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Review Article

The Political-Economy of the USA

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Abstract - *Shaping Expectations, an Awkward Observation... Shaping expectations is important, though, difficult by way of targeting variables. It is really an irony that if we target a variable and try to carve expectations, it works in the opposite direction. For example, if we target inflation and shape inflation expectations, it takes us in the opposite direction, deflation, because inflation would make things costly, which means less purchasing power and spending. Moreover, it increases savings because of higher future inflationexpectations. People would demand less and save more. Nonetheless, if we could try to target lowerprices or inflation, people would spend more and save less because of lower prices and priceexpectations. They would feel richer, spend more, and increase inflation in the future. For further understanding, we could take the example of targeting higher interestrates and expectations. It would again lead to lower spending and lower interestrate. Moreover, if we try to target a lower exchangerate, lower demand for imports and foreignexchange would make foreign currency cheap and increase imports in the future...*

Keywords *- Economy, USA, Political*

I. INTRODUCTION

Inflation and/or deflation affect the value of money and, therefore, demand and supply in the economy by way of increasing or decreasing real wages and/orreal interest rates, both as a tool to achieve fullemployment. Inflation reduces the real interest rate, which pushes investment by lowering the value of money and debt, and also reduces the real wages and demand, which decreases the cost of labor and capital and increase investment; however, disinflation or deflation increases the real interest rate and real wages which increases the cost of investment by increasing the value of money which might not be true. Inflation is often used to induce investment and supply by increasing the pricelevel, and disinflation or deflation increases demand and investment by decreasing the prices. Of the two, it is clear from the above lines, that inflation reduces demand, and disinflation or deflation increases demand, and, investment and supply, both, by reducing prices and increasing the value of money and, real interest rate and real wages. Therefore, we might also get closer to the point that during a slowdown, i.e., in a period of high unemployment and low demand, an increase in the real interest rate and real wages by lowering prices or inflation would incentivize demand and investment and supply when the moneysupply is loosened. Nonetheless, inflation and slowdown are hard to happen at the same time because, during a slowdown, there is a pressure on the pricelevel to go down in the presence of higher unemployment. Nevertheless, inflation coincides with a boom and low unemployment. Thus, it is futile to expect inflation during low growth and higher unemployment. Then, it is not worth expecting that inflation would cut real interest and real wages to promote supply and investment, but lower prices and more moneysupply are expected to increase real wages and real interest rate, which would also increase savings and investment by increasing the value of money. A recent study shows that prices significantly affect the economic growth rate, and the relationship between the two is positive, i.e., lower prices increase demand/supply or quantity and prices or inflation and economic growth and expectations. Among the major factors affecting prices and economic growth are moneysupply, current account deficit, and house-priceindex. Therefore, the Fed's targeting of higher income, demand, and inflation failed to increase real wage expectations and spending, and lower real interest rate, by increasing inflation, never happened during the slowdown. Notwithstanding, if the Fed had committed higher real wage expectations, it would have increased spending, and, savings and investment too by increasing the real interest by committing a lower pricelevel.

A. Two quantity theories for two Worlds

A common observation of the everyday life is that the value of money is assumed to go down or decrease as the time pass, which means the value of onerupee or onedollar falls as we go ahead with the time that they buy less and less as we go through the time and we use higher denomination of a currency to increase demand and growth, but we

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suppose inflation also do increase which lowers the purchasingpower of the realvalue of money and that depends upon the both, demand and supply. If we take demand into consideration, an increase in the moneysupply will increase inflation and inflation expectations with supply-side constraints and full-employment, which is the old-quantity theory of money and is true for a less developed or developing economy with protectionary policies, but when seen from the supply-side perspective, an increase in the moneysupply is likely to lower the borrowing-cost and prices, and improve supply when population growth-rate and demand is going down through time, in short supply may outpace demand [1]. The supply-side argument, increasingreturns and lower prices may be called the special-quantity-theory of money observed in most of more-open-Western-countries Japan, Europe, and the US. This might also be explained with the help of returns to the scale experiencing the economy. The old quantity theory of money has presumed the decreasing returns to scale in the economy, which means prices would increase as a result of expansionary monetaryand–fiscal policies; more moneysupply would increase the price-level, since demand would exceed supply. On the other hand, the special-quantity-theory of money and increasing returns may lower the general-price-level as a result of more money supply and expansion because supply may increase more than demand. By comparing the above two, we find that the old-quantity-theory-of-money may lead to money-illusion and inflation, and may lower demand by lowering the value of money, whereas the special-quantity-theory-of-money and increasing-returns would compensate for the lower population growthrate and low demand by increasing the value of money.

B. Neutral or Natural real-interest-rate

The Fed has constantly said that Core-CPE (Consumer-Price-Expenditure) at 1.5% is near the inflation target (2018), which is in line with the unemployment rate close to 4.9 %, although the growth rate is tepid. However, it is yet unclear that the bank has shifted its official inflation index, the CPE, to the Core-CPE, which might show the increase in the pricelevel due to full-employment and wage-hike since inflation from other sources like transport or oil and food show no price-pressures and loss in the domestic value or purchasing power of the dollar[2]. Currency debasing is debated widely in the Political-circles. The Fed's Fund-rate path demonstrates that it would be near 2-2.25% by 2018, and if we assume the same inflation target, we arrive at a real interest rate of 0.25%, which means that the real-interest-rate would increase and not fall compared to the present condition when nominal Fed's fund rate is 0.25-0.5%, and inflation is 1.5%. Therefore, the real-rate would be 0.5% - 1.5% equals -1% lower than the real rate in 2018. Hence, 3 years down the line, we could expect real rates to be higher than today, at which the investmentspending would decrease and not escalate, and inflation would go down because real rates would be higher than the naturalrate today when spending is low. The current scene explains lower natural real rates when inflation is low and stable a little above zero at 1%, which might need slight tightening to bring complete pricestability by increasing realrates and nominal interest rates. Nonetheless, lowering demand to lower the pricelevel is different from increasing supply and lowering the pricelevel because the former lower employment and demand, whereas the supply increases employment and vice-versa and lower the pricelevel. Therefore, the Fed is expected to find or achieve the real natural interestrate by keeping money-supply loose, and increase supply, and lowering the pricelevel than by keeping demand and the price-level low by increasing the realrates and unemployment [3].

C. The natural rate theory

The natural rate theory says that the interestrate should not produce inflation or deflation so as to make the economy stable because inflation fosters inflationary expectation that is neither good for consumption because aggregate demand would go down, nor for investment because the value of the capitalstock would go down. However, deflation would increase deflationary expectations, but since lower prices would also discourage supply, people would rush to buy the inventories. The expectation that people would delay spending is not acceptable. In addition, lowerprices would again lower interest rate and interest-rate expectations, which would increase supply in the future, which further means price correction or lower prices. Lower borrowing cost is a larger part of the overall cost, which is likely to increase supply and lower prices. The Fed is targeting inflation and has increased inflation expectations which have made the economy costly when there is already a long-term marginalproductivity and real-wages gap. Nonetheless, Janet Yellen has conveyed to the government to increase productivity by investing in education, skills, and innovation. But, what would be the use of increasing productivity when there is already a big gap in realwages and productivity since the 1970s. Paul Krugman supports the stagnant-wages theory [4). Nonetheless, the Fed, too, might help increase realwages by increasing deflation and deflation expectations by keeping the moneysupply a little tight… Or by increasing nominal wages by continuing to lose moneysupply and increasing inflation and inflation expectation which actually reduce demand. Milton Friedman, in his optimal-monetarypolicy, envisaged deflation as the right strategy and maintained that the nominal interestrate should be sufficiently down.[5]. Therefore, the Fed might increase rates again after a complete year to keep the prices lower and lower inflation expectations in the future, but there might be a trade-off between inflation and unemployment, a little higher unemployment at which prices and wages support a higher or increasing real wages which also means lower prices is the right thing to desire for(2018). Wages or real wages should increase to keep demand intact in the face of a lower

population and labor-force-participation rate. Revival in the lagging demand due to low real wages compared to the productivity might also help to increase domesticdemand and spending and economicgrowth…. Nevertheless, in the next five years, we could expect a natural interestrate, not above 2%, which is currently negative… By increasing nominal rates, the Fed would also increase the realinterest rate because inflation and inflation expectations would also go down… But, sharp tightening is not expected because that would also lower growth and growth expectations…

D. Inflation-targeting in the US

The Fed could raise inflation either by increasing demand; higher demand would increase the pricelevel, or reduce supply, lower supply would increase prices, relative to each other. Demand-side would work when employment and real wages would go up, and the supply-side would work for inflation targeting if supply goes down. Both, together, mean that demand should go up in comparison to supply, i.e., demand should go up relative to supply or supply should go down. Moreover, low prices and expectations show that supply is abundant and demand is low. In this situation, inflation targeting would lower real wages and demand; supply would outpace demand, prices would further go down. On the opposite, if we lower inflation expectations, losing moneysupply would also increase real wage expectations, which means more spending and less wage demand due to lower prices could also increase export competitiveness. If prices fell, it would do the increase both demand and also reduce some supply due to lower prices [6], which might help the inflation targeting. However, if the Fed tries to increase inflation by inflation targeting, it would reduce real wages expectations and demand and spending, and higher prices would further improve supply in the event of low demand, and lower prices could fail inflation targeting. Higher inflation may not let inflation targeting work because demand would go down, and supply would increase means lower prices. However, lower inflation expectations might increase inflation in the future by increasing real wage demand and limited supply due to low prices.

E. Inflation would lower demand

Economists think that deflation or lower prices make people delay spending, which is against the sales logic that lower prices would help clear the market… During a sale or low price period, the seller is expected to sell more. That is equivalent to saying that higher prices in the future would decrease demand, and it might also increase savings which are against the spending reason. Higher inflation or inflation expectations in the future could also make people spend less, purchasing power goes down, the number of goods and services relative to the money-quantity or amount in hand goes down, and they also save more for the future. Economists say that the relative comparison between two nominal variables makes a real variable. Inflation hurts demand is very simple to understand when it can reduce demand by increasing the pricelevel. Simply, we know that lower prices increase demand, and higher prices reduce it (Tobin)[7], which is true for both, the domestic economy and the external economy. Lower prices make you competitive in the market. Moreover, Pigou has also put his theory in a similar way that lower prices would increase realwages, thereby increasing demand. Ordinary people talk about nominal variables, but an economist likes to look at the real picture, realwages, real interestrate, realprices of assets, real GDP, and so on, i.e., inflation-adjusted values of variables. The central banks are trying to reduce unemployment by cutting on real wages, external devaluation to increase exports, and real interest rate through inflation to make businesses and investors spend more in order to clear the market, but inflation targeting has also failed to increase domestic demand by reducing real wages and income to increase external demand at the expense of the former at a time of global headwinds and slow growth. Inflation-targeting by the centralbanks has reduced domestic demand by lowering real wage expectations and also increased savings, in the face of higher inflation, for the future.

F. The Opposites

This discussion between the Fed and the government over the use of fiscalspending to increase demand and growth within the economy has turned out to be the point of contention. The Fed Chair's view is that the spending is not opportune as the economy is near full-employment and more spending would increase over-heating and probably would force it to increase nominal interest-rate before than expected, which might be true because at this time it would mean debasing of the currency which is a pet issue amongst the policy-makers, higher inflation is seen as negative for the value of money and demand. But, the economists favor lower real-interest-rate or natural-rate, which means the lower value of debt. However, they forget that lower prices would increase that value of money, and more savings due to lowerprices could help maintain lower nominalrates and real-interest-rate if the economy is below fullemployment and the pricelevel is low. Fiscalspending at this level would increase expected inflation because we have signs of wages firming up because of fullemployment. Nonetheless, higher inflation and inflation expectation could increase exportcompetitiveness in the short-run, but at the cost of lower domestic realwages and higher nominal exchange rates, and lowerimports, which may increase exports, but is not suggestible since domestic demand could go down. Lower consumption means lower domesticwelfare, and depreciation would increase capital outflows that mean domestically, less investment could lower inflation and interest-rate expectations, which is the opposite of what the policy-makers want. They want higher inflation and interestrate to comeout of the liquiditytrap, the opposite [8]. However, if the Fed targets lowerprices and interestrates, it might increase expected inflation and interest rate and

expectations by increasing demand. They are targeting higher inflation, but inflation would increase when demand increase, and that is dependent on realwages and income, which higher inflation might push down. Keynesians too believe that effectivedemand during slowdowns would increase if employment and wages increase. The Fed has committed a higher inflation target and has also targeted higher real-GDP, but other things constant, if inflation increases, it would reduce real-GDP because of a higher deflator. Higher inflation would increase the value of the deflator when GDP is constant. So both, the signals to target higher inflation and higher GDP are half conflicting. Notwithstanding, if we try to keep inflation constant or lower with a higher real-GDP target, that might increase the GDP when the moneysupply, demand, output, and income increase… If we commit higher inflation, it would also lower real-GDP expectations if other things remain constant…

G. Helicopter-money, and, Fiscal and Monetary Policies

The idea of "Helicopter-Money" has its origin in the Keynes's famous advice to a President of a country of digging and leveling pits and paying for labor and wages, which would create effective demand in the economy during recessions, i.e., advocating fiscal-policy during low growth. Some continued this argument with a difference that since this public investment has not actually created a publicasset to justify time and labor spent on the project so it may take another form like helicoptermoney or money under the ground or money in bottles in an attempt to simplify the procedure. Keynes prescribed fiscalpolicy during recessions and liquiditytrap to increase demand, spending, and growth. Nonetheless, he never added that spending should target inflation which the centralbanks are doing. Rather he assumed that more spending would increase demand and prices by increasing employment and wages during the recession.

If the centralbanks would target higher inflation, people's views about real wages might change, and they would save more for the future, which means less spending. Whenever, wages or incomes increase, the money is divided between consumption and saving. Poor people's marginal propensity to consume is higher than other classes who have a higher propensity to save. Developed economies have fewer poor people, and the majority are well-off,, and they spend less and save more out of a given rise in income as far as helicopter money is concerned. A part of this rise, an amount would also be saved, and that depends upon inflation expectations. Higher inflation expectations would increase savings, and it is undeniable that some people might save all. The helicopter money's multiplier would be lower than a fiscalmultiplier because this would increase wages and poor people's incomes with no employment and with a higher propensity to consume. Poor people would spend more. Therefore, fiscalpolicy to create publicassets and spending on wages look more enticing [9].

However, a permanent increase in wages and incomes would increase spending more. This is called by Paul Krugman as the credibility problem. The centralbanks could not commit to a forever increase in moneysupply because inflation would push them to tighten, but that would rest on the supply-side and, open and freetrade might help to overcome the problem of fullemployment and moresupply. Nevertheless, if the centralbanks could commit a permanent increase, people might spend more. Inflation and inflation expectation would make them save more, and lower prices might make them feel richer and spend more. A commitment to increase real wages, in the long run, would increase demand. In the shortrun, if we commit higher wages and lower prices, that might also increase spending in the shortrun. Also true for the longrun, as mentioned before.

Therefore, if fiscalpolicy commits full-employment and wages, and, monetary-policy lowerprices, it is likely to increase spending and growth at a higher pace. Both, policies might do their bit to recover fast.

H. Lower real-wages lead to lower demand and growth

All the countries are trying to increase their per capita income and livingstandard according to the increase in productivity while maintaining their competitiveness with innovations because labor is relatively scarcer,which might restrict the economy's capacity to absorb capital without increasing wages and the general pricelevel, as found in the general quantity theory of money.

Productivity is measured by output per labor (Y/L) and output per capital (Y/K). If these increase over time, we can say that productivity has increased and vice-versa. Productivity can be measured. We need a productivity growthrate to decide the growth of returns to factors of production. We are here talking about productivity that increases supply capacity to sell more at lower prices. In the market, there is a competition to sell at low prices. A direct factor that drives productivity is knowledge or innovation [10].

More moneysupply has reduced the cost of capital with low wages increasing supply despite of low demand, which has lowered the general pricelevel and interest rates pushing the economy at the zero lower bound or liquidity-trap for a longer period. At the zero lower bound, cash hoarding increases, not necessarily in banks, because the value of money goes up in the face of lower prices; moreover, everybody expects higher inflation in the future because it is the our basic observation that prices increase with time and the will to hold unlimited money also increase savings.

The zero lower bound also trims the possibility of increasing investment and employment by reducing the borrowing cost or nominal interest rate, but the central banks are trying to reduce the real interest rate and wages with inflation to incentivize the supply-side and profits which

would also increase the relative international competitiveness to survive in the market-place.

A higher current-account-deficit (CAD) in the most of the developed -world means you have to devalue, either by cutting on nominal wages, interest-rate and prices (internal-devaluation) or by cutting real wages, interest-rate and prices (external-devaluation) by increasing inflation. In internal devaluation,the moneysupply is tightened to lower inflation, to cut down nominal wages and interest rates. In external, the moneysupply is loosened to increase inflation and cut down real wages and interestrates. But, we have evidence of downward-nominal-wage-and-price-rigidity after a point. In most of the developed world, there has been a cut on realwages despite increasing productivity. There has been a real-wages and productivity gap fora few decades.

Nonetheless, when real wages are going down, demand to is likely to remain subdued, resulting in a lower growth rate. But, if, we pay equal to the marginalproduct or productivity, there would be no inequalityissue. Economists favor reward to factors of production according to their product which is the purpose of Economics (explaining incomedistribution). It is among the stylizedfacts that the share of labor and capital should be equal in GDP, and realwages would rise in the longrun. Labor-saving technological progress and higher productivity may be the reason for higher capitalists' profits, but real-wages-productivity-gap is observable in the charts.

I. The US might target higher realwages…

The Fed could try to moderate long-run interest-rate and interest-rate expectations that the economy can weather rate-hikes in the long-run one its current growth without decelerating. A little higher unemployment rate may save the economy from overheating. When the real neutral interestrate has some positive bias, then, the downward pressure on the pricelevel would make savings worthwhile. Capitalists earn profits, save and invest; they have a low propensity to consume, they demand less compared to income. The value of the accelerator would be below. The economy has been demand deficient since the 1970s. The real wages have stagnated low even after an increase in the economy's productivity. Higher real wages would increase domestic demand and income and growth…

The centralbank could commit higher real-wages through tighter labor market and low inflation and inflation expectations through low-interestrate when unemployment is below the naturalrate, and there is an upward pressure on the real wages by lowering the borrowing cost, increasing supply, and lowering the general-price-level because lower prices would increase the value of money and demand and lower unemployment and higher growth. Higher realwages could increase investment in people skills and reduce voluntary unemployment and increase the supply of labor and productivity too. It would increase demand and growth. Nonetheless, lower interest rates due to higher supply and lower price-level could increase real-wages-expectations and increase spending, and lower prices may help increase savings and investment and the economicgrowth rate. Higher real interestrate, since of lower-prices, would also increase return on capital.A little higher realinterestrate would save both little, labor and capital and would help lower demand and prices with a downward bias to make money strong and valuable to increase demand in the longrun when the population growth rate is going down [11]. Higher realwages in this scenario would help maintain demand/supply and the pricelevel, and the real- GDP. Too much expansionary and too much contractionary policy would increase volatility, and in the attempt to control the swings during booms and busts, either we slow too much or grow too much. If the Fed tries to stabilize the value of money at the currentlevel of the prices or increase disinflation or little deflated expectations is would increase the wealth expectations and demand and the economic growth rate. Borrowed from the Milton Friedman's OPTIMAL MONETARY POLICY... The government, too, may contribute by increasing the real wages expectations by demanding more labor and helping achieve wagegains. Nevertheless, if the budget increases on infrastructure and skillsdevelopment or reduces taxes on the lower and middle-class, it could also increase realwages and expectations and spending – consumption and investment. When the value of money increases in the economy, it affects everybody in the same way by way of inflation/disinflation/deflation.

J. Disinflation or Slow Deflation Trajectory

In Economics, we generally assume that the value of money falls in the longrun because inflation increases as the money-supply are increases, the Monetarism. One of its principal proponents Milton Friedman, based his models on the Irving Fisher's Quantity-Theory-of- Money which states that as the moneysupply is increased, either by the monetary and/or the fiscal policy, it increases inflation which also forms the core of the inflation-expectations theory because it assumes that when money-supply is increased it also increases inflation -expectations. This is what the Fed in the US is trying to do to come out of the liquiditytrap, since only higher inflation and inflationexpectations make a case for rate-hikes and hikeexpectationsin short and the longrun. Inflation and interest-rate expectation may influence spending decisions.

The Fed could try to moderate long-run interest-rate and interest-rate expectations that the economy can weather rate-hikes in the longrun on its current growth without decelerating. A little higher unemployment rate may save the economy from overheating, when the real neutral interestrate has some positive bias so that the downward pressure on the price-level to make savings worthwhile. Capitalists earn profits, save and invest; they have a low propensity to

consume. They demand less compared to income. The value of the multiplier would be below. The economy is demand deficient. Since the 1970s, real wages have stagnated low even after an increase in the economy's productivity. Higher real wages would increase domestic demand and income, and growth.

In the liquiditytrap, Keynes advocated government intervention during recessions. He probably prescribed counter-cyclical economicpolicy to stabilize trade-cycles for full-employment and stable-price, too [12].

The Fed thinks that real neutral rates could go up. Currently, it is negative when the nominal rates are still close to zero and lower than 1 (2016). It is expected that the neutral rate might go up probably because a higher nominal rate may lower economicactivity and inflation. Lower prices and higher real rates could increase savings in banks. Money value would increase, and more savings would lower the loans-rate, which means more investment in the future. Lower price or prices expectations are more expansionary, both consumption and savings and investment increase. The Fed might commit a lower price and price-expectations trajectory, in the long run, to increase demand when demand from the population growthrate is going down, which determines the employment, production, and economicgrowth.

Lower cost of supply - lower real interest rate and lower real wages – because of lowerprices and lower population growth-rate has made supply outpaces demand and also lower the pricelevel, and lower oil prices have all contributed to low inflation and low inflation expectation. Fundamentally we are in a lower price regime…

K. (Deflation) They never let it materialize

Higher realrates or lower prices or deflation makes money more valuable in terms of banks deposits and bonds owing zero nominal interest rates. Money becomes more valuable. But, some economists say that lower-price expectations make people delay spending. Lower prices increase the value of money; therefore, people accumulate reserves not because they expect lower prices ahead, especially in the liquiditytrap. People always think that prices will go up and they need to save more for the future. Banks also keep the longrates higher than the short-run rates, which also depend upon expectations of inflation besides just inflation [13]. The centralbanks conduct monetary easing to lower long-term rates first, and then it lowers short-term rates. Banks have kept long-term real interest rates higher than the short-term rates. Since zero-lower bound, nominal rates are zero. We also do need to lower long-term interest rates, which also depend upon inflation/deflation expectations. Lower price expectations would lower long-run interest rates, and inflation would increase the long-run interestrates. Expectations depend upon the right information and more on economic policy.

Keynes is right upto the zero lower bound or liquidity-trap for which he advocates fiscal policy because interestrates are zero. Fisher talked about the real interest rate, i.e., inflation-adjusted rates, and Wicksell natural or equilibrium interestrates at which there is neither inflation nor deflation, which means constant real interest rate [14][15]. The economists still say that there is no unique set of nominal and real interest rates, which might be true. Non-economists people rarely think about the real interest rate. They are occupied with nominal interest rates. The Fed says it is a Wicksellian economy.

Japan might also target real wages to increase demand and supply, and inflation by increasing consumption, and when demand goes up, supply is increased to earn profits by investing more at lower prices. The forecast about the real GDP growth may influence investment decisions. Low price increases demand and supply and consumption, and investment. In the stocks, lower prices are an opportunity to buy at low and sell at high. Lower inflation might lower costs and increase profits. Labor demand fewer wages, and interest rate/cost also goes down in a low price regime. Lower prices too reduce inflation expectations, and people may save less increase spending. Lower prices help demand.

Most of the economists argue that deflation is unending and not lasting, which might be wrong, because when prices fall, too much demand increases, and supply also goes down, which may push the pricelevel up in the future. People know that supply is limited, so they must spend now. Moreover, if they expect lower -prices, they would also save less, which again increases spending. Deflation might not last too long, but may help increase realwages and demand and inflation in the time ahead, if other things are constant.

They never let it materialize. Japan always used policies to increase inflation and inflationary expectations through losing moneysupply and communication. They never accepted deflation as a tool to increase demand; realwages have been low. Although the economy is near fullemployment, but lower rate of population growth is also responsible for low demand and inflation. Nevertheless, Core-inflation has shown improvement (more inflation). Improvement in wages in yen-terms is very slow or low compared to the size of the money-economy in the yen terms. It would need a very-very big stimulus to reach the threshold that could increase wages and spending. Japan could communicate deflation and increase the moneysupply in order to increase realwages and demand.

L. Negative interest-rates

Negative interest rates these days in Europe and then in Japan is the latest unconventional tool of the monetarypolicy to increase demand and growth with a persistent deflationary bias in the general price-level attributed to low demand and spending, consumption, or investment. Deflation is a prime cause of low-interestrates, and the centralbanks are trying to reduce real interest rates in order to adjust to the natural interestrate, which would keep unemployment and inflation at the targeted or NAIRU-level while increasing the growthrate to catch the potential. In their efforts to converge interestrate to the natural rate, the centralbank has adopted the negative interest path when inflation has failed to materialize to cutdown the realrates. The banks, as negative rates sound, are charging their savers and customers for their deposits in order to dis-incentivize savings and incentivize consumption and investment [16]. The negative interestrate used by the central banks has been charged on deposits, but we have not heard banks paying for loans. Negative interest also means a reversal of incentives to invest or spend from the creditor to the debtor. It also means that the banks might have to pay more for spending or investment. Only then is it consistent with the outcome we want, more consumption, more investment (or spending). Is it happening?

M. More on negative-nominal-interest-rate

The negative interest rate adopted by some of the World's developed countries' centralbanks has started a new discussion among analysts and economists as to what would be the interest-rate trajectory for the economies reeling under recession, several rounds, when they have cut down nominal-interest-rate below zero in an attempt to boost consumption and investment spending to increase demand and growth keeping inflation and unemployment low. It is true that several important centralbanks of the developedworld has cut down nominal-interest-rate below zero and are receiving money from deposits, opposite of the usual practice of paying interest rate for their deposits which is primarily intended to boost consumption instead of savings during the recession. But, these banks have missed reconciling consumption and investment, both. They are trying to increase consumption by disincentivizing savings, but, have made no effort to increase investment by also reducing the borrowing cost in the negative, which means banks should literally pay for new loans, which means interest-rate payment for availing loans when they are getting money from deposits. The banks are now earning from deposits, but they must also try to increase loan demand by incentivizing through interestpayment, and that's what negative interest rates should do in order to increase employment, demand, and growth. Only then negative interest would make a complete sense to increase economicactivity because the Capitalist must also be incentivized to increase employment through more investment when the households are encouraged for more consumption. However, if the banks manage to increase consumption without investment, that would create inflation and unemployment, in the place of deflation and unemployment, which is again an awkward position from the viewpoint of stability. Nonetheless, the objective of the monetarypolicy and interest-rate management is to shoot for the natural interest rate at which the economy is on fullemployment, and there is neither inflation nor deflation.

N. Synthesize

In the context of the 2008 Financial-Crisis in the US economy that sent jitters to the rest of the global economies, the long divide between the "freshwater" and "saltwater" economists, also known as "the neo-Classical" and "the neo-Keynesians", respectively, over the rigidity or sticky or no-rigidity of the key economic-variables, could be brought to the light of evidence to understand the view-point of the two schools of thought. The neo-Classicals maintain that the economy, in the long run, could self-equilibrate with the help of change in the real economic variables like, real-wages, realinterest rate, and real exchange rate, i.e., inflation-adjusted variables, while the neo-Keynesians believe in government intervention and sticky or rigid prices to converge the economy to stability. In the earnest efforts to tackle the recession that followed the Lehman-brothers, an investment bank, collapse the Federal Reserve Bank of the US embarked on massive monetary-easing and set inflation targets to achieve the economicactivity, full-employment, and growthrate. Nevertheless, the economy after these seven–years (2017) showed recovery in terms of employment and economic growth, but inflation remained below the target. Even after so much of easing, the economy failed to increase demand and inflation, and the discussion is still on to raise the inflation target, but as we know, inflation is also a kind of tax, and it reduces demand and growth by increasing the pricelevel and the interest rate. Thus, inflation reduces demand. The Fed initially thought that more moneysupply would increase inflation and inflation expectation, but this did not happen as oilprices, which have constrained the growth many times, have gone down due to innovation in crude oil by shale. "Targeting" and "expectations" have been the buzzwords in Economics. Now, the countries target economic variables like prices or inflation, wages, interestrate, exchange rate, and economicgrowth, and also try to shape expectations about the future- values of economic variables. There has been a tradition among the major economies to target higher GDP projections to increase investment. Nonetheless, inflation targeting and exchange rate targeting are also not uncommon. However, the question is still there that which variables to target, nominal or real, and if there is a need for governmentintervention (?) The neo-Classicalsfavour the real economic-variables, but not governmentintervention; however, it is still unclear that the centralbank is a part of the government although independent. Keynes prescribed fiscalpolicy in the liquiditytrap to increase nominalwages and effectivedemand, whereas Pigou recommended increasing

realwages and, probably, the same effectivedemand. Notwithstanding, if we target real variables with the help of monetary and fiscal policy, we might get results or outcomes soon. We might try to affect realvariables since nominal variables confuse the agents. For example, the Fed has committed inflation and also income which might send contradictory signals about real wages and real-wages expectations, which reflect the real position. In this situation, spending would be low, and people would also save more due to higher inflation expectations which during recessions may negatively affect demand/supply and economicgrowth. Conversely, if people see and expect lower prices, they would increase spending because real-wages and real-wageexpectations would goup. Similarly, if the Capitalists see and expect lower prices of investment goods and services, they would increase investment, because the real cost would go down, and real profits could increase. Moreover, if foreign importers see and expect lower domestic prices, they would import more because the domestic real exchange rate would increase, exports would increase. All the three cases above might help increase demand/supply, employment, and the economicgrowth, but with the help of low inflation and inflationaryexpectations and real economicvariables. However, the Fed is trying to do the same with the help of higher inflation and inflation expectations and nominal variables, which have given only limited results and sub-par growth rate. The US has had been the home of many great economists, of which Milton Friedman is outstanding and widely celebrated. He himself proposed "the optimal-monetary-policy" [17] that says that monetary-policy might give better outcomes in terms of demand/supply, employment, and economic growth if the nominal interest rate is set substantially low and there is little deflationary bias in the economy [18]. Moreover, the relationship between deflation and depression is weak, and there are periods of satisfactory growth and deflation in the history [19]. The Fed is indirectly targeting nominal wages, interest-rate and exchange rate through inflation, which misses the outcome of more demand/supply, employment, and growthrate, but if the Fed targets real wages, real-interest-rate, and real exchange rate by lowering inflation and inflationary expectations or through little deflation it might be able to achieve better outcomes, demand, and growth. There has been a real-wage and productivity gap in the US since the 1970s, which the Fed and the government might try to level in order to increase domestic demand and growth [20]. Committing a lower inflation or little deflation path by the monetarypolicy might help increase real wages and domestic demand. Likewise, it would also increase real-return on investment and wealth, thereby increasing supply and growth [21], and, is also likely to increase real-exchange-rate (real-exchangerate equals the nominal-exchange rate multiplied by the foreign country price-level divided by the domestic price-level) and exports, and growth. Friedman has clearly acknowledged that the optimal monetary policy would entail dis-inflation or little deflation and would require a sufficiently low nominal interestrate. In the developedworld, the evidence shows that pricelevels in these countries have gone down even with huge increases in the moneysupply and lower interestrates in the longrun. In the longrun, perhaps lower borrowing cost has helped improve supply and lower the pricelevel. The Fed may review Friedman's optimal-monetary-policy in respect to the relationship between lost moneysupply, lower borrowing cost, more supply, lower price-level or inflation, and realvariables – realwages, real-interest-rate, and real-exchange-rate - for better guidance about the future monetarypolicy.

O. Still, relevant

Keynes predicted the euthanasia of the creditor or rentier of the capital because he thought that land and labor are scarce, but capital has no reason to be scarce, because the centralbank can print money to stoke demand/supply to achieve fullemployment. In the developedworld, the centralbanks have pumped so much money into the system that it has made money so cheap that it pushed interest-rate rock-bottom (Japan, US, Europe). In these countries, capital is cheap and not scarce, at all; interest rates are at zero-lower-bound. These economies are very close to that (Keynes' concept of) euthanasia, when interest rates are almost zero. If we take Japan as an example which has been reeling under recession for the past two decades and interestrate near zero, euthanasia of the creditor seems very plausible. In all the three economies,the interestrate is near zero, and they are also probably in the famous Keynesian liquidity trap in which people accumulate reserves, when the nominal interestrate is zero and cannot fall further, and in the expectation of lower prices forth they delay purchases. Prices reflect scarcity, and higherprices reflect higher scarcity, even prices of labor (wages) and capital (interest-rate). During downturns, both are not scarce as there is a cut down on investment and interestrate (or increase in the moneysupply) and employment and wages (or increase in unemployment and laborforce). In an attempt to increase demand and growth, these banks failed to understand the importance of savings which is also a function of real interestrate (nominal interest rate minus inflation). It has also led to capital-fight. Moreover, in another attempt to make the economy competitive, we have also cutdown on realwages (nominal wages minus inflation). The continuous increase in money supply and inflation has kept real-interest-rate and wages and demand low. Moreover, the slowing population growth rate has also affected demand negatively. The centralbanks are trying to push the economy through moneysupply which is supposed to increase spending and inflation, but this is even going to hurt demand by lowering real-interest-te-and-wages and might not work in the liquiditytrap. Savings also do have a positive effect on demand through lower interest rates and higher investment. Moreover, inflation will also lower realwages. These banks policies might have a negative effect on demand by increasing inflation. The Fed is trying to push

prices up, which is opposite of the argument that increases in realwages will also increase demand, the Pigou-Effect. The effect is also helpful in the liquiditytrap by increasing real wages and demand. Growth-rate of the economy will increase. The Fed should try to release the repressed demand by increasing realwages and stopping inflation targeting, and letting the prices fall to increase demand. Lower interest rates, as they are, will help increase investment. The interest rate in these countries might remain very low, probably zero, for an indefinite period of time (maybe forever) because, in these capital-rich countries, capital is not scarce anymore. Japan is a good example.

Interestrate depends upon the moneysupply, the price level, and expectation of changes in it, because of the pricestability objective of the monetarypolicy of the centralbanks. They manage the moneysupply to adjust the interestrate and demand/supply, which jointly determines the pricelevel or inflation. But, the interestrate, in turn, is also determined by inflation and inflationary expectations, both short-run and long-run. Higher inflation and inflationary expectations also make the centralbanks fine-tune moneysupply and interestrates. Normally the central-banks job is to ensure pricestability, but when the growthrate is tumbling, it might set higher-inflation-targets, because it is a sign of higher demand/supply and economicactivity. Generally, booms and high growthrates coincide with higher prices and interestrates. Nonetheless, busts and slowdowns in the economicactivity and growth-rate call for lower interestrates, but to cut interestrates during down-turn, it is important to tighten during higher inflation; otherwise, it would feed bubbles by increasing the gap between nominal and real prices of assets because of inflation. The fear that losing moneysupply and interestrate might create asset-pricebubbles in the US is baseless since inflation is too low. Moreover, the fear of risky investment because of too low rates is again overdone since banks lend only after assuring the feasibility of the project. Nevertheless, the low-interestrate on retirementfunds also depends on inflation and inflationary expectation, and, the low-interestrate would also mean that inflation in the future could remain low, which means higher realinterest rates, and the argument that pension funds might lose because of low rates may also be overblown because it would also signal that inflation could remain low in the future so that fewer savings would be needed. With oil from the Shale-revolution, that has put the expansion of the US economy in shambles many times before. Lower oil-price expectations in the economy have kept inflationary expectations and interest rates low, which is likely to stay because the US is now a big oil-producing country. Most of the prior recessions in the US economy were associated with oil-price booms and inflation. Lower oilprices are a major contributor to low inflation and inflationary expectations after Shale. Higher oilprices in the future would also make high-cost shaleexploration more viable, and, thereby, more production and supply leading to further low oil prices, inflation expectations, and interest-rate.

II. CONCLUSION

It is worth a thought that economicmodels assume zero inflation in the longrun. Inflation is a short-run deviation from the equilibrium pricelevel. Economists think of the longrun as self-correcting. But when deciding long-run rates, expected inflation plays an important role, because the economy first consumes and then saves for the future; if they expect higher inflation based on the current situation, they would also save more for the future too, and more savings result in lower spending means lower demand and prices. Interest rate would go down. On the contrary, if they expect deflation based on the current condition, they would save less-spend more, which might increase demand and prices, and interest rates. People expect a higher interest rate if there is inflation, because the monetarypolicy would work to control inflation. Generally, prices and interest rates move in the same direction. Expected inflation would increase the long-run rates, higher than the short-run rates. The long-run rates are higher than the short-run rates, which shows that depending on the economic –policy, people expect inflation in the longrun, which is opposite of what the economic models assume that inflation, in the long run, would be lower or zero. Keynes long ago accepted that labor and other factors of production might not be abundant, but capital has no reason to be scarce since the central bank can print money to finance the economy. Gold-Standard off-load was a big move in that direction which was later used to print notes, buy foreign exchange and devalue to gain exports. Keynes foresees capital as not scarce in the longrun. Our zero-interest-rate regimes in much of the developed world do support Keynes's view that capital is not necessarily scarce.

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