

INSIDER-OUTSIDER LITERATURE - AIMS AND ACHIEVEMENTS

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Introduction.

In recent years a growing body of literature has developed in macro labour economics focussing on the distinction between insiders and outsiders and the economic implications of this disparity. In such work, insiders are generally held to be currently employed workers (at a given firm) and outsiders are those currently unemployed. From such an analysis comes, it is claimed, explanations and possible solutions to current unemployment problems. Our aim in this paper is to offer an analysis of the two quite separate paths that this research has taken, discussing their respective aims and achievements, with critical comments where justified.

In section one we assess the "hysteresis" work of Blanchard and Summers, whilst section two considers Lindbeck and Snowers research. Both of these sections contain a brief insight into the theoretical basis of the relevant models and a critical appraisal of them. Finally section three offers some concluding comments and possible further research developments.

Section One-Insider-Outsider analysis and Hysteresis.

The recent European employment experience has led many economists to believe that we are observing hysteresis in the labour market. What this entails is that far from there being a natural rate of unemployment to which the economy will return we are experiencing an employment ratchet effect: once unemployment falls to a new low this low then becomes the economy's equilibrium position. Blanchard and Summers have developed an insider outsider model to support this view.

The key assumption of this work is that only insiders are involved in the wage setting process—outsiders have no direct influence. However what is meant by insiders is a somewhat flexible concept. Taking a simple model we can analyse the basic implications. Assume there are many firms in the economy, and demand facing each firm is a function of aggregate demand, which itself depends on real money balances and the firm's own price relative to the general price level. Assuming that the only potential source of fluctuations in the economy is nominal money, and that our variables of interest are employment (n), output (y), price (p), nominal money (m) and the wage (w) (an i

subscript refers to firm i , an unsubscripted variable is economy wide), then formally the demand facing firm i is given by

$$(1) y_i = (m-p) - a(p_i - p)$$

If firms operate under constant returns to scale $\Rightarrow y_i = n_i$ and given constant marginal costs and constant elasticity of demand, profit maximisation implies $p_i = w_i$.

From this we can obtain a derived demand for labour for firm i of

$$(2) n_i = (m-w) - a(w_i - w)$$

Now associated with each firm there exists a group of insiders with membership n_i^* ; only they are involved in wage bargaining and they have priority in employment. Assuming that in each firm the group of insiders is sufficiently strong to set the wage unilaterally, and sets it so as to make expected employment equals membership size we have

$$(3) E(n_i) = n_i^*$$

Thus from (2) we have that $E(m) - E(w) - a[w_i - E(w)] = n_i^*$. Given that all firms and groups of workers are the same and that the only shocks are aggregate nominal shocks then all groups will choose the same nominal wage. Thus $w_i = w = E(w)$ which implies

$$(4) n = n^* + [m - E(m)]$$

i.e. employment = membership + a disturbance equal to the unanticipated component of the money supply.

Consider the membership rule. In an extreme pure insider model this would be only workers employed at the time of bargaining i.e. $n^* = n(-1)^*$ which implies

$$(5) n = n(-1) + [m - E(m)]$$

Hence employment follows a random walk, innovations being due to unexpected movements in aggregate demand. In reality though membership rules will not be this rigid, it may take a few periods to gain or lose insider status. Under such circumstances employment dynamics become more complex e.g. a long sequence of unexpected shocks can generate a change in membership but this is likely to be a rare event. Thus on average employment is stable at its equilibrium until such a sequence occurs to change the equilibrium (be that positively or negatively), hence the insider model can generate persistence effects.

This simple model can be extended to take account of outsider effects on wages via employment in new firms (something which is more likely in boom periods). This leads to employment following a first order process around the level of the labour force and if the labour force evolves slowly over time unemployment also follows approximately a first order auto regression. Similarly, if we believe that only the short term unemployed can exert downward pressure on wages (due to discouraged worker effects etc.) then assuming that short term

unemployment is roughly equivalent to the change in employment then (3) becomes

$$(3) E(n_t) - n_t = b[n(-1) - E(n)] \quad , b > 0$$

i.e. assuming wage pressure from outsiders depends on expected short term unemployment, then solving for aggregate employment gives

(7) $n = n(-1) + [m - E(m)]$ - employment follows a random walk. Again allowing for the more realistic nature of the complex dynamic relationship between short term and total unemployment we can move away from this full persistency result to a more stepped ratchet effect. Thus the Blanchard and Summers work has generated an insider-outsider model with persistence effects for unemployment, and which implies that any attempts to reduce actual unemployment will serve to reduce equilibrium unemployment as well. To succeed such policies must be aimed at generating a series of positive shocks to the economy, possibly via monetary expansion in this simple framework, in an attempt to re-enfranchise the unemployed, particularly the long term unemployed.

Whilst persistence effects are important in analysing unemployment as any simple regression will show, this insider model suffers from three major problems. In its pure insider form it implies that at the disaggregated level sectoral wages should largely depend on sectoral conditions and previous employment history in the sector; but evidence suggests that economy wide influences actually play the dominant role in sectoral wage equations. Also, these wage equations suggest that wages are inversely related to labour force size - on this model they shouldn't. Thirdly and possibly most importantly, there is the turnover problem: each year firms lose many of their employees through voluntary quits. If wages were fixed to ensure continued employment of the insider group alone i.e. not entrants we would expect to observe continually falling employment. However despite these criticisms the insider outsider analysis seems to have made a lasting contribution to wage theory, and given the infancy of hysteresis theories we can only expect this field to expand and enhance its theoretical basis and empirical robustness over time.

Section Two: turnover costs.

In the theory of involuntary unemployment the following two questions are of fundamental importance:

(i) Why do involuntary workers not succeed in underbidding their employed counterparts?

(ii) Why do employed workers accept being laid off when times are bad rather than take a cut in their wages?

In the context of the free market economy an answer to these questions can proceed along one or both of two routes

(a) it can explain why employers have no incentive to accept lower wage bids, or,

(b) it can show why the unemployed have no incentive to underbid.

Efficiency wage theories take the former route, union models the latter, and implicit contracting notions both. The insider outsider analysis of Lindbeck and Snower offers an approach to both routes. It attempts to capture the notion that

(i) workers might not try to underbid their fellow workers, because they believe that the latter would respond by making their working life unpleasant for them, or

(ii) firms may refuse to accept wage offers of underbidders because to accept would be unprofitable i.e. it might reduce insider morale hence productivity; entrants may require training and the wage differential may be less than this expense for example.

As such this branch of insider outsider analysis is designed for a completely different purpose from that of section one. Also as we shall see it seems to offer a better microeconomic foundation from which to assess current events. Lindbeck and Snower's analysis starts from the premise that currently employed workers have, in the firm's eyes a cost advantage over outsiders. This stems from the insiders' ability to impose a turnover cost on their employer if they are to be laid off or entrants recruited.

Turnover costs are generated in three ways. Firstly there are hiring and firing costs. If we assume that there exists three homogenous groups of workers: insiders, entrants and outsiders and entrants are associated with the same hiring cost and go through a fixed initiation period after which they become insiders and thus associated with firing costs. Assuming that contracting is only possible for the initiation period and no longer, also that "entrant fees" are not available for whatever reason, then it can be shown that insiders can exploit their bargaining strength to use this cost advantage and gain some of the firm's monopoly rent. Thus we should observe the insider wage > entrant wage (but by no more than the firing costs) and the entrant wage > outsider wage (but by no more than the hiring costs). Clearly we have a situation where the insider wage is above the market wage but due to the costs entailed in recruitment etc. - it is not firm's interest to hire workers who are seemingly undercutting current employees. Assuming that all firms are identical and aggregating we generate a situation with labour supply > labour demand i.e. unemployment.

Expanding this to encompass ability differences, measured by the differential between marginal products net of indispensable labour costs, we can show that whenever this differential is less than the differential between the insider wage and the reservation wage, then outsiders may be identified as involuntarily unemployed. This unemployment will persist whenever the ability differential net of dispensable and indispensable labour costs is greater than the wage differential. In that event the firms have no incentive to replace insiders by outsiders.

A second turnover cost is generated by co-operation and harassment activities of insiders which can affect each others' productivity. Given firms' inability to contract against such activities, due to monitoring difficulties, insiders can use such methods to generate economic rent which they can exploit in wage determination to prevent underbidding being successful.

Consider co-operation alone: entrants offer to work at their reservation wage and insiders attempt to gain a wage above this. The wage differential is only sustainable so long as it is less than the insider-entrant marginal product differential generated by the disparity between insider-insider co-operation and insider-entrant co-operation. Assuming co-operation has no direct utility cost to insiders then it is insiders interests to maximise this disparity; given that co-operation enhances productivity this implies co-operating only with insiders. Given this situation persistent involuntary unemployment may exist because outsiders suffer a reduced choice set—they are unable to compete on the same productivity grounds as insiders due to a lack of co-operation, leaving them as lower productivity workers; thus it wouldn't be in the firm's interests to hire them for they would only become employed outsiders still failing to receive productivity enhancing co-operation thus only being worth the reservation wage.

Similarly harassment activities can achieve these results. Insiders can keep unemployed workers from underbidding by creating a credible threat that the underbidders will be harassed with its associated disutility. Thus outsiders will have a higher reservation wage than insiders, hence their choice set even allowing for their abilities is less favourable than that of the insiders, and they thus may be considered involuntarily unemployed.

A third cost induced by turnover is the adverse morale effect on employees such behaviour generates leading to a fall in productivity. If the firm's remuneration package consists of (a) wage (b) cut off productivity then the firm can increase turnover by raising the cut off productivity. This reduces expected future return to current effort for each employee; the effect on

effort depends on the income and substitution effects. The substitution effect causes effort to fall—the employee works less hard since he is more likely to be fired and therefore less likely to be compensated for effort; whilst the income effect raises effort because the worker works harder in order to avoid being fired. Thus turnover has an adverse effect when the substitution effect dominates the income effect. If this is the case an insider can gain some of the economic rent and there may be involuntary unemployment.

We can model the above process as follows. We have three distinct groups: outsiders, insiders and entrants (subscripted o, i, e). The variables of interest are employment (L), output (Q), the cost of firing insiders (C_o), the cost of hiring entrants (C_e). Finally, m is the incumbent workforce (inherited insiders) and A is the productivity differential between insiders and entrants. We assume that long term wage contracts committing entrants to not becoming insiders are unenforceable and that an imperfect capital market exists. Then if outsiders are perfect competitors for jobs with a firm then the entrant wage W_e will equal the reservation wage R . We have three functions, the production function $Q=f(AL_i+L_e)$, $A>1$; the C_i function $C_i(m-L_i)$, $C_i>0$ and the C_e function $C_e(L_e)$, $C_e>0$.

Thus the firm's problem is to
 $\text{Max } \Pi = P f(AL_i + L_e) - W_i L_i - W_e L_e - C_i - C_e$.

The first order conditions are

(i) $P f' - W_i + C_i' > 0$

(ii) $P f' - W_e - C_e' < 0$

For simplicity assume that insiders bargain individually and that they gain all the economic rent available, thus

$W_i = \min[(P f'(m) + C_i^*), (W_e + C_i^* + C_e^*)]$

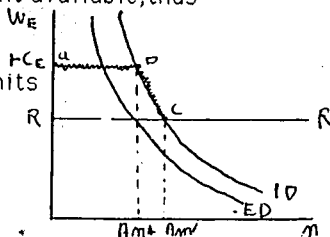
Thus graphically we have

$n = AL_i + L_e = \text{employment in efficiency units}$

ID = demand for insider labour

ED = demand for entrant labour

$m = \text{hiring condition}$



Clearly from such an analysis we are presented with three cases.

(1) $0 < m < m^*$ i.e. the incumbent workforce is initially small enough to allow both insiders and entrants to be profitable $\Rightarrow L_e > 0$. Insiders can't force their wage W_i up to the point at which their marginal profitability is 0 because in doing so it would be worthwhile for the firm to replace them by entrants. Thus insiders raise their wage to the level at which their marginal

profitability is equal to that of the entrants $w_i = w_e/A$, thus ab+short run equilibria but only point b is long run equilibrium, due to entrants becoming insiders after the initiation period.

(2) $m^* < m < m'$ i.e. entrants are now unprofitable at W, but insiders are marginally profitable at that wage: $L_e = 0$ and $L_i > 0$ hence outsiders can't compete for insider jobs, the insider wage is driven up to the point where the marginal profitability of the insiders is zero, i.e. on the ID curve hence bc equals both short and long run equilibria. Any current stock of insiders in this range perpetuates itself.

(3) $m' < m$ i.e. now both insiders and entrants are marginally unprofitable at R. Thus insiders are fired to the point m' and $w_i = R$ which is both a short and long run equilibrium.

To close the model W and R must be determined endogenously. We can let R be inversely related to the insider wage

$$R = -dW_i \quad , d > 0$$

and with respect to the entrant wage, assuming entrants capture all of the available economic rent, and that the ratio of the marginal product of outsiders to entrants is a constant b where $0 < b < 1$ then

$$w_e^* = (1/b)R$$

Thus in our analysis the line abc can be seen as an effective labour demand curve. Now assuming there exists a fixed number of firms all identical (n) and that there are s workers in the economy then we can aggregate the above labour demand curve to obtain an aggregate labour demand function. Clearly if $s > nm'$ and the current aggregate level of employment $< nm'$ then there is persistent unemployment.

If we define involuntary unemployment to have occurred when workers are unemployed who are prepared to work at a lower efficiency wage than that prevailing provided they can work in identical conditions to those currently employed; then involuntary unemployment is said to exist when

$$w_e + C_i + C_e < w_i/A \text{ for identical conditions of employment, } \Rightarrow$$

$$w_i > (w_e + C_i + C_e)/A$$

Thus, this model generates a rationale for involuntary unemployment from an insider outsider analysis as well as addressing the initial questions posed. Returning to these points, it can be seen from this model that involuntarily unemployed workers are unable or unwilling to underbid their counterparts for a number of reasons. Firstly hiring costs generate a gap between insider and entrant wages which the firm can't remove. Secondly, morale effects amongst insiders could lead to the hiring of entrants decreasing overall productivity, whilst

finally harassment activities of insiders towards outsiders could generate such a disutility that the reservation wage is raised above the insider wage, hence they won't offer themselves as undercutters. Similarly Wage cuts will be refused by laid off workers because insiders remaining would object, thus leading to further harassment and alienation etc.-as such their effective reservation wage is now above the insider wage.

Also this model can shed some light on the hysteresis type developments. At the aggregate level, if labour demand falls this implies that the insider and entrant demands will shift inwards- in this simple model the insider group will choose to maintain a rigid wage, and decrease its size leading to persistence of unemployment at a higher level; similarly expansion of demand generates a constant insider pool with rising wages, preventing a recovery in employment. As such we have a model which implies that to tid the economy of unemployment we must either attempt to expand the informal sector of the economy where insider outsider distinctions are less powerful, or we must attempt to weaken the insiders' grip on the wage setting process.

However it would be wrong to make snap policy judgements from such a simple model. Some of its assumptions especially about the bargaining process are very restrictive and perhaps should be weakened; also some evidence on the strength of the income and substitution effects would be useful. More importantly the movement from a well defined micro model level to a broader macro model leaves a lot to be desired e.g. we generate an economy with only two wages. However this work has made a positive contribution and such problems as there are can be ironed out.

Section three: conclusion

Each half of the insider outsider developments have offered new approaches to their respective problems. Whilst these initial findings have been interesting and enlightening it must be asked how far such models can go. The hysteresis work appears to offer no explanation of wage dispersion as yet. We need to allow wage bargaining strengths to vary from firm to firm thus creating a set of insider wages reflecting the strength of each firm's insider union. Also some analysis to voluntary quit process as observed is also necessary-why don't insider groups perpetually shrink over time? Such questions need to be addressed; in future research for this line of thought to offer a feasible model.

The Lindbeck and Snower analysis also must face up to such stylized facts and it makes some very bold assumptions which aren't easily justified. For example their work assumes that entry fees aren't payable by an outsider i.e. if the outsider could offer

an entry fee equivalent to the insider reservation wage differential summed over expected working life then the firm would have an incentive to recruit that outsider. Such entry fees would remove all involuntary unemployment in this model. Whilst imperfect capital market ideas and moral hazard arguments can be used to justify such an entry fee elimination this doesn't prevent internal labour markets being designed by the firm which offer implicit entry fees, i.e. a rising earnings profile over tenure; thus this model may not generate involuntary unemployment. Furthermore the insider outsider analysis presumes that contracts are not possible apart from at the entrants' initiation period, an outsider can't contract to become an employed worker without attaining insider status and the associated awards. Why isn't this possible? - clearly we need to assume some level of market uncertainty preventing such explicit contracts from being signed, but such uncertainty must also affect the insider firm bargaining and thus may lead to a breakdown in our involuntary unemployment result or for that matter the persistency result. Such issues must be addressed if this is to become a more feasible model.

A possible further development might allow for multiple insider and outsider groupings within the economy, possibly even within a given firm. Such internal distinctions may arise at varying seniority levels in a given internal labour market with a structured hierarchical form. The two extremes of such a process are (i) each individual on the promotional ladder being a separate insider grouping, leading to individual bargaining à la the classical model and (ii) one insider group with one insider wage à la Lindbeck and Snower. Another line of research could be to integrate this micro model more fully in a macro model possibly allowing for an informal or competitive sector where such distinctions don't occur, or allowing for sectoral rather than economy wide demand changes. However the literature is still in its infancy and there are clearly no lack of issues for a research program in the area in the coming years.

Footnote.

1. Such theoretical developments would offer support to Keynes' notion of multiple unemployment equilibria i.e. under a persistence effect each new unemployment level immediately becomes the new unemployment equilibrium.