

The Importance of Context for the Development of Labour Market Theory and Policy

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Abstract

Labour market theory underlies much of economic analysis with implications for theory and policy. I argue that conventional approaches to the labour market as well as more modern approaches represented by aspects of behavioural labour economics and Keynesian economics are often decontextualized from how individuals actually behave and the institutions affecting their behaviour. Building labour market models with empirically valid assumptions about human behaviour and individuals' decision-making environment casts doubt on key core predictions of contemporary economics, such as: higher wages are bad for the economy; improvements in conditions of work and social support are economically damaging; lower real wages are a prerequisite to increasing macro employment, and workers prefer leisure over work. These models also challenge the view put forth by heuristics and biases type behavioural economists that workers behave irrationally, are biased, and therefore make decisions that are sub-optimal, damaging to themselves and the economy at large.

JEL Codes: D01, D02, E10, E20, 010

Keywords: Context, Assumptions, Behavioural Economics, Labour Markets, High Wages, Policy, Wellbeing

1. Introduction

Context is important when constructing any type of economic theory. When theory is decontextualized from the decision-making environment and preferences and decision-making capabilities of decision makers then the capacity of theory to explain and predict is undermined. This is the case even when the theory generates 'predictions' that match real world outcomes. These predictions carry little or no weight as a causal explanation for particular phenomena because they are derived from decontextualized models. These models are built upon assumptions that have little basis in reality. They are not empirically robust. The importance of context for constructing

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robust economic theory is well articulated by Simon (1959, 1978, 1987; see also Altman 1999) in his approach to behavioural economics. In this paper, I make the case that conventional approaches to labour markets and even some non-conventional approaches exemplified by contemporary behavioural economics are largely de-contextualized thereby often generating misleading analyses and policy recommendations. This is highly significant in that labour market theory underlies much of economic analysis in both the micro and macro domain with implications for the theory of the firm and labour market behaviour and for policies related to, for example, fair wages, unions, minimum wages, social support, labour market regulation, and economic development.

To build robust models of the labour market that facilitates a better understanding of its functioning and which can, therefore, better inform policy, requires theories that are built upon empirically valid assumptions about human behaviour and individuals' decision-making environment. Such models, I argue, cast doubt on many of the core predictions of conventional economics such as that higher wages are bad for the economy, improvements in conditions of work and social support are economically damaging, lower real wages are a prerequisite to increasing macroeconomic employment, and that workers prefer leisure over work. These empirically informed models also challenge the view put forth by heuristics and biases type behavioural economists that workers behave irrationally, are biased, and therefore make decisions that are sub-optimal, damaging to themselves and the economy at large.

In this paper, I critically examine the theory of income-leisure choice, the theory of the firm as it relates to the assumption of effort discretion, and the heuristics and biases approach to behavioural economics (Kahneman 2001, 2003; Tversky and Kahneman 1981) as this relates to individuals' behaviour on the labour market. I argue that these three theories are largely built on unrealistic behavioural and institutional assumptions thereby lacking rigour as an analytical tool and as a basis for public policy. I focus on a more nuanced target income approach as a substitute for the model of income-leisure choice. I argue that target income is the more powerful predictor for labour market behaviour, but this does not deny the importance price as one of the drivers of such behaviour. I also interrogate the assumption that effort input is fixed as some level (usually at some rationally determined optimal level) in conventional theories of the firm. The notion that effort is a variable derives from research on x-efficiency and efficiency wage theory. I also critically assess the assumption that irrational behaviour by workers results in them making choices that cause both individual and social harm by contributing to increased levels of unemployment and their persistence over time. I argue that individual choice behaviour tends not to be irrational. Rather, flawed decision-making environments might generate errors in decision-making.

2. Decontextualized Economic Theory

Decontextualizing economic theory from the reality that it purports to explain is strongly related to the dominant methodological tradition that Friedman (1953; see also Altman 1999) helped establish in his article on economic methodology. Although Friedman strongly advocated that economic theory should focus on explaining and understanding fundamentally important economic issues this should be underpinned empirically. But he maintained that the assumptions that are the building blocks of any theory need not have any relationship to socio-economic reality. They can be dissociated from the real world. This goes beyond any reasonable discourse about the importance of making simplifying assumptions, which carries resonance with social science researchers in general. Rather, Friedman argues that the simplifying assumptions themselves need not have any connection or basis in reality. Hence, for example, assumptions one makes about labour markets and the economic agents embedded in these markets need not be derived, even in a simplified form, from the reality of labour markets. Indeed, efforts to draw upon such a reality can result in confusing the researcher.

Friedman argues, with regard to efforts to determine the realism of a model's or theory's assumption that it:

...is fundamentally wrong and productive of much mischief. Far from providing an easier means for sifting valid from invalid hypotheses, it [testing for the realism of assumptions] only confuses the issue, promotes misunderstanding about the significance of empirical evidence for economic theory, produces a misdirection of much intellectual effort devoted to the development of positive economics, and impedes the attainment of consensus on tentative hypothesis in positive economics (1953, 14).

Friedman maintains the opposite is best practice methodology, namely that "...wildly inaccurate descriptive representations of reality, and, in general the more significant the theory, the more unrealistic the assumption (in this sense)" (*ibid.*). Hence the building blocks of theories or models should be decontextualized to be robust, from this methodological perspective.

What is critically important as a determinant of the scientific robustness of a theory, in this Friedmanite approach, is its ability to analytically predict how well the dependent variable correlates to the independent variables. This would be the case even if these variables are completely decontextualized from individuals' decision-making capabilities, preferences, and their decision-making environment. Correlation is in fact substituted for causal analysis. Although Friedman argues that theory should be modified if it does not fit the facts, his default is to double-check the data for errors, especially when the facts are inconsistent with the default theory. For example, if the facts don't support the hypothesis that minimum wages have no effect on unemployment, one should check the data as opposed to thinking through a revised theory which could make sense of the facts in hand. When theory is modified, then it is done so by adjusting the independent variables but without due consideration with

how they relate to the reality within which the theory is embedded. An example of this would be introducing psychological variables into one's model without determining the empirical validity of such a modification (Berg and Gigerenzer 2010; Leibenstein 1983). What counts is the extent to which this improves the strength of the model's analytical prediction. This speaks to aspects of behavioural labour economics where theory remains decontextualized. Improving a model's or theory's correlation does not improve a theory's scientific validity when it remains decontextualized.

Simon (1959, 1978, 1987; see also Altman 2001a), articulating his methodological narrative of behavioural economics, challenges the Friedman-informed conventional methodological wisdom. He argues that grounding or contextualizing a theory's assumption in reality is vitally important for a theory's scientific validity. It is reality grounded economic theory as opposed to theory based on assumptions that have no basis in reality that distinguished and distinguishes Simon's perspective of behavioural economics from that of conventional economics, and also from that of contemporary behavioural economics (heuristics and biases).

Simon elaborates on the importance of the realism of one's modelling assumptions:

... behavioural economics is best characterized not as a single specific theory but as a commitment to empirical testing of the neoclassical assumptions of human behaviour and to modifying economic theory on the basis of what is found in the testing process. And not all of the economists who hold a behavioural point of view also hold a common theory, or are all preoccupied with examining the same parts of the economic mechanism (1987, 221).

Simon also emphasises the importance of the realism of one's assumption with regards to the decision-making environment as this affects the decision-making process and the decisions made. If one incorrectly assumes that the decision-making environment is fit for purpose then one's causal analysis will probably be incorrect by ignoring, assuming away, what might be a key determinant of decisions and outcomes. Here Simon points to the institutional context of decision-making. Simon argues that "economic theory must be reformulated to take account of the social and legal structures amidst which market transactions are carried out" (1979, 499). North makes a similar critique of conventional economic theory where it is all too often assumed, "not only that institutions are designed to achieve efficient outcomes, but that they can be ignored in economic analysis because they play no independent role in economic performance" (1994, 360). The conventional wisdom naively assumes that market forces yield efficiency facilitating and promoting institutions (see also Altman 2008; Olson 1996). But here again theory is arbitrarily decontextualized.

A key point made by Simon is that the realism of one's simplifying assumptions plays a vital role in determining which theory, amongst a set of theories, which predicts equally well, is the most robust causal theory. Making false modeling assumptions will yield false causal analysis, even if the analytical predictions are strong. One ends up with spurious correlations that have the appearance of providing proof of a robust scientific analysis (see also Leibenstein 1983). This point is especially telling for labour markets where the subject of interest are human beings whose context is

quite different from apples, oranges, and computers, all of which have no mind of their own and can't respond or create market incentives or decision-making environments (Solow 1990).

3. Income-Leisure Choice in Context

The classical model of income-leisure choice purports to explain labour market behavior in the context of rational or smart individuals making well informed choices when choosing whether or not to seek employment and, therefore, to work on the labour market. This model or theory is taken to be one which actually explains real world behavior across time and space whilst making some simplifying assumptions about human choice behaviour. Moreover, and quite importantly, from the contemporary economics perspective, this model is supposed to predict labour market behaviour. And, as it stands, it informs public and private labour sector market policy. However, there is little evidence that this model, which is built upon traditional price theory, does a good job of explaining labour market behaviour or even in predicting it (Altman 2001b; Pencavel 1986). And, even when the predications appear to be reasonable it is not clear which variable in the model drives the prediction. As importantly, the variables driving the analytical predictions in this model have little basis in reality (are decontextualized) and, therefore, have no strong foundation to provide robust causal analysis and reasonable public policy recommendations.

It is assumed that individuals are typically motivated by price and income considerations when deciding whether or not to seek employment and whether or not to accept a job. Other factors might also be in play, but they are overwhelmed by price and income variables. Changes in the price of 'leisure' is what drives labour market decisions as well as changes in real income. The price of leisure is proxied by the real wage rate or the opportunity cost of leisure (not working on the labour market). Leisure is assumed to be a normal good and for some a superior good—which is a core assumption in this model. Therefore, it is either implicitly or sometimes explicitly assumed that individuals typically prefer not to engage in market work. They have a preference for leisure time over market work. Increase the real wage rate, then one would expect that labour supply should increase as the price of leisure increases—one purchases less leisure and one has more time left over to work on the labour market. Even if one accepts these decontextualized assumptions, this prediction is highly conditional on the different possible consequences of increasing real wages (or the price effect) on labour market behaviour.

The price effect is comprised of the substitution effect and income effect, just as it is in the market for apples or laptops, except here, in the labour market, we are dealing with thinking and more or less empowered human beings. The substitution effect always results in a decrease in the demand for the higher priced product, in this case leisure, hence resulting in an increase in labour supply. But the income effect, the consequence of increasing or decreasing real wages, results in an increase or decrease

respectively of the normal good, in this case, leisure time. Increasing real wages results in an increase in labour supply (substitution effect), but the resulting increase in real income yields a reduction in labour supply. The net effect of increases in wages depends on whether or not the substitution effect outweighs the income effect. But this model provides us with no guidance as to when one should expect the income effect to outweigh the substitution effect (Pencavel 1986). This analysis tends to be *ex post*: when increasing wages coincide with decreasing labour supply, one argues that the income effect outweighs the substitution effect and *visa versa*. But this type of argument is not causal or truly analytical. Robust causal analysis requires that one can pinpoint when and why one effect should outweigh the other. These variables would have to be contextualized to do so.

An additional critical element of income-leisure choice model is the prediction that any increase to labour's income through income support, referred to as a demogrant (unemployment insurance, social assistance), socialized medicine, daycare provision, and the like, will reduce labour supply. There is no change in the relative price of market work and therefore no substitution effect, but there is a clear income effect of increasing the demand for leisure time. This reduction in labour supply will have the effect of increasing the wage rate and, thereby, increasing firms' average costs, making them and their economies less competitive, according to conventional economics. An additional negative externality of this type of income effect is to increase the bargaining power of labour, which will increase the 'equilibrium' real wage by increasing the reservation wage of labour, further increasing firms' costs and further reducing their competitiveness. In terms of policy, this theoretical narrative suggests that to improve the competitiveness of an economy one should eliminate demogrants and other initiatives that increase the equilibrium real wage rate. These arguments are critically addressed in the section below.

An alternative model of labour supply that is empirically grounded is a target theory of labour supply where, what motivates decision-making, is the target income of decision-makers (Altman 2001b). This target income is informed by a variety of factors. Once one can establish what the target is, then one can explain and predict supply side labour market behaviour. An important component of this theory is recognizing the reality that for most people working on the market is not an inferior good. Rather, working on market is preferred to leisure and even preferred to working off the market – if one has a choice (Altman 2001b; Frey and Stutzer 2002; Helliwell and Huang 2011). For example, many women would prefer to work on the market but can't because of domestic responsibilities which their partners will not or cannot take on. Moreover, market work generates utility or satisfaction in and of itself. In this case, increasing income (demogrants) can't be assumed to generate a reduction of labour supply, and the income effect generated by higher real wages need not yield a lesser supply of labour.

A target model assumes that individuals have a real target income and will work as much as required to realize that income. Once, this target is achieved then one can

predict that labour supply will be reduced, all other things remaining the same. In this theoretical narrative increasing the real wage rate will not increase labour supply if target income has not yet been realized. Labour supply is probably already maxed out. And reducing the real wage rate will not reduce labour supply if the target has not yet been achieved or if the cut in wage reduces income below the target. Individuals, typically, cannot simply walk away from a job because the wage rate falls. They can't afford to. Moreover, individuals attach utility to working. Also, even if the real wage rate yields an income above the target, this does not imply that labour supply will diminish in the longer run when real target income increases over time, which appears to be the case. The target income approach accommodates these realities. An individual's target income appears to dominate any possible price effect. And any embedded income effect is not of any importance when market work is not an inferior good.

A critical assessment of the conventional income effect narrative is quite important from a target income approach, since demogrants cannot automatically be predicted to reduce the supply of labour. Labour supply will be reduced only if target income has been achieved and also if the positive utility from work is outweighed by the utility gained from moving into leisure and/or non-market activities. So, even if target income is exceeded through the demogrant, there can be no expectation in and of itself that labour supply will diminish if market work generates utility. Two important context related factors are to be emphasized here that tend to be ignored in contemporary economics: 1. The importance of target income to labour supply determination; 2. The extent to which market work is a normal good, at a minimum, generating positive utility in and of itself. In this case, increasing demogrants would increase the wellbeing labour without negatively impacting on labour supply. On the other hand, reducing demogrants might increase labour supply as workers would need to replace demogrants with market income. This is also what conventional theory would predict, but for different and decontextualized reasons.

Some these arguments are illustrated in Figure 1, where we have the classic textbook backward-bending labour supply curve for the individual. This curve illustrates increasing labour supply as wages increase up to the point where the income effect outweighs the substitution effect. This is given by point F. Thereafter, the supply curve is negatively sloped. But there is no theory as when and why there is with backward bend to the labour supply curve. One illustration of a target income labour supply curve is given by the perfectly inelastic labour supply curve (LS A). For this curve, increasing real wages has no effect on labour supply when target income has not yet been met. And one assumes here that workers are supplying labour at some maximum to realize their target income. All other things remaining the same labour supply would diminish once target income is reached and further increases in wages allow workers to meet their target income whilst supplying less labour to the market. This would be especially the case, when workers are working 6–7 days per week at 10–14 hours per day, which was the case in the nineteenth century in many industrializing economies (Roser 2018).

into a critical discussion of whether or not one should expect that increasing wages should negatively affect the competitiveness of firms, which is the prediction of conventional economic theory.

4. Higher Wages and the Firm

Conventional economic theory assumes that higher wages increase average costs of production, thereby reducing the competitiveness of firms and reducing employment. But this argument builds on the assumption (which is not evidence based) that firms are as organizationally efficient as possible. It is assumed that firms tend to be x-efficient in production (Leibenstein 1966). Firms are doing the best that they can, given the assumption of profit maximization. Fundamentally, it is assumed that all firm members are working at some fixed level (often assumed to be a maximum) in terms of the quality and quantity effort per unit of labour input. This includes the labour of managers and other members of the firm's leadership structure. This is not an empirically informed assumption. It is not contextualized by how firms operate and how labour responds to its incentive environment. But this assumption underlies economists' low wage policy prescriptions without contextualizing their recommendations. Hence, economists critique policy that would increase real wages, such as unions, minimum wages, social support, unemployment insurance and any form of demogrants. It is not the case that conventional economists (including many mainstream neoclassical) do not support these measures, but they make the case that such policies carry with them significant economic costs such as increased unemployment and the reduced the competitive position of the firm.

A fundamentally important point made by Leibenstein (1966, 1979) is that firms tend not to be x-efficient. Much depends on the competitive environment and the incentive environment within the firm. Whether or not x-efficiency exists (effort is maximized), is an empirical question. The evidence suggests that a more appropriate simplifying assumption is that x-efficiency exists. And this can have significant implications for analysis and policy. Leibenstein focuses on x-inefficiency based on managerial preferences and the competitive environment within which their choices are embedded. But this model can be extended to incorporate the behaviour of all members of the firm, inclusive of workers (Altman). It can also be extended to incorporate technological change (Altman 1992, 1996, 1998, 2005, 2016). In the original Leibenstein model x-inefficiency (less than maximum effort input) results in high average costs. Management works sub-optimally (has a preference leisure). This yields less effort input in the firm overall, yielding lower productivity which, in turn, generates higher average and marginal costs.

This point is illustrated in equation 1, below, where AC is average cost, w is wages which is a proxy production costs, and Q/L is average productivity, output divided by labour input. The latter incorporates effort inputs. Decreased managerial effort results

in lower productivity which, in turn, results in higher average costs. If markets are protected, x-inefficient firms can survive and even prosper, especially with lobbying garnering government intervention in terms of tariff and subsidies. This could result in higher costs to consumers and, thereby, in a lower standard of living to the population at large (and, related, deadweight losses).

$$AC = \frac{w}{\left(\frac{Q}{L}\right)} \quad (1)$$

An extension of this model pays closer attention to the incentive environment within the firm and the nuanced relationship between how the firm is managed and its employees (Altman 1992, 1996, 1998, 2009, 2006a, 2016; see also Akerlof and Yellen 1990 on fairness and efficiency wage theory). In this case, effort is explicitly a variable input with regard to members of the firm hierarchy *and* employees. In this scenario, w is a proxy for production costs, incorporating the incentive environment within which employees are embedded. One component of the incentive environment is the level of real wages. There is a positive relationship between the two as it is costly to improve this incentive environment. Improved incentives positively affect effort inputs and vice versa. Here, the level of x-efficiency is affected and is a function of the quality of the incentive environment. If w increases, so does effort input which, in turn, increases productivity or Q/L . In this more nuanced x-efficiency model, the possible relationship between w and technological change is also recognized. Increases to w incentivizes firms to adopt more productive technologies, which might otherwise not be adopted, so as to remain competitive (Altman 2009). Therefore, as w increases productivity can be increased through increases in the level of x-efficiency and through induced technological change. In the conventional economic model, any increase in w increases average cost as firms are assumed to be x-efficient or at least effort inputs are assumed to be fixed. And technological change is assumed to be independent of increases in wages and overall improvements in the incentive environment. In the extended x-efficiency model, increases w need not affect average costs since such increases can be neutralized by increases in productivity. On the other hand, when decreases in w are accompanied by productivity decreases, lower levels of x-efficiency need not result in increased average costs. Both high and low wage firms, both high and low level x-efficient firms, can be cost competitive, operating at the same average cost. One has a form of multiple equilibrium (Altman 2016). In this scenario, the impact of higher or lower wages, for example, on the competitiveness of firms and employment depends on the incentive environment of the firm and the extent to which effort is a variable and technological change is endogenous to the incentive environment of the firm.

Some of these points are illustrated in Figure 2. In conventional economics increases in wages result in higher average costs as given by AB. But in the extended x-efficiency model, the relationship between wages and average costs can be linear and horizontal whereby increasing or decreasing wages have no effect on average costs (given by AF). Changes in wages are neutralized by changes in productivity given by

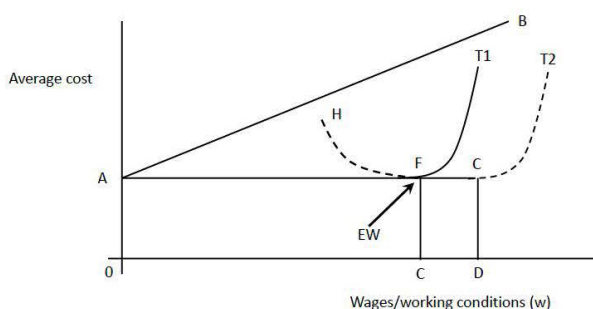


Figure 2: X-Efficiency and Sustainable High Wages.

changes in the level of x-efficiency. Further wage increases can be neutralized by induced technological change, shifting the average cost curve from AFT1 to AFT2. In this narrative increasing the minimum wage or increasing the bargaining power of labour need not have the negative economic effects predicted by conventional economic theory, as the firm moves along average cost curve AF, not AB. In the efficiency wage literature (see the section below), on the other hand, there is a unique equilibrium wage rate given by F (0 A) (Akerlof and Yellen 1990; Altman 2006a; Leibenstein 1957). A lower or higher wage increases average cost. But the efficiency wage exceeds the market clearing wage rate.

This context driven modeling narrative, has important implications for analysis and policy. From this modeling perspective one cannot assume that increasing wages is bad for the economy. One cannot argue, therefore, that increases in demogrants, by increasing the reservation wage is bad for the economy. Relatedly, one cannot predict with complete confidence that minimum wages and unions will cause economic harm by reducing the competitiveness of firms and by reducing employment. Policies that improve the material wellbeing of workers and their families can actually incentivize improvements in productivity by increasing the level of x-efficiency and inducing technological change. Welfare improving public policy can also have the effect of increasing the size of the economic pie. What becomes of critical importance is how firm members and government can facilitate firms' improving productivity so as to improve the wellbeing of firm members across the board whilst assuring that such firms remain competitive. It is important to note that this type of modeling scenario is consistent with the evidence that suggests that well thought out minimum wages, unemployment insurance, and unions focusing on improving working conditions and maintaining their firms' competitiveness tend not to have the negative economic consequences predicted by conventional economic theory (Akerlof and Shiller 2009; Atkinson and Micklewright 1991; Brown, Alessio, Merkl, and Snower 2014; Card and Krueger 1995; Dube 2019; Freeman and Medoff 1984; Onaran, Guschanski, Meadway, and Martin 2015).

5. The Psychology of Unemployment

A key assumption of conventional economics, as with in more non-conventional methodological domains, is that higher wages is an obstacle to increasing employment in the long run, but also with respect to facilitating lifting the economy out of an economic downturn. But there are psychological roots to this narrative. The problem is that these roots are not contextualized. They are simply broadly accepted as a robust assumption, one which is repeated generationally especially since World War Two. But there are different approaches to this assumption. In one classical conventional perspective, one assumes that workers are unemployed because they wish to be so, given the choices that they make, choosing “leisure” over work (Friedman 1968). Unemployment is *de facto* voluntary. Another approach championed most recently by Akerlof (2002) is that although unemployment is rooted in wages being too high, this unemployment is both involuntary and rational. The rationality assumption is important in Akerlof’s radical critique of those academics who maintain that Keynesian economics has no basis in robust economic theory, it being rooted in assumptions of irrationality, where the latter is linked to the notion of money illusion. Here, workers can be persistently fooled into accepting lower real wages to boost employment through pro-active fiscal and monetary policy. Being more realistic, it is argued by ‘classical’ conventional economists, one should assume that rational workers won’t be fooled. This yields a narrative on the ineffectiveness of pro-active demand-side government policy and persistent voluntary unemployment.

But Akerlof argues that these conventional assumptions are wrong; they are not empirically based. They don’t have empirical validity (Akerlof 2002; Akerlof and Shiller 2009). He accepts that real wages must fall to increase employment. But he argues that employment that is a product of too high wages is not voluntary and, also, these involuntarily unemployed workers are rational. Workers are not willing to cut their own real wages to secure employment. But, he argues, workers are willing to accept lower wages that are a product of mild inflationary monetary policy. If inflation rates are low, rational workers are not expected to notice the price rise. It is not worth calculating the diminution in the real wage rate in this scenario. Hence, it is rational for workers, in terms of utility maximization, to accept lower real wages when the rate of inflation is low. Akerlof is, in effect, making a case for rational money illusion. Akerlof and colleagues support this argument with evidence from economic experiments (Akerlof, Dickens, and Perry 2000). Therefore, it is government’s responsibility, and within its capacity, to increase employment through carefully administered demand side policy.¹

¹ This is similar to Keynes’ (1936) argument in the sense that he also argued that lower real wages are required to increase employment. He adhered to the ‘classical’ assumption that the marginal product of labour curve is subject to diminishing returns, where more employment yields lower marginal product requiring a lower wage to achieve more employment. But Keynes assumed that they would knowingly accept lower real wages if this was achieved

Another rationality based critique of conventional economics is rooted in efficiency wage theory, pioneered by Leibenstein (1957) and extended by Akerlof (2002; Akerlof and Yellen 1990; Altman 2006a). The key point here is that effort is a variable in the production function, as it is in x-efficiency theory, discussed above. And effort input is positively related to the real wage rate (an empirically contextualized assumption). But it is also argued that there is a unique real wage (efficiency wage) that minimizes average and marginal costs of production. This unique real wage is a rational choice based on workers' rational choices related to how well or poorly they are treated and management's response to workers' anticipated behaviour, given effort discretion. This unique rationally determined efficiency real wage is *assumed* to be above the market clearing real wage. Therefore, one ends up with voluntary unemployment which is rationally determined because of workers' rational labour market behaviour (workers retaliate against employers when being poorly treated in a manner that reduces firms' short and long term productivity). If effort discretion was somehow eliminated then a sustainable lower level of unemployment would be generated.

Akerlof's behaviouralist resolution to the efficiency wage determined higher level of unemployment is active demand management policy with a mild inflationary bite that would effectively lower the unique efficiency wage (Akerlof 2002; Akerlof, Dickens, and Perry 2000; Akerlof and Shiller 2009). With Akerlof's modeling, one has the resurrection of the traditional Phillips' Curve relationship wherein inflation rates are positively correlated with increased employment. But Akerlof specifies that only mild rates of inflation could causally be related to increased employment as aggregate demand increases.

The above all relate to alternative explanations of involuntary unemployment, assuming that too high wages are the ultimate cause. But an alternative explanation, built on x-efficiency theory, and in a more realistic context, does not rely on real wages being the causal culprit to relatively high levels of unemployment. Fundamentally, if reduced and increased real wages are consistent with the same average cost, as changes in wages are neutralized by changes in the level of x-efficiency and induced technological change, increasing wages and effort discretion are not barriers to increased employment. Here, there is no arbitrary assumption of a unique efficiency wage. There is an array of real wage rates consistent with an array of average costs (Altman 2006b, 2016). Public policy need not concern itself with reducing real wages to increase employment. If anything, public policy should be concerned with facilitating increasing x-efficiency and technological change in the economy. This being said, when there is an economic recession or depression that is demand side related, then increasing employment requires proactive demand side policy. High wages cannot be the culprit they are assumed to be in contemporary economics. Too high real wages do not the cause relatively excessively high levels of unemployment. In this

through demand led government policy where inflation reduced real wages 'equitably' across the board in anticipation of increased and more secure employment.

narrative inflationary policy is not a cause of increasing employment as it would be in Akerlof's modeling. But it is consistent with a Phillips Curve-type relationship (which is not a causal one here) wherein there is a positive relationship between inflation rates, related to active fiscal policy, and increasing employment.

Economists active in behavioural labour economics research are also adding psychological variables, for example, to their models to add realism to their modeling narrative since non-economic variables are introduced. One theme in this literature is to provide a better explanation for real wage rigidity of too high wages, which are argued to be core to an explanation to persistently higher than necessary rates of unemployment, even in the long run, controlling for business cycle effects. This particular narrative has nothing to do with effort discretion. It is related, however, to the notion that individuals tend to be somewhat irrational or biased in their behaviour. They are not behaving as they should according to neoclassical norms. Moreover, they end up making decisions that are not in their own best interest (sub-optimal) (Babcock, Congdon, Katz, and Mullainathan 2010). This follows in the tradition of Kahneman and Tversky's (2003, 2011; Tversky and Kahneman 1981) heuristics and biases approach to behavioural economics and in the tradition of the nudging approach to behavioural economics and policy put forth by Thaler and Sustein (2008). A basic example of this behaviour is individuals rejecting a job offer at a real wage lower than what was earned previously, due to the unrealistic expectation that they will get a job offer at a higher wage in the near future. Workers fail to recognize that the objective reality of the job market has turned against them and they need to adjust to changes in their objective circumstances. This would be an example of overconfidence bias. This behaviour could also be explained by loss aversion (another bias) wherein workers regard a lower wage as a loss, yielding a substantive reduction in their utility. These individuals should know better. But they are stuck in a sub-optimal equilibrium choice domain. Hence, one has the policy prescription of de-biasing workers to the newer lower wage environment within which they are embedded. One suggested solution to this dilemma is to provide workers with short term wage loss insurance so as to ease the pain of transitioning to the required lower real wage rate environment. In this psychologically enhanced model, it is assumed that workers are not only biased and possibly irrational but also, relatedly, that there are jobs available for them if only they agree to lower their reservation wage.

The assumed causality embedded in this narrative is that one has persistent high unemployment, and this is correlated with real wages that are inflexible downward, hence it is the downward inflexibility of real wages that is largely to blame for the high unemployment. The contribution of this modelling narrative is to introduce psychological variables into the equation. But there is no clear evidence that it is the inflexibility of real wages that is the penultimate cause of unemployment being too high. The specified psychological variables might be simply generating spurious correlations as opposed to causal effects (Berg and Gigerenzer 2010).

The heuristic and biases approach to labour market decision making does not deny the importance of inaccurate information and information processing costs as possible causes of errors in decision-making. But it focuses on cognitive biases as the key source of problems. It is also assumed that the demand side is not a problem so that lower real wages will translate into increased employment, and it is assumed that there is no negative efficiency wage effects of lowering real wages that would negate any cost benefits to firms accruing from lowering the real wage.

But in the bounded rationality approach to behavioral economics, originally rooted in the work of Simon – where individuals are largely rational and smart, correcting information errors, more accurately framing information, providing less costly access to information, reducing job search costs, improving individual capabilities to engage in job search, job re-training, and addressing depression induced lack of confidence – is of greater importance to reducing long-run unemployment than debiasing workers. From this perspective, correctable errors in decision-making and inadequate capabilities amongst the unemployed are thought to be the larger problem. Also, the focus here is not on cutting wages, but rather on providing workers with the skills sets to be employed in well-paid jobs that are also compatible with firms' competitiveness on the market. And, given optimal conditions on the supply side, job offers must be available to the job searchers. Otherwise, these individuals will remain unemployed irrespective of ideal supply side conditions that explicitly deal with decision-making problems related to cognitive, informational, and transaction costs issues.

Another domain where behavioural economics has sought to fill some causal gaps is on the effect of unemployment on the human capital stock and the quality thereof of workers and their families. This is largely ignored in the economics literature where it tends to be assumed that the workers' human capital stock is unaffected by being unemployed or the length of time of being unemployed. In this way, any issues related to the incompatibility of real wage levels and productivity can be assumed to be a problem of real wage rigidity. The evidence is quite clear that long term unemployment diminishes a worker's human capital stock. It also diminishes and depreciates a worker's emotional human capital (Darity and Goldsmith 1996; Karsten and Moser 2009). In other words, being unemployed makes workers less productive through no fault of their own. And the depreciation of emotional human capital stock has the same effect. It also tends to diminish the capacity of workers to engage in searching for employment, *ceteris paribus*. This, in turn, tends to increase unemployment. The modeling narrative here, which is better empirically contextualized than in conventional economics and the heuristics and biases narrative, points the causal finger of persistent unemployment generating structural obstacles to increasing employment, especially employment at higher real wages. It also points to efforts to quickly restore employment, to rebuild human capital stock and emotional stock, as superior policy instruments to increase employment especially at welfare improving levels of higher real wages than efforts to cut real wages or convince workers that accepting lower real wages (lower reservation wages) is best, from the perspective optimizing the wellbeing of society at large.

6. Conclusion

Much of current economic modeling of the labour market is decontextualized from real world labour market behaviour. Hence, theories make analytical predictions and policy recommendations that can be highly misguided, with detrimental effects on the wellbeing of the population at large. Fundamentally, economic theory tends to be deductive with largely no interrogation of the assumptions from which the theory is constructed or deduced. One aspect of the importance of context is related to the Herbert Simon perspective on behavioural economics. He emphasizes the importance of the realism of modeling assumptions for the construction of robust models. Better contextualized models can make a radical difference in how we understand the workings of labour markets and public policy as well as informing decision-making within firms by employers, management, and workers. Context also matters when attempting to determine which model best explains economic phenomena. Two models might appear to provide equally valid analyses in terms of economic predictions, but the model that is deduced from reality-based assumptions, that is better contextualized, is the most reliable model with significant implications for policy (Leibenstein 1983).

I exemplify the importance of labour markets in context by focusing on the theory of labour supply, the importance of effort discretion for labour market behaviour, and how psychological variables might affect decision-making. A unifying theme in my narrative is the predicted impact of high or higher wages on labour market behaviour and economic performance. A contextualized model of labour supply suggests that labour supply is driven by income and other targets set by employees and their family and by the fact that for most people market work is not the inferior good it is assumed to be in conventional economics. Also, the more realistic assumption of effort variability allows us to better understand why higher real wages, be they market determined or affected by minimum wage legislation, unionization, and other institutional factors, should not be expected to have the negative consequences on employment and competitiveness predicted by conventional economics. To the extent that high or higher real wages are not the obstacle to increased employment in either the short or long run (given effort variability and a more nuanced and contextualized modeling of the incentive environment of the firm), then introducing psychological variables to better explain the persistence of high or higher real wages does not serve to enrich our understanding of persistent relatively high levels of unemployment. Other variables must then be taken into consideration. But psychological variables can serve to better explain why persistent unemployment can reduce traditional human capital stock and emotional capital having deleterious effects on productivity and real wages.

The different analytical predictions emanating from decontextualized and contextualized models can be quite profound. Overall, a contextualized perspective on labour markets makes for more robust theories with significant implications analysis for firm-level and government policy and, therefore, for the socio-economic wellbeing of the population.

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