Keynes's Dynamic ISLM versus Taylor's Rule

Satya Prasad Padhi

The present paper suggests that the logic of ISLM, as understood by Keynes, permits a dynamic version of it. The latter can illustrate a short run that can capture growth prospect facing it. This understanding shows that growth prospects define the monetary prospects that in turn determine the rate of interest, as a monetary phenomenon. The comovement of interest rate and prices is a response to growth prospects, and the former plays the signaling device to indicate the growth prospects facing the current period. The broader conclusion is monetary policy should play a passive role and align the rate of interest to actual growth prospects; the policy focus is on the management of the growth prospects

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

Introduction

Monetary policy generally targets the current short run, and in the orthodox stance, short run is defined by the orthodox static price theory. In this understanding, an economy can experience normal growth (and adjustments to productivity shocks) if in the short run, the values of the crucial variables reflect fundamentals of static price theory. The only (or primary) source of short run instability comes from monetary disturbances, which in turn can disrupt adjustments to productivity shocks. This understanding, for instance, is also central to the New Keynesian Taylor's rule that, following Wicksell (1898), articulates that if banks create credit at "low" rate of interest, the consequent higher endogenous growth of money can lead to inflation (Lavoie, 2006 for a critical review of the rule). The low rate is defined in relation to the fundamentals of price theory where the real (natural) rate of interest is the one that corresponds to the actual use of capital stock for the production of consumer goods and defines a potential output in the period i.e. the marginal productivity of the capital-based natural rate of interest. The rule only adds that due to price rigidities, the above aggregate demand-led inflation in a cer-

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tain range can permit output to increase up to the potential output (Sims, 2014). Then, the natural real rate of interest comes with some inflation. However, if an economy were to experience exogenous embodied technological progress, which has a propensity to grow, but confirms the price theory's marginal productivity theory (with the inflation), the natural rate of interest would increase *pari passu* with the rate of growth. The rule of interest rate management to manage inflation adjusts (at least in principle) the actual one to this real rate of interest, in every short period.

The above monetary theory, however, remains silent on realism with respect to how the short run decisions/fundamentals generate actual and current growth prospects. The latter are held to be variable, but not to be analyzed by the economic theory; the fundamentals cannot indicate the current growth prospects (Solow, 2000).

On the other hand, Keynes (1936henceforth GT)'s monetary policy would argue in favor of low interest rates to sustain higher growth prospects. Here, GT is an attempt to provide a short run that can incorporate growth propensities - actually, it is conceptualized on the basis of "investment" that can define growth prospects. As would be argued later, Keynes maintained that the marginal productivity theory-based investment (i.e. maintenance of current capital stock in a static theory) is to be viewed as "costs of production", whereas the current production of consumption goods has to be dependent on new investments i.e. addition to capital stock. This new investment, targeting additional output flow, would depend on future expectations (future investment flows that define expectations of growth prospects), and (therefore) takes place under uncertainty (see Davidson, 1978; Kregel, 1998). Every short run then captures these expectations, which are held (by agents concerned) in varying degrees.

This understanding of "short run with a particular growth prospects" is important; it would provide a valid criticism of the Taylor rule of interest rate management.

To start, the expectation of growth prospects, seen as a historical sequence of subsequent short runs, influences the current short run rate of interest. The main focus in GT is on the bond rate – expectation of future demands for bonds, based on a particular growth prospect, defines the current demand for bonds. and in turn determines the bond rate. At the same time, favorable growth expectation defines current new investment that is independent of current prior savings, and it induces higher expected current production, which is also prior to receipts. Then, bank lending, induced by the needs of actual production, and independent of prior savings (deposits) is crucial both for the current income determination process and growth prospects.

The lending rate has to be aligned to the current bond rate, to permit the required flow of endogenous money supply. This is the endogenous money thesis, which takes place with an accommodating stance of the central bank (Kaldor, 1970; Lavoie, 1984). Here, it is hypothesized (to be elaborated later) that the lending rate has to be aligned to the current bond rate, to permit the required flow of endogenous money supply.

However, such monetary prospects also depend on how growth is expected to pan out: the exact expectations regarding the aggregate supply function that embodies the expected evolution of prices and wages would determine the transaction demand for money. This influence on the monetary prospects should be taken note of.

Initial Outlines

In the present literature, how a current short run relates to actual growth prospects is fuzzy. The multiplier acceleration hypothesis is notoriously naive (Davidson & Smolensky, 1964; Palumbo, 2009). In this context, the present perspective is an attempt to illustrate an alternative Keynesian short run that can capture actual current growth prospects on a firmer basis. For example, a short run can be discussed in terms of autonomous (finance-led) investment commitment that is more productive, comes with favorable growth prospects - say, productive investment with long run higher market access. In this context, the present perspective relies on the more plausible Youngian-Kaldorian (Young, 1928; Kaldor, 1972) thesis. It allows for the growth of rate of investment that defines the growth possibility. It then

defines a sequence of Keynesian short runs along the growth path, each short run capturing the growth possibilities. To generalize, different short periods with different investment commitments would capture different actual current growth prospects.

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The purpose is to show that this permits a simple illustration of a dynamic model-based on the ISLM "logic" - to underline the monetary prospects, say, whether the interest rate formations conform to the growth prospects. The initial hypothesis, argued throughout the present article is that evolution of monetary prospects should be aligned to the bond rate. If so, however, as discussed earlier, the evolution of prices that would shape the transaction demand for money becomes important.

The dynamic ISLM would incorporate the long run evolution of an aggregate supply curve that would indicate (hypothesized) co-movements of interest rate and prices. In fact (and contrary to the argument of the price theory), a higher growth phase would be associated with lower pressure on interest rate and prices, and the opposite would be true of the low stagnant growth phases (also see Padhi, 2018). Co-movements of interest rates and prices have a history. It is contrary to the predictions underlying static price theory, which would predict higher

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interest rate in high growth phases; since along the productivity growth, the aggregate demand would match the supply increases, price stability (zero inflation) is also a natural assumption. The earliest challenge came by way of the Gibson's Paradox (Patinkin, 1968): historically, interest rates and the price level have moved up and down together. Patinkin (1968: 122) invoked the Wicksellian process, which implies increases in aggregate demand more than the supply potential, explaining in turn upward comovement in high growth phases; for instance, Taylor rule shows how the inflation permits adjustments of output towards potential one, to realize growth prospects.

However, exceptions to the above understanding of Taylor rule - co-movement of output and prices in expansionary phase except as temporary short run bursts - are there. Bruton (1951: 224-27) has noted, again as a historical fact, that the higher growth phases, resulting in the developed status of present day developed countries (and reflecting the impact of technological progress), were associated with a secular decrease in rate of interest (with stable inflation). This cannot be explained by the Taylor's rule. The present dynamic ISLM apparatus is used as a simple illustration to show that the exceptions to Taylor's rule can exist, as a historical possibility. It would take Bruton's "paradox" as a point of departure, explaining that this may not be a paradox after all, but with a rider that the causality does not run from lowering of interest rate to higher growth phases. The focus should be on the reverse causation.

Towards the Long Run ISLM: The Antecedents

It can be argued that the ISLM is only a short run apparatus meant to highlight the two way causation between rate of interest and income. Here, however, it can be stated that in this case, the focus is on the Keynesian synthesis-led interpretation of ISLM apparatus that can underline the marginal productivity theory-based adjustments (Pasinetti, 1974). It can be shown that the variability of interest rate brings the savings into equality with the investment that is required for the purpose of the production of the pre-existing normal output; the corresponding rate of interest rate is the standard price to which employment should adjust, if wage flexibility is allowed, defining the full employment outcome.

In this connection, it is also suggested that Keynes himself believed in this short run apparatus. Patinkin (1987) adds that if the General Theory (GT) has to be viewed as a theoretical exercise, Keynes himself suggested that he has nothing by a way of a theoretical criticism of the basic Hicksian ISLM apparatus (that tries to interpret GT).

Though Keynes's position has generated a debate, the present perspective has a different take on it. Keynes only accepts ISLM as an apparatus; however, he did not accept the Keynesian synthesis logic underlying it and viewed it as a long run apparatus. This needs elaboration.

Keynes on ISLM

To start, GT's basic criticism of the classics (and the Keynesian synthesis adjustments) should be taken note of. The classics (in stationary economy language) depend on an investment possibility that is entirely guided by savings, and the maintenance of the capital stock (and its utilization) requires that investment in each period equals how much of fixed capital is used up to produce output in that period. The savings-led savings investment equality takes place at a rate of interest that in turn equals the value of the used up capital stock. Keynes (in GT: 52-55), on the other hand, was pointing out that the decision to utilize the capital stock in a period depends on the possibility that the expected proceeds (sale of production) exceed the total (prime) costs of production (i.e. the user costs denoting how much of the capital stock and purchased inputs are being used up for the production and the factor costs). User costs would equal the normal depreciation and the part of purchased inputs in the period that are used up for the current production. For him, if total proceeds falls below the expected one, the firms would just maintain the capital stock (in its original efficiency) without utilizing it (and avoiding incurring of 'higher' user and factor costs in the current period).¹ The actual production would take place if the total purchased inputs exceed the part of the being used up, and in that case the excess adds to the capital stock, which makes the proceeds to exceed the total costs. If GT brings in the importance of the excess proceeds for the determination of income, this would involve demand that is more than the demand created by the production of consumer goods in the current period, and has to depend on investment that is more than accounted for by the marginal productivity theory. Moreover, the investment (addition to capital stock) has to be based on future expectations.

The marginal efficiency of capital (mec), in conjunction with the expectation-based rate of interest, guides the new investment.

In this understanding, as a crucial building bloc, the expectation-based Keynes GT model depends on the notion of income; Keynes (1973: 75), in his correspondence with Hicks, (strongly) insisted that his concepts of user costs, income, etc. are central to the development of his ideas in the GT that emphasize the importance of expectations. More specifically, in GT, the focus is on the investment that augments the capital stock, and has autonomous characteristics i.e. unrelated to current production, and depends entirely on the expectation of future market size (GT: 138-9). In this context, Keynes brings in the marginal efficiency of capital (mec) of new assets to define the estimates of future yields of such investment and such expectations also define the monetary prospects that in turn determine the rate of interest. The marginal efficiency of capital (mec), in conjunction with the expectation-based rate of interest, guides the new investment.

¹ They would do so, if the present value of future prospects (proceeds minus the total costs) exceeds the current maintenance costs.

Then, if a reduction of (or, low) current output is due to unfavorable expectations, an adjustment via possible reduction in the short run rate of interest induced by wage (and price) reduction, is not enough; the deflation may in fact negate the crucial revival of expectations guiding investment (for a entire gamut of the debate, see, Cottrell, 1994).

Keynes's strong misgiving towards the adjustments suggests that he wouldn't have thought much of the Keynesian synthesis-led ISLM. He in fact was viewing the apparatus as a device to illustrate how a determination of income, given an initial exogenous investment, is not the final resting point, but induces further changes in investment (and equilibrium income) till a final resting point is reached. For Keynes (1973: 80-81), the ISLM apparatus has to involve the changes in the investment commitments (and effective demand), defining different equilibrium income levels, etc., but he was dismissive of giving the role of the current income in inducing further investments. The issue is: what then explains the changes in investments? Are they guided by the changes in rate of interest, as suggested by the Hicksian ISLM, or other factors are indicated?

In the literature, Keynes's understanding of ISLM never caught on; Keynes himself did not take much interest in long run growth prospects, and had no further interest in ISLM. The issue however is: is the line of thinking significant? The rest of the perspective will be devoted to answering this question. The contextual issue is: suppose the agents hold on to a growth expectation, does the implicit real forces affect the evolution of rate of interest (and prices), and if so, does it provide the challenge (to Taylor's rule based expectations)? To start, however, the focus has to be on whether the inclusion of growth expectations (and the study of their impacts) is consistent with the GT.

Towards a Dynamic ISLM

Keynes in GT's short run framework took a particular future expectation to be given, which in turn determines the expected profitability of new assets and a determinate long run bond rate, after taking all expectation-led money market influences into account (i.e. equating it to the money rate of interest i.e. equalization of short and long rate). In the sense Keynes made the model completely determinate with respect to the expectation: the mec (the bond rate) permits the investment opportunities that determine the expected income (and prices) (that conforms to the expected money market influences). In this interpretation, according to the present perspective, Keynes provided a (GE) approach (taking commodity and money market) where all actions are based on a particular prevailing expectation. Given any particular expectation, there is no variability of interest rates.

Following the logic, favorable future expectation will result in higher present investment commitment (that in turn defines higher income possibility), and the opposite would be true of unfavorable future expectations. If so, it can further be supposed that such differences in the expectations, guiding different investment commitments, also bring in the changes in liquidity preference-based bond rate. If the expectation of future is favorable, the certainty of investment commitments (i.e., favorable mec) for present and future income prospects would imply that the agents would be willing to lend (without immediate payments), say, through bonds that require sacrificing present income (present liquidity) in lieu of a definite higher future income prospects (future liquidity prospects) and this time preference based on liquidity preference translates into lower interest rate; it has to be added that this time preference is also guided by the fact that the agents expect that the rate of interest would decrease further (increasing the capital certainty of present decision (to purchase bonds). Conversely, unfavorable expectations would be associated with higher uncertainty and higher present liquidity preference - a low level of investment would be associated with higher (bond) rate of interest.

Investment is a function of rate of interest, but is distinct from that of the marginal productivity theory conception of it.

Then, Keynes's GT logic admits of the variability of both interest rates and investment commitments, but the focus is not on the changes in the interest rate (or the savings out of income) that determine the changes in investment. Now, it is the changes in expectation that explain the variability of both mec and rate of interest, determining in turn the changes in the volume of investment; in this case, in functional form, investment is a function of rate of interest, but is distinct from that of the marginal productivity theory conception of it.

Therefore, if IS curve were to trace different income levels, they have to be supported by the changes in the expectation that define different mec (and income levels). In this sense, the present perspective accepts the logic of O'Donnell and Rogers (2016) that 'IS' curve should trace mec (i.e. long run bond rate) and the corresponding income levels, with lower mec (and bond rate) associated with higher investment opportunities (and income levels), but maintains that each mec (and bond rate) is specific to a particular expectation and different points along the IS curve (i.e. different mec) should trace the impact of different expectations.

However, the logic of ISLM apparatus demands that current expectationbased investment commitment induces more favorable future expectations, inducing higher investment commitments (associated with lower rate of interest); in this sense, it requires that investment commitments define growth expectations. In a way, Keynes's discussion of future expectations involves growth expectations. That is, given current (period 1) capital stock, if the current expectation determines the investment (and the income), the expectation surrounding current investment also involves the future (period 2) income corresponding to the future capital stock (augmented by current investment), which in turn is dependent on the expectation about future investments, and so on. It is this growth expectation that defines the variability of investment (and interest rates) that in turn can define a particular IS curve.

This shows that the initial commitment, and initial income, does not define a final resting point but that there is the evolution of investment commitment till a final resting point is reached (with reference to any given growth expectation). (Keynes then could be viewing the apparatus as something that is tracing this dynamic implication of GT, to define a final resting point.)

These initial understandings suggest that ISLM apparatus deals with growth expectations created by initial investment commitment. Then the issue is: if, following Keynes, current realized income does not induce such changes, how the changes are effected? The following section takes up the issue of the investment commitment-led historical factors that determine growth prospects; the discussion of which permits the understanding of the possibility of different growth expectations. The section following would integrate the growth expectation with the ISLM apparatus to show how different growth prospects permit different final resting place.

Youngian-Kaldorian Growth Expectations

In the Keynesian approach, the focus is on growth possibility enjoining autonomous investment (i.e. investment autonomous of savings out of current income, say finance-led) that realizes current income (and savings). Here, if higher growth phases are commonplace and are routinely guided by productivity growth, the implication is that the autonomous investment also induces further investment possibilities (say, by making the incidence of uncertainty and liquidity preferences less important). If following Keynes, a multiplier-accelerator theory is to be discounted, a particular focus can be on the 'autonomous investment creating external economies', and thus inducing further investment possibility' process. Keynes (GT: 163) holds that the profitable investment projects that create 'external economies' (i.e., resulting in higher social profitability), in fact, mitigate the effects of uncertainty (and liquidity preference), and can effect a revival. It is true that he was emphasizing this advantage with respect to (autonomous) public investment, but it can be maintained that he would have given such importance to private investments also, if only they can create the external economies. The latter possibility needs careful elaboration.

The present perspective does not rely much on the new neo classical endogenous growth theories where 'human capital' (making physical capital more productive) creates the external economies (externalities?) that in turn permit its 'own' growth (and ensuring productivity growth). The problem is not with the insight into the developed growth prospects that highlights the importance of the external economies created by human capital, but with the conceptualization of the external economies-based growth of human capital via a well behaved production function where human capital is an additional argument (see Solow, 2000).

Coming back to the insight, and here the endogenous growth theories mostly rely on Young (1928), the present perspective focuses more on the Keynesian (Kaldor, 1972), Young's 'investment begetting further investment process' that provides a historical account of higher growth phases.

Following Padhi (2015), it can be added that the Youngian division of laborled growth, even if involves credit led inflation to some extent, lends itself to long run price stability with reference to a long run supply curve (see the section below). The implied intermediate cost reduction and the price rigidity (based on the rigid inter-linkages of various specializations that define the division of labor) ensures that higher nominal value added per unit of output as the (double deflation) real value added is increased, permitting higher wages and profits. The further division of labor, highlighting the tendencies towards the specialization between firms, permits greater outsourcing that in turn allows the growth of wages and profits at a given price. Here, if higher wages (and reinvestment of profits) add to the demand growth, it reinforces further division of labor-led growth prospects.

A crucial issue is: do the prospects (and certainty) of future division of labor that is more productive discourage the present investment commitment in the ini-

tial division of labor (e.g. Keynes' skepticism regarding the 'more productive' future investment)? The present perspective holds that the initiation of division of labor (guided by prospective higher returns) defines the dynamic firms who are committed to investment plans, and the scope for further division of labor is nothing but the realization of such investment plans (of different firms) that adds more (and new) specializations, or allows the firms to be more specific regarding its narrow specializations (say, via outsourcing). Then, these possible future prospects of more productive investments (i.e. further division of labor) do not make the present commitment in the initial division of labor obsolete; they only define the scope of realignments to make the present commitments more profitable in the future (through the scope of further division of labor). Also, the search for greater market (and profits) by way of the division of labor (and the further division of labor) is not based on price reductions, per se; the coming up of sophisticated products can ensure higher income elasticity of demand despite their possible higher prices, as the overall market size is increased (and the intermediate costs reduction takes care of the higher selling costs and the higher profits).

ISLM: The Dynamic Considerations

The present section endeavors to construct a long run ISLM that can capture the force (or absence) of the dynamic Youngian acceleration principle i.e. the external economies-led 'investment begetting further investment" possibilities. At the outset, the focus is on the expectation of a particular growth phase. In response to an invention, or new deployment of resources and new activities, businesspersons always anticipate its potential, how it is going to impact different businesses and coming up of new business opportunities, etc.; nonetheless it would have a definite revival phase.

Force of the acceleration principle depends on the nature of investment. For example, if the focus is on the initial autonomous investment that defines 'traditional investment' (Young here also hints at the targeting of higher scale economies), the acceleration principle would be absent (for the problematic conception of the principle with a given capital output ratio (Davidson & Smolensky, 1964; Palumbo, 2009). On the other hand, the historical possibility of the Youngian division of labor-led growth process would underline the force of the principle.

Different possible growth expectations, based on differences in the nature of investment, imply different profit expectations associated with current investment. If the growth expectation associated with traditional investment is unfavorable, the current investment would embody low profits expectation. Similarly, external economies-led 'an investment begetting further investment process', embodying favorable growth expectation, implies current investments would embody higher profits expectation. (The assumption is: higher the initial investment commitment, the higher would be the growth expectation) Then, one can construct different IS curves. IS1 embodying unfavorable growth expectation would trace current investment with low profits expectation. On the other hand, IS2, embodying favorable growth expectations, would trace current investment with higher profits expectation. These can be related to the required rate of interest (i.e. bond rate), to induce higher investment along a growth expectation and (the resulting) income (and savings) equilibrium outcomes.² The required rate would indicate the willingness to pay a current interest rate in relation to the expectation of profits (i. e. repayment terms) that the current investment embodies. Given low profit expectation, the movement along the downward sloping IS curve would require drastic reduction in bond rate; IS1 is steeper. On the other hand, IS2 would define a flatter slope, based on higher expectation, i.e. the slide along the curve does not require drastic reduction in the bond rate.



² Each IS curve traces the possible determination of different short run income levels (via the multiplier) corresponding to different current values of investment; however, the initial investment is responsible for growth expectations, inducing the economy to move along a moving equilibrium, tracing possible future income levels.

Towards the "Long Run" LM curve

However, the evolution of money rate of interest, based on overall monetary prospects, would be different in different growth expectations. There are three different types of influences. First, it has been already suggested that if investment commitment indicates higher growth expectations, the public and banks would be willing to part with liquidity, or the actual bond rate (based on such expectation) would be lower; on the other hand, for the same reason, if the growth expectation does not exist, the bond rate would be higher.

If investment commitment indicates higher growth expectations, the public and banks would be willing to part with liquidity, or the actual bond rate (based on such expectation) would be lower.

Second, implicit in the analysis of "independence of investment", expectations (and potential production-led demand for money) would guide the endogenous money supply. With respect to favorable expectation, banks are willing to lend, independent of prior savings (deposits) by creating deposits (i.e. creation of money), and would indicate the endogenous growth of money. The higher the growth expectation, higher would be the force of such growth of money.

Third, the growth expectation would also define the transaction demand for money, which would mainly be guided by expectation of prices along the expected long run supply curve. Different growth expectations can embody different long run supply curves (relating the expected revenues from the different income levels corresponding to different investment commitments). If investment commitment is towards the traditional projects, the pressure would come from the decreasing returns-led higher costs (of variable inputs including wage goods); the supply curve is expected to rise and be convex to the income axis, emphasizing that the prices increase as more income is generated (through higher investment commitments). On the other hand, if the commitment is towards division of labor, and it induces further investment, all actions take place via higher labor productivity growth that translates into reduction in the intermediate costs in the face of sticky prices (that permit both specialization-based higher wages and higher profits), and the long run supply curve (allowing for constant share of wages and profits - an assumption) would be rising, but remaining linear to the employment axis.

In the present context, it can be suggested that the "money market", now, would evaluate the above three growth prospects-led monetary prospects, and in turn would determine the actual course of money rate of interest. This in turn would be indicated by the LM curve. It can be added that in this perspective, the complex factors that define the complexities of different rates of interest, say based on interactions of different markets, guide the monetary prospects; a possible increase in the raw material price, if translates into higher overall price, also affects future investment prospects via higher monetary pressure on bond rate. There is then the need of the LM curve to study the pressure coming from the money market via the long run growth expectations, and highlights the expectation-based supply side relevance of GT.

The IS and LM interaction would show a particular adjustment process. The IS curve would show the current required bond rate corresponding to the current investment commitment. The LM curve would take into account the growth expectations that define the actual course of money rate of interest. It is possible that the current money rate of interest can be different from the current required bond rate. The higher the current required bond rate in relation to the overall money rate of interest, the higher would be the possibility of more profitable further investment commitments, explaining the sliding down along the IS curve; the LM curve in relation to the IS curve, for any current income, provides the signal for further investment commitments. This will continue till IS and LM intersects. and the money market clears i.e. the equalization of the current bond rate and the expectation-based money rate.

Then, the present perspective (by its thrust) tries to show that the different growth expectations, define different LM curves. First, why should the LM curve start with a low position? Perhaps, initial low income level explains a low transaction demand for money. However, if the IS curve is IS1, indicating higher uncertainty surrounding future investment commitments (i.e. lower growth expectation), it defines both lower capital certainty (of bonds) and the possibility (expectation) of higher income certainty if the bonds purchases are postponed, both inducing higher present liquidity preference; therefore, higher would be the pressure on the bond rate. So, again, there are two forces, and the initial position can be higher, if the latter influence is more binding (the position of LM1 in the diagram 3).

The slope of the curve (LM1) would be defined by the growth expectation (and long run supply curve) along IS1. Here, the pressure coming from the bond rate is expected to be maintained (or increase, by definition) and that of the pressure coming from the short rate also is expected to rise, say, when the higher commitments define a rising long run supply curve with higher prices. It should be stressed that bank lending rate for the endogenous money supply adjusts to this expectations/supply conditions. All in all, starting with a higher position (LM1), the LM curve would be rising.

The additional consideration is the "finance motive"; is an important contribution, Davidson (1965; following Keynes, 1937) pointed out that if a steady state affairs with respect to investment and output flow is expected and current low expectation does not induce the banking system and public to part with more liquidity, the firms (expecting a turnaround) can plan for higher autonomous higher investment that translates into higher "transaction demand for money" for meeting the need of the increase in investment (i.e. the finance motive for higher transaction demand). This increased demand for money would put more pressure on the rate of interest, and the LM curve would bodily shift up. In the present context also, since, movement along IS1 visualizes such increases in investment, and there would be less willingness to part with liquidity (i.e. the higher induced bond rate due to unfavorable growth expectations), corresponding to the curve, the upward sloping LM curve is expected to shift up as well (i.e. the dashed LM 1 in the diagram).

This increased demand for money would put more pressure on the rate of interest, and the LM curve would bodily shift up.

These above considerations show, corresponding to IS1, the LM curve would be at an initial higher position and would be rising (and also shifting upwards), leading to an actual expansion along the IS curve which would be low. If the initial commitment and growth expectation is low, the expansion will also be limited in scope.



But if the commitment is one of higher initial investment towards the initiation of division of labor, IS2 is the relevant curve (with higher growth expectations). Corresponding to it, the speculative demand for money would be lower (guided by higher future capital certainty and expected decrease in future income certainty), and with the initial low transaction demand for money, the LM curve's initial position would be lower i.e., LM now refers to LM2. In addition, even if the higher growth expectation (and higher future investment commitments) would be associated with higher transaction demand for money, it is also specific to a long run supply curve with a given price, and such commitments embodied in future division of labor, now, permitting intermediate costs reduction (say, more efficient outsourcing that specializations permit), put less pressure on the short rate. Moreover, since higher investment commitments come with higher growth expectations, the pressure from the bond rate will decline. Here, if the endogenous money supply is attuned to the bond rate (and the long run supply curve), the behavior of the bond rate would determine the money rate that captures overall monetary prospects.

Since higher investment commitments come with higher growth expectations, the pressure from the bond rate will decline.

The revival implies that the LM2 can move along a straight line, permitting some increase eventually (allowing for the fact that growth expectations refers to a given growth phase). This configuration of the IS and LM curves (higher difference between current bond and expectation-based money rates) permits much pronounced expansion of income level. Moreover, the demand for money arising from the finance motive would, now, be weaker; if public and banks (with an accommodating institutional setting, see Davidson, 1965: 59) are willing to part with more liquid (as indicated by the induced decrease in the bond rate), the firms would be induced to keep less for the finance motive, and the LM curve corresponding to IS2 would face a downward shift.



It can be seen that a higher (and rising) LM curve (i.e., LM1) is consistent with lower investment commitments; the reverse is true when the investment commitment (market size) is higher; moreover, in the latter case, if the policy focus is on inducing higher growth expectations, it defines the LM curve whose initial position is low and that remains almost horizontal as expansion takes place, permitting in turn the transition to higher income level.

Concluding Remarks

The basic difference between the neo classical theory (and its adaptation in the new Keynesian Taylor's rule) and Keynes's present perspective should be noted. The former is concerned mainly with a given normal output in a period that in turn defines the normal rate of interest (with some inflation), which becomes the policy anchor. In sharp contrast, Keynes's normal output comes with new investment opportunities that also generate further investment opportunities; (if so, in the literature) this growth prospects would demand that the assumption of a "given money supply" is to be given up for an endogenous money thesis in which banks lend (and central banks would generally play the accommodating role), to actualize these induced investment opportunities, independent of prior savings deposits. Then, the growth prospects depend on the possibility that aggregate demand in a period always outpaces existing potential supply, and can result in some spurt in inflation. However, in an important sense, the price movement (i.e. evolution of inflation) would be anchored on the long run supply curve; and, in high growth phase, inflation would be stable. The perspective would also hold that if the Taylor's rule, in the initial signs of some higher inflation, increases the policy rate, and in-

The growth prospects depend on the possibility that aggregate demand in a period always outpaces existing potential supply, and can result in some spurt in inflation. duces a halt to the endogenous money, it hampers the long run evolution of the growth prospects; for instance, the LM curve would sharply increase, and a slowdown of investment opportunities can adversely affect the position of the IS curve.

The point is: low (or downward) pressure on the current rate of interest in high growth phases and the co-movement of price level, as a policy focus, are anchored on the long run supply curve (or the expectations of it). The favorable long run supply curve, however, is endogenous - depends on pace of the growth of aggregate demand, which in turn, is dependent on a monetary stance that is permissive of endogenous money growth. To put it differently, if money policy is permissive, growth of demand embodied in higher pace of investment opportunities provides the favorable long run supply curve on which the stability of inflation would be anchored.

The growth of aggregate demand, facilitated by proper monetary policy, manages supply constraints the best.

That the division of labor based growth process needs the support of the growth of aggregate demand is well known (Kaldor, 1972). There are other considerations – Kaldor (1981) speaks of proper industrialization. This emphasis needs further elaboration. The investment prospects have to be financed-led to permit the Keynesian enlargement of market size in each step, and the required finance, in volume and easy terms, should be forthcoming. The growth of aggregate demand, facilitated by proper monetary policy, manages supply constraints the best.

First, there would be cases of traditional industries, and if they create supply constraints, can induce macro decreasing returns, negating the division of labor-led increasing returns. However, the growth of aggregate demand, induced by the division of labor-led increasing returns, now, embodies learning by doing, and human capital formation (Padhi, 2014) that can transform the traditional firms – making them conform to the increasing returns growth prospects.

Second, the high growth phase can be an important aspect of market economies that give the importance to profit augmentation. However, it creates its own (grave) problems; because the context is one of the historical possibilities that are path dependent, allowing 'departures'. The growth of market size can induce higher monopoly based profits that are derived from higher scale economies. The latter do not induce further growth; it in fact may hamper the competitionbased growth prospects (Chandra & Sandilands, 2005; Padhi, 2016). Therefore, there is the role of the industrial policies to guide growth prospects: support for the division of labor-led expansions, and discouragement to the scale based expansions. In this case, if some incidence of scale-based firms cannot be assumed away, the division of laborbased growth of demand can support these scale phenomena.

Third, even if the industrial policy is in place, the division of labor -led growth process supports the coming up of new tasks, new products, new industries that may create fundamental uncertainty (Padhi, 2015a). Greater growth of aggregate demand, on the other hand, can provide the support to both traditional expansions and new ones.

Last, Kaldor (1981) highlighted that if the Youngian growth processes start unevenly, the division of labor-led cumulative causation process breeds further uneven growth and the slow growing sectors can create supply constraints. In this case, the countries have to rely on imports, but then the division of labor-led growth of demand that manifest itself in exports growth can manage the imports.

If long run supply curve underlying growth prospects is the anchor for a more permissive monetary policy, the policy stance, and the resultant aggregate demand support defines the supply curve.

It should be stressed that supply side disruptions can adversely affect monetary prospects, say, implying higher liquidity preference (and the LM 2 curve now can slope upwards). However, if proper monetary support for increases in aggregate demand (with some higher periodical inflation) is allowed for, say, more permissive attitude for endogenous money growth (as against the Taylor's rule), the supply constraints can be mitigated, and the long run supply curve would make inflation temporary. This means if long run supply curve underlying growth prospects is the anchor for a more permissive monetary policy, the policy stance, and the resultant aggregate demand support defines the supply curve! So much like Keynes who often remarked: in economics, everything depends on everything else – but the interactions have to be structured!

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