys Say's law and, so even if one brings in money and consumption credit that conforms to it, demand for and supply of money should equate, without any hoarding.

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There are other issues. Schumpeter discusses the emergence of credit-inflation in the development process, which is temporary (because innovations, once actualized, induces increased supply of goods); though he holds that inflation can reappear as new credit-led innovations appear etc. This analysis of the business cycle, based on assumed cyclical behavior of innovations, and its relationship with interest rate (and inflation) is inadequate. What if innovations lead to further innovations, in a secular way? Here, though Schumpeter invokes 'external economies' to show that innovations induce similar endeavors in the same line of production (for competitive reasons), the issue is: why not such inducements take place in other lines of production? For instance, there is Young's (1928) analysis that shows (discussed below) that there is a serious case of innovations begetting further innovations-led cumulative causation process, which can form the basis of secular increases in profits (and savings). Then, does the generation of savings affect the need for credit and the credit-led inflation? Which way? What would be the secular behavior of interest rate and inflation?

Youngian-Kaldorian Thesis

Young, like Schumpeter, considered that nothing much can be gained by looking at the working of traditional firms that define a traditional economy. He mentions, in his correspondence with Knight, "...the static view does not interest me very much, because; if it is *rigorously* adhered to, almost everything worth saying about it can be put onto a very few pages. We *have* to depart from it somehow. The only question is how" (Blitch, 1983: 364)?

According to Young, initiation of division of labor by a firm provides the context that permits the departures from the concept of static equilibrium. To elaborate, one can describe the behavior of traditional firms as confirming to a static picture (as assumed by Schumpeter), but still it can be assumed that some are different; a dynamic firm can emerge, who targets larger volume of output, specifically requiring larger employment of labor force. For Young, the initiation of division of labor, targeting larger volume of output, amounts to sub-division of the production process, coming up of specialized capacities for each sub-tasks (though initially undertaken in an informal way (Stigler, 1951)- greater roundabout method of production - that amounts to a new method of production.

Young mentions that this introduction of division of labor also makes the incidence of firm specific modern trading/ marketing an endogenous phenomenon. (Though not discussed by Young) it can also be argued that the production of larger volume of output by division of labor comes with better latent value of the products (say, production of more sophisticated products) that makes the trading more effective. The division of labor is initiated to capture larger market to augment higher profits. The specific mechanism whereby higher profits realization also permits higher wages to specialized labor force and higher trading expenses was not discussed by Young, but it can be hypothesized that the division of labor-led higher labor productivity at a given price would permit these if (also) wage rate lag behind the increases in labor productivity (also see, Padhi, 2015). In fact, in the writing of Young, the basic incentive to initiate development is the possibility of positive profits more than the 'costs of management'. However, the basic hypothesis is that the initiating firm is in a position to shift the demand curve rightward that in turn realizes the higher production, which in turn permits the profits.

What Young (1928) also brings in is the possibility, otherwise absent in Schumpeter, that the initiation of division of labor creates external economies i.e. others also innovate, that translate into the generalized adoption of the division of labor. If division of labor makes profits augmentation a certainty, others would follow i.e. the working out of the external economies. There is then the possibility of increasing returns in production possibilities that is consistent with higher profits for many; Young alluded that this would be possible if the process leads to increases in market size (but see below). If so, there is further scope of external economies in terms of further division of labor i.e., industrial differentiation signifying specialization between firms, which would have cumulative characteristics, associated as it is with further increases in market size, and so on.

Here, with respect to the rightward shift of the demand curve, the Youngian emphasis cannot be on the possibility that the price reduces for the firm, arising from the division of labor, ensuring higher labor productivity in converting inputs to output, captures higher market share as such. In this case, it would amount to market diversion from others, which in turn would not permit the crucial generalized adoption of division of labor (Kaldor, 1972). In any case, as discussed earlier, Young's profits depends on a rightward shift of demand curve at a given price, making it consistent with higher trading expenses. Therefore, if according to Young the initiation of division of labor creates external economies that translate into the generalized adoption of division of labor, and then creates scope for further division of labor, and all initiatives are profitable at each stage i.e. associated with increases the size of the market, Kaldor's (1972) contribution is important. According to him, if economic development is led by an investment begetting further investment process, it has to incorporate the

Keynesian insight that the increase in market size (at each stage) is mediated by money. That is, according to him, the division of labor has to be seen as a finance-led investment that in the Keynesian fashion increases the aggregate market size, which provides the much needed support for the Youngian cumulative causation process.

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At the same time, the present paper holds that Kaldor takes the existence of a developed financial system for granted. The present paper, on the other hand, holds that in an economic development perspective, the focus has to be on the induced development of this advanced financial sector, the analysis of which would furnish the conditions under which the financial system would be stable, which in turn would permit the formulation of proper monetary policies.

Economic Development: Credits, Inflation & Interest Rate

Economic development here would refer to an endeavor to achieve Youngian increasing returns (i.e. a cumulative causation process), a cumulative departure from static outcomes, which is the consequence of the introduction of the division of labor (seen as an invention) by a dynamic firm. The present focus is on the conditions that facilitate its successful initiation. The dynamic firm targets larger volume of output, requiring larger inputs, but, importantly, it introduces some new elements: the new capacities to define the new sub tasks embodying the division of labor and the demand for the labor force that can undertake the new specializations efficiently. The introduction of specialized marketing and trading organization is important, but in the present discussion it is subsumed under the production activities. Similarly, the production period would take into account both the production of the capital goods involved and the utilization of them. What is important is that production, initially, takes place informally, and the firm would be dependent on a set of chosen laborers who can do the specialized tasks. This labor force's participation comes with a promise of higher wages (for performing specialized tasks), and is enforced on the basis of a contract. The introduction also highlights a particular dependence of the firm on the traditional economy; the firm would be arranging the 'inputs' (both wage goods and means of production) from the traditional sector. This dependence, again, would be based on contracts with the traditional supplying firms, with a promise to pay at a later date with some 'rate of interest'. Therefore, the initiation defines and is based on informal credit.

To elaborate further, this credit can be visualized as a promise to pay in terms of future products (of the dynamic firm) for a specific amount of inputs at present. Even if the initiation of division of labor targets a product line that has higher la-

tent value, the credit would be based on particular contractual relative prices; this is to define how much of the future goods produced by the dynamic firms would be paid for a specific amount of the present supply of inputs. The rate of interest, at the minimum, would take into account the possibility that the additional demand for the inputs requires future production, which if takes place under existing/traditional methods i.e., under decreasing returns, would involve higher prices so that the revenue can cover the 'costs'. (The contract can also take into account risks of future payments and the need for compensating the suppliers for the diversion of inputs from other traditional buyers, etc.)

At the maximum, the rate of interest, underlying the above particular type of borrowing and lending, specific to the development process, should permit profits. The borrower would take into account the expectation of an increase in the production in the future (liquidity) that can be more than their liquidity commitment in the future i.e. more than compensate for their taking loans at a rate of interest at the present. The lenders would be willing to forgo present liquidity if the promised future liquidity is enough to compensate them for the revenue that should make future expansions of production worthwhile (in response to the higher demand). If lenders' expectation is the future revenue required to expand production under the existing methods of production, and the (asking) rate of interest would have to factor this, the borrower should absorb these "costs" i.e. the contractual price and expected higher expansion-led labor productivity, based on the division of labor, can allow profits. Rate of interest therefore is the one that permits the positive profits. The rate of interest is indeterminate but would lie within the range defined by the minimum asking rate and the maximum that can permit the expected profits. (The difference permits the coming up of the modern banking intermediation).

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Then, the higher production, embodying the division of labor, should ensure the payments of inputs (including the interest payments) and the realization of the profits. If division of labor results in higher labor productivity in converting materials to final product, this intermediate costs reduction at a given price (by assumption) can permit higher profits even if the wages (in response to increased specializations) also increase, but lags behind labor productivity. That is, profits refer to the possibility of material costs reduction in the face of given product price (Padhi, 2015).[1] For any given state of division of labor that comes with specific material costs and the price of the product, there is a particular expectation of profits.

[1] Then the nominal value added would increase more than the real value added that includes higher wages for specialization in production and in trading; such trading profits, after accounting for wages, also permits profits as the incentive for undertaking the division of labor.

Here the focus is not on the evolution of market structure in response to the coming up of a dynamic firm; it is on the conditions that permit the possibility of many such firms. They cannot depend on cutting into each other's market; they would define the macro excess production that would target increases in the aggregate market size. This means that economic development process necessarily enjoins the Marxian-Kaleckian-Keynesian conception of current production where if it involves savings or surplus (after payments to all inputs, including the interest costs), it has to be dependent on future investment possibilities, which is more than the "investments" that are used up for the purpose of its current production.

Interest Rate & Prices

An issue confronting is: how the rate of interest (and inflation) evolves in the long run in response to the 'Keynesian' investment. It can be argued that if the investment targets a demand for wage goods and other inputs and is matched by expected ex-post savings, and the production is renewed in the "static sense", the credit, and the credit-led interest rate (and inflation) would be stable at some level. In the present perspective, production process is not renewed in the static setting. In Youngian context, if credit inflation is the process that replaces less productive firms by the more productive ones, all firms can have the incentive to improve to stay in as businesses. This facilitates the working out of the Youngian external economies, inducing in turn the generalized adoption of division of labor. If credit environment permits this (Keynes, 1937; Davidson, 1986), it would enjoin higher demand for higher inputs more than what is defined by the requirements for the current production. The implied magnified increase in the market size is crucial, supporting the realization of profits of many firms involved, without cutting into markets of each other.

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Given that each firm would view the increases in market size as a sign of durable revival, investment would then outpace current "savings" and would readily get translated into further division of labor, targeting in turn still larger production (and higher profits). Here, the greater the scope for such further division of labor (and demand for inputs) in relation to previous realized savings, the higher would be the pressure of credit (and credit-led increases in rate of interest and inflation). The upward pressures on interest rate and price level should not be seen as something natural in the development process. Much depends on the nature of development processes that would define the changing pattern of the relative value of inputs. For instance, the induced expansions can define a "shallow" division of labor-led economic development where the initiations are limited in scope i.e. the incidence taking place in some isolated sectors, and (es-

pecially) not touching upon inputs production. The production of variable inputs (including the production of wage goods) takes place with existing methods of production i.e. under decreasing returns. This would put upward pressure on the interest rate. Here, if the development process has to go on at all, and the scope of division of labor has to be in terms of targeted profits (and savings out of profits), the higher interest costs/input costs have to be met by way of higher prices of final product; in this sense, the higher interest rate translates into higher overall inflation.

This shallow division of labor-led process faces a basic constraint (see also Kaldor, 1976). Not only there is the higher inflation induced pressure on wages, but also that the force of external economies created by division of labor would be limited in scope i.e. reduced scope of 'investment begetting further investment' process, and, in turn, constraining the realization of targeted profits.

On the other hand, the focus can be on a "deep" division of labor-led development process, guided by higher incidence of technological external economies. The increased incidence of sophisticated industrial differentiation in narrow specializations would typify the coming up of specialized firms in the production of sophisticated machinery production, in knowledge industry, etc. This would not only translate into increased productivity in the production of capital goods but also lead to a general increase in productivity in the economy, in agriculture, in the production of variable inputs, (other) wage goods, etc. If these cost reductions translate into lower prices of variable inputs, the credit requirement would be lower. This source of higher developed status shows that the pressure on both the rate of interest and inflation are expected to decrease in the course of development. Therefore, overall, in the economic development process, the performance of the sectors producing the inputs of production (wage goods and other inputs) is important. If they are slow growing (and their prices are increasing as more is demanded), the credit-led pressure on the interest rate and inflation would be higher; if they show greater dynamism, the process would be accompanied by a lower pressure on the rate of interest and inflation.

The Monetary Prospects

It can be supposed that the smooth mediation of the increased transactions in the economic development process, given the sophistication of the transactions (that also enjoin increased demand for variety as income is increased), needs the role of money. However, role of money in the economic development process is conditional. For instance, in a static conception, if production translates in to factor payments only (without any interest payments – as discussed earlier) and, in an ex-post manner, the supply matched the (traditional) demand conditions (at a pre-determined price), there is a definite quality of money, as units of payments, given the velocity of circulation of money. However, the present perspective does not tack money

in a static framework. The increased production in the economic development process brings in the role of money that involves financial obligations towards purchased inputs for the current period with interest (as a promise), and this obligation is dependent on the reinvestment possibilities that comes with the increases in future financial commitments; this is when the requirement of inputs increases more than the savings generated in the production process in the current period. If future financial commitment is viable i.e., the increased investment results in higher market size, it supports the present financial commitments. The stability of 'money' then depends on the stability of financial commitments that links present financial obligations with the future ones.

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To discuss the financial obligations further, the firms, in a way, issue financial assets (as an alternative to informal credit) for the purchase of inputs; partly, short run assets that ensure current income certainty (interest payments) to producers of variable inputs; rest, the long run assets (say, common shares) to pay fixed capital goods out of profits on a long term basis, mainly targeting capital certainty of such assets. The supply of both the assets is determined by the respective input requirements. The higher the inputs requirement per savings, the higher is the supply of the assets.

The demand for assets however depends on the certainty of profits, which depends on (i) the force of investment begetting further investment process, (ii) input costs, especially the costs of production of variable inputs that also affects the costs of production of fixed inputs, and (iii) the productivity of fixed capital inputs.

If the economic development process ensures the certainty of profits, maintaining in turn the income and capital certainty of different assets, the demand for assets matches the supply (and supply of money equals the demand for it), and development process continues without monetary disturbances. However, in the economic development process, the evolution of real forces, and their nature changes, resulting in the changes in the pressures on the interest rates and prices. Such changes affect the evolution of financial obligations and the stability with respect to money.

Monetary Disturbances

The present paper maintains that the constraints facing the real forces i.e. a shallow division of labor-led growth process, explain monetary disturbances. That is, the particular focus is on the development process that is associated with the increases in the pressure on the rate of interest; the pressure coming from an increased demand for variable inputs, the production of which takes place under the conditions of decreasing returns. It has to be stated that this growth process indicates a slow grow-

ing process with slow growth of savings. This is because, the process associated with less dynamic capital goods sector, i.e. marginal cost reduction in the production of capital goods and marginal increases in the productivity of such inputs, the increases in income would be associated with slower growth of profits. The downward pressure on profits comes not only from higher inflation -induced higher wages, but also that the division of labor-led 'investment begetting further investment process' is slow. One implication is that even if production (and savings) is increasing, if overall interest (and inflation) rate also rises, there would be a decrease in the share of savings, increasing the share of financial assets (in future).

The implication is that the capital certainty of long run assets is decreasing, decreasing in turn the demand for long run assets. Here, the traditional argument (see, Hicks, 1933) would hold: as the demand for profits related long term financial assets would reduce, it would induce the substitution of long run assets for short term ones, and the process reduces the short run rate of interest and increases the long run rate of interest. This substitution of financial assets would then be attended by the corresponding substitution of the fixed capital for the variable capital. Hicks argues that these substitution possibilities are the possible way out. The present focus on the division of labor-led development process permits no such substitution of inputs in the production processes; in fact, it demands the increased incidence of fixed capital that in turn induces the demand for variable inputs. Then, the substitution possibility of financial assets, attended by the changes in interest rate, would not be attended by the "required" substitution in the real sector.

The changes in interest rate, in fact, create a situation in which the short run assets holders are assured of the capital certainty of the assets, but there would be the income uncertainty in the sense that the interest payment required to maintain the production of inputs in the current period (subject to decreasing returns) is not assured. The assurance can come from higher use of fixed capital (targeting higher production and profits), but the development process, via lower capital certainty of long run assets, may lead to lower future investments, decreasing the possible future profitability of the firms (and further decreasing the prospects of future investments). The implication is that the (variable) input suppliers either stop providing the inputs (on credit) – then the short run assets prices would decline – or ask for higher current prices – with the inflationary consequences, which may put a downward pressure on prices of long run assets, increasing the long run rate (further).

If the development process induces the financial substitution-led changes in interest rate without any corresponding substitution of factors of production, the process gives way for fundamental uncertainty about future prospects. This would generally translate into a preference for present income, reduces the value of assets. Asset preferences, if any, would be guided by speculative trading in assets, in response to interest rate differentials-led

scope of profits through trading. Since the source of the uncertainty is with respect to the profits (and savings) realization (and further investment possibilities), the decreases in the attractiveness of both short and long run assets are nothing but a reflection that the public (and banks) would be less willing to part with "liquidity" i. e. the overall rate of interest would increase. So, if uncertainty leads to a situation of rigidity – not allowing easy substitution possibilities to adjust the real sector to the financial sector – Keynes in General Theory could be right in focusing on the uncertainty-led higher long run rate of interest cum low output with low (real) savings (investment) equilibrium.

However, the present long period perspective shows that the above is but a special case (of the logic of General Theory) that arises from the possibility of a slow growth process that induces higher decreasing costs-based inflation and higher rate of interest. These are the sources of the low long period expectation that in turn induces the possible derailment of growth, with the possibility of unemployment equilibrium.

In a long run perspective, however, the logic of General Theory demands that nothing much is to read into the prevailing higher rate of interest; if "banks" or monetary authorities set a higher rate of interest in the face of higher inflation, it is nothings but a reaction to market forces; it should not be viewed as inflation targeting. In fact, the correction of the problem needs the policy focus on a transition to the development process that is associated with higher productivity of input producing sector and an accommodating monetary policy, reducing the rate of interest, facilitate the transition by removing the liquidity constraints that the firms concerned face. The low interest rate, and the possible endogenous growth of money, should, however, be a response to the revival. This would result in the growth of money, paced by the development process, which outpaces the financial requirements; the lower pressure on rate of interest (inflation) would be attuned to the need of the real sector. Here, also, expectations will play their role, possibly putting pressure on interest rate, but these developments would come without liquidity premium. It would be expected that, now, money can flow from the short run assets towards the long ones, decreasing the long run rate and increasing the short run rate. This change, in favor of fixed assets, is in line with the development process that highlights increased specialization-based division of labor-led development processes. All in all, in opposite to the case of shallow division-led processes, the demand for financial assets would outpace their supply, resulting in the maintenance of a lower rate of interest (and inflation).

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Concluding Note

The present paper's reliance on historical narrative of economic develop-

ment perspective should not be misconstrued. Every contemporary economy faces periodic new developments of better supply forces that provide the revival options and the dynamic firms face (immediate) liquidity constraints. The present paper alludes how the basic financial structure evolves; such a revival has to be attended to by the growth of endogenous money at a low interest rate – the contemporary financial infrastructure towards this end is a different matter. Theoretically, some advantages with respect to making clear the stark contrast between the Taylor's rule and the present "post Keynesian" perspective come to the forefront. In the Wicksellian scheme, allowing for technological progress, true rate of interest is pro-cyclical. On the other hand, the changing monetary prospects underlying the economic development processes show that both interest rate and prices are anti-cyclical (in nature). This understanding also illustrates how real forces define the monetary prospects, which in turn permit the endogenous evolution of interest rate as a monetary phenomenon. On the other hand, the endogenous evolution of price level is to be viewed as a real phenomenon. The co-movement of interest rate and price level are different in different growth phases. This makes the present post Keynesian perspective distinct, as an antithesis of the Taylor's rule's presuppositions. Taylor rule has the propensity to set a "high" interest rate, while the present post Keynes perspective would hold that low interest rate-led revival of aggregate demand is the key for revival of higher growth phases; Taylor's rule hinders the transition to higher growth phases that are guided by the growth of endogenous money-led aggregate demand that outpaces the realization of existing supply. The suggested monetary policy matters only when there are the latent better supply forces.

It is true that even if a country experiences deep division of labor, it is accompanied by the growth of aggregate demand that outpaces the existing supply base. This growth of demand, however, can provide the exogenous market support for the realizations of increasing returns to scale phenomenon that can be inimical to Youngian increasing returns in production possibilities (Young, 1928; Chandra & Sandilands, 2005; Padhi, 2016). Similarly, easy credit environment can support mis-directed/speculative investments, based on higher leverages (Minsky, 1982)[2]. Kaldor (1981; 1983) noted that the pace of growth can be characterized by unevenness, even in the context of a particular economy; sectoral imbalances of Kaldorian types can put pressure on wages (and rate of interest), and in turn on profit margin; if the latter is achieved through higher prices, it can have a feedback effect on demand for higher wages, and the process can result in hyper inflation and financial/monetary instabilities. Easy credit policy faces these tough choices/developments.

As the growth impulses are slowing down, the implicit pressure on liquidity preference would increase; so should the

[2] Minsky provides a lucid discussion of systematic developments in which every Keynesian deep development process has (in the wings) a latent shallow division of labor-based phase.

Hyper-inflation creates monetary instability because it originates in shallow division of labor phase.

rate of interest. Hyper-inflation creates monetary instability because it originates in shallow division of labor phase. The policy focus should zero in on a transition from bad performance towards good performance, achieving stability with respect to money. The present paper would advocate proper policies that should be in place to guide the economy towards "deep division of labor"-led growth, and the monetary policy should play (only) the accommodation role, permitting the accommodating endogenous supply of money. If the stability of money is important, policy focus is on the nature of real forces.

In fact, the basic orientation of the present paper is to underline the analytical bases of the choices facing a monetary stance. Here, it has been stated that the endogeneity of money, linked to long run growth processes (as in Kaldor, 1970), undermines Keynes's short run monetary analysis, especially the liquidity preference hypothesis. However, there can be a different translation of Kaldor. To elaborate, Kaldor (1970)'s discussion of endogenous money was designed to challenge monetarist position on the issue of the invariance of velocity of money (with respect to income), and in that case a horizontal endogenous money supply at any rate of interest (that accommodates demand for money) was posited; if the supply adjusts the demand, any existence of liquidity preference has to be neglected.

The discussion admits of the implicit role of liquidity preference (as a principle); he also argues that if somehow conventional money supply is restricted in the face of favorable expectations, public and banks would still be willing to be more liquid (as a response), and the velocity of (conventional) money (or, its alternative, the endogenous supply of money) would increase. The force of (this implicit) liquidity preference (and its reverse) then defines the extent and terms of endogenous money. For instance, a deep division of labor-led growth phase, investment begetting further investment-led higher future demand for bonds (and implicit low present liquidity preference), would result in lower rate of interest and higher endogenous money (in line with higher expected production) that in turn would make the money velocity stable. Similarly, if investment opportunities (and expectations of them) decrease, and pressure on (implicit) liquidity preference increases, it can either induce higher rate of interest (as in the current paper) with lower endogenous money, to keep the velocity constant, or lower velocity of money; the possibility of any particular outcome is model specific.

This position on the expectation of real forces-led rate of interest formation can sharply be distinguished from that of the basic position held by the post Keynesian structuralists, who maintain that during expansions, rate of interest, as an endogenous phenomenon, would

increase. This is when, credit expansion reflects increased "liabilities" of the banks, translating into say, higher costs, higher perceived risks of expansions, adverse condition with respect to banks borrowing from central bank. These in turn imply higher induced interest rate on credits.

The credit supply curve is downward sloping i.e. during the expansion-led increases in endogenous money, rate of interest would decrease.

The problem with this position, however, is that it remains silent on the nature of expansion and the assets side of banking operation. For example, the focus is on the Youngian division of labor-led expansions where the incidences of division of labor make trade (and capturing of markets by dynamic firms) endogenous, making higher profits realization more certain as the aggregate size of the market is expanding. This characterization of expansions induces higher and more favorable expectation. Therefore, such higher growth phases are guided by favorable expectations, and would be associated with lower bond rate; if banks are also guided by the sentiments (with less perceived risks), the lending rate would decrease[3]. Because the "public and banks", again guided by the expectations, would be more than willing to part with liquidity (Keynes, 1937; Davidson, 1986), or the opportunity costs of liquidity creation would be lower, the present paper maintains that the credit supply curve is downward sloping i.e. during the expansion-led increases in endogenous money, rate of interest would decrease. On the other hand, credit supply can be associated with increases in rate of interest if the expansions characterize shallow division of labor.

Moreover, the difference in the conceptualization of liquidity preference between the current paper and the structuralists (Palley, 2013) is significant. The relationship: lower (higher) demand for money would be associated with lower (higher) bond rate - is accepted by Palley. In the current paper's perspective (and also following Keynes's General Theory liquidity preference arises from low growth expectations, which also induces less of bank lending (and such creation of credit-led deposits). What Palley suggests, instead, is that increases in liquidity preference-led higher bond rate would induce higher lending by banks (and willingness of the public to hold such deposits), because (in his model) loan finance is a substitute of bond finance. The issue is: what is the purpose of this lending? Of course, deposits (in the situation of higher liquidity preference) can be created without lending, and lending can take place without any relationship with any true expansion (though the lower growth phases, and such lending would be associated with increasing risks, fragility of the financial system), but this stretching of the endogenous money model that per-

[3] Because the assets position of lenders lends themselves to monetary stability, the central bank would be lowering the discount rate. The banks would stand to gain by way of lower discount rate, certainty of higher expected volume of trade (and profits).

mits this substitution-based endogenous money (i.e. liquidity preference should translate into lending unrelated to growth prospects), perhaps, is not a good guide to maintaining the stability of money.

Therefore, the present paper shows that if Keynes's short run framework gives importance to expectation of real forces guiding monetary prospects (and rate of interest is an indicator), as a good policy focus, a natural development is the long run development of real forces, and its nature that defines the evolution of the rate of interest and prices. The endogenous monetary prospects define the rate of interest while the endogenous price level is a real phenomenon. In this sense, the main post Keynesians criticism of Taylor's rule should zero in on the formulation of marginal productivity theory-based rate of interest, which is a real phenomenon, and implication is that money plays no role in the formation of real variables, and at best, it can explain the price formation as a monetary phenomenon. A policy perspective would follow the criticism, tied up with the present paper's suggested post Keynesian hypotheses. A low interest rate as such is not important; the accommodating monetary policy at low interest rate does not achieve much unless the latent policy guided better supply responses (and the expectations of them) are in place. The monetary policy should attend only to the liquidity constraints facing such supply responses. That is, money plays the important role to actualize supply response (and define expansions), but such a role cannot guarantee any natural tendency towards a productivity driven growth path, and hence, the stability of money, targeted only by monetary policy rules, cannot be taken for granted.

The accommodating monetary policy at low interest rate does not achieve much unless the latent policy guided better supply responses.

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