



UNIVERSITÀ DEGLI STUDI DI ANCONA
DIPARTIMENTO DI ECONOMIA

**LABOUR SUPPLY
AND UNEMPLOYMENT**

ANTONIO G. CALAFATI

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1. Introduction

If the economic system is considered a 'self-regulating system', the appearance of unemployment should retroact to labour supply and labour demand so as to reduce the magnitude of unemployment. A self-regulating system is a system endowed with adjustment mechanisms which make disequilibria *transient*.

Two quite different classes of adjustment mechanisms have been considered in economics. The first class refers to adjustment processes based on price-quantity interrelations. The second class refers to adjustment processes based on parametric (institutional) modifications. The first class of adjustment mechanisms – price-quantity convergent fluctuations in response to appearance, as a consequence of exogenous shocks, of disequilibrium states – has played a central role in the interpretation of unemployment. Indeed, the 'dis-connection' of this mechanism in the labour market has been very often proposed as the cause of persistent unemployment. In contrast, institutional adjustment (or evolution), notwithstanding the importance that it has gained in different scientific paradigms in the last decades, has not been extensively used to deal with the fundamental question of interpreting and explaining unemployment. However, by affirming that in contemporary societies the adjustment mechanism which relies on the flexibility of wages is 'disconnected', the relevance of institutional evolution for the interpretation and explanation of unemployment becomes hard to question¹.

¹ An effective analysis of the reasons why in modern societies the labour market *does not clear through wage flexibility* is presented in Solow (1990). By generalising the 'wage efficiency theory' and the 'insider-outsider theory' Solow puts forward an explanation of the fact that wages are not flexible based on the rationality of a specific set of norms governing the behaviour of individual on the labour market. However, Solow neglects a question of fundamental importance. A system in which markets clear through prices changes is a system with an extraordinary high degree of 'resilience': shocks of any magnitude are absorbed by the system, which is able to attain a new equilibrium position. To the extent that equilibrium is what matters *and the system has a high degree of resilience* we do not need to care about the magnitude and nature of shocks, that is parametric (or institutional) changes. But if the mechanisms which make the system 'resilient' are disconnected the (disequilibrium) state of the system at time t may be understood only in terms of the nature and magnitude of shocks occurred at time $t-k$. To understand the nature, frequency, relevance, magnitude of these shocks becomes the only way to construct an explanation of the state of the economic system. Moreover it may be said to be exactly the scope of the 'theory of institutional

In this paper I shall address the issue of the relationships between institutional evolution and unemployment in modern market economies. In order to deal with the issue of institutional evolution – and institutional adjustment – one has to consider carefully the dichotomy between formal and informal institutions, which raises the fundamental question of the meaning of ‘self-regulation’ for an artificial system. Modern economies are ‘artificial systems’, to the extent that some of their parts – for instance formal norms constraining private contracting – are introduced through public decisions. In modern societies, then, the role of collective decisions in the sphere of institutional evolution is of central importance.

In a society endowed with a collective-decision mechanism a state of disequilibrium is relevant not only because it is perceived by individuals: policy-makers too perceive and react to disequilibrium states. If social interaction does not induce an institutional evolution which makes disequilibrium transient the economy may still attain a position of equilibrium if policy-makers react to disequilibrium by determining the ‘right’ kind of institutional modification. Such a system may be still regarded as a self-regulating system to the extent that the policy-maker is considered a part of the system and the ‘calibration’ of the system he performs is effective².

By introducing the regulation of the system performed by collective decisions a second fundamental issue emerges: *which are the disequilibriums to which the policy-maker reacts?* With regard to the issue of unemployment this is an important and pertinent question. In fact, the interpretation of unemployment as a ‘disequilibrium state’ is not straightforward in the context of policy-making. Unemployment may be interpreted as a ‘waste of resources’. Unemployment may also be considered for the distortion in the distribution of the social product it

evolution’. Solow can bypass this question simply because although he gives a role to norms in his framework he does *not consider the evolution of the normative orientation of the population* over time. But how much is it believable to consider as given all the social norms which seem to be relevant to understand the state of the labour market in the last four decades? When the state of a system over a long period is considered to assume a given normative orientation it seems to be inappropriate.

² A modification of an artificial part of the system may be called a ‘calibration of the system’ (on the concept of calibration see Bateson (1979, Ch. VII)). If it is assumed that there is a calibration of the economic system such that the system will reach an equilibrium position, unemployment (or any other state of disequilibrium) may be interpreted as a consequence of the *inability* or *unwillingness* of policy-makers to calibrate the system.

entails. Moreover, unemployment is, in most frameworks, an event which is interrelated to other events (for example, inflation).

The second issue I shall address in this paper is the relationship between unemployment and the welfare effects of unemployment. I shall argue that the reaction of policy-makers to the ‘unfairness’ of the distribution of social product brought about by unemployment is of crucial importance in explaining the kind of institutional evolution ‘induced’ by unemployment. I shall also argue that there are peculiarities of individual societies which ‘filter’ the effects of unemployment on the distribution of social product. Because of specific institutional features societies differ greatly in the effects that the same amount of unemployment has on the intertemporal distribution of the social product. Therefore, the institutional evolution which is relevant for an interpretation of the phenomenon of unemployment encompasses also the formal and informal institutions that govern the distribution of social product.

After having developed an institutionalist metatheory of labour supply (paragraphs 2, 3 and 4) I will turn to explicate the relationships between the notions of ‘unemployment’ and ‘disequilibrium’ (paragraphs 5 and 6). Finally, I will address the issue of the mechanisms which regulate labour supply and the welfare effects of unemployment (paragraphs 7 and 8).

2. Individual utilisation of the time and labour supply

The utilisation of time is the basis of the metatheory³ of labour supply I shall present in the next pages. I shall use three categories to describe the utilisation of time by an unspecified individual agent: paid-work (A); house-work (H); consumption (L)⁴. The usual distinction in behavioural sciences between the *actual* utilisation of time and the *desired* utilisation of time is introduced for any individual in the population who can control the function of allocating his time. This distinction is made necessary by the existence of constraints, stemming from social interaction, which limit

³ A metatheory is a web of causal relationships which is ‘open’, that is it allows the occurrence of the event to be explained, and also of a limited set of other events (cf. von Right 1971). By adding a state of the world present at time $t-1$ (or an event occurred at time $t-1$) only the event to be explained can be caused by the modified causal relational structure. In so doing the metatheory is then turned into a theory. This way of constructing an explanation is typical of much institutionalist thinking. For an analysis of Hirschman’s methodology from this perspective see Calafati (1996).

⁴ Cf. Juster-Stafford (1991).

the set of structures of time utilisation that an individual can actually achieve.

By definition, in the following framework individual labour supply is given by A , where \hat{A} e \bar{A} are respectively *potential* and *actual* individual labour supply, and $D \equiv (\hat{A} - \bar{A}) \geq 0$ is a measure of the individual disequilibrium in this sphere⁵.

A basic question is the interpretation and evaluation of the individual and aggregate effects of a state of disequilibrium defined as above. To explicate this question it seems useful to turn to the analysis of the internal interrelations of the components which make up the structure of time utilisation.

The cornerstone of the structure of time utilisation is to be seen in the 'consumption process'. Individual welfare can be interpreted as a network of 'individual final states' – that is, 'goods' – in which the individual wishes to be for a certain length of time (the length of time being technically determined by the nature of the goods). Hence, following the flow-fund approach the consumption process can be interpreted as a production process⁶: the consumption process may be interpreted as a subcategory of the more general production process. The consumption process is the final stage of the whole production process (when it is fully vertically integrated).

What distinguishes this stage of the production process is that it cannot be further disintegrated by substituting one's time with the time of other agents in the production (consumption) function. An agent may decide to drive to reach the theatre or to buy (exchange) the taxi service. But he, and nobody else, has to sit down and follow the performance. There is a 'consumption process' when an interaction between an individual agent (body-mind) and physical elements takes place such that the time of the individual cannot be substituted by any other factor of production.

To perform the consumption process an individual needs a set of elements that can be grouped into three categories: a. the flow-elements (commodities and services) produced through housework; b) the flow-elements obtained through exchange from the market; c) the fund-elements.

Both the commodity content (capital intensity) and the time content (time intensity) associated with the consumption process put a constraint on the magnitude that the other elements of the structure of time utilisation

⁵ I am not taking into consideration the case in which individuals are obliged to work *more* than they wish.

⁶ Throughout this paper I shall interpret the production process following Georgescu-Roegen's fund-flow model (Georgescu-Roegen 1961).

can assume – and vice versa. Given relative prices⁷, any increase in individual labour supply logically implies a change in the consumption pattern: *it must lead to choosing a network of final goods (final states) which is less time intensive or to substitute self-produced commodities with commodities bought in the market.*

There are practical limits to the commodity content of the consumption patterns of human beings. However, the range of the commodity content of the consumption process is very wide – and it is culturally determined. Of course, for the individual, there is an economic limit. But this limit does not prevent the individual from setting the amount of paid-work he wishes to offer at a level *would allow him to attain a 'very high' commodity content.*

I will now introduce the hypothesis that *individuals (being rational) tend to use all their time* – that is, idleness is a forced or pathological state. Therefore, individuals choose a consumption structure that leads to *a utilisation of all their time.* But the actual structure of time utilisation of an individual at time t is the result of a specific 'adaptation process' that involves his whole structure of time utilisation and consequently his consumption.

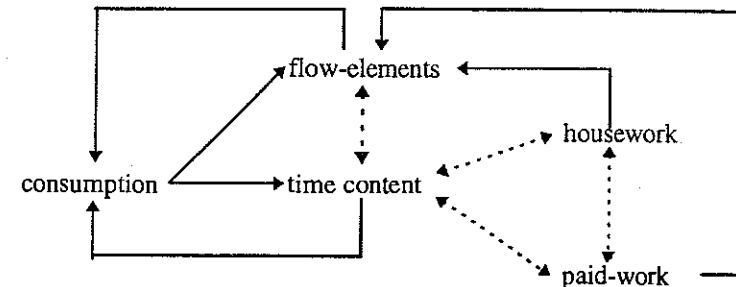


Figure 2.1 - The interdependency between consumption and the utilisation of time

Given relative prices, the adaptation process towards the actual pattern of consumption is constrained by the fund-elements the individual has access to, and by the fact that no goods can be generated – that, is final

⁷ Assuming no wealth, transfers or access to credit.

states attained – without a certain amount of flow-elements (which in modern societies cannot be totally self-produced).

If an individual is rationed in the labour market he can react by moving to a pattern of consumption with a higher time content, and by increasing the self-production of the flow-elements he uses in the consumption process. On the other hand, by reducing the time content of his consumption process an individual will be in a condition to increase his labour supply⁸.

The adaptation process described above normally implies a learning process and, sometimes, it can even imply a change in the desired pattern of consumption⁹. The malleability of consumption is a factor of fundamental importance in this process of adaptation – and it is a consequence of the lexicographic ordering of goods that individuals follow.

Each individual evaluates the outcome of the adaptation process, and make plans on how to change his consumption pattern. But this outcome can also be evaluated on the basis of the criteria of social justice collectively chosen. Hence, a very important issue in advanced societies, in which this process plays a crucial role, is to judge from a normative point of view the equilibrium position attained¹⁰.

3. Non-market transactions and individual utilisation of time

The individual structure of time utilisation is also rooted in the network of non-market transactions in which the individual is embedded. Individual agents are normally 'parts' of a social network to which a 'set of non-market transactions' is associated. In order to simplify the analysis I shall briefly consider only two classes of non-market transactions, namely those related to the family and to the State.

If the whole transaction network of an individual agent is taken into account, it can be easily inferred that market exchanges of work-time *do not play the key role that is often implied*. The assumption that the exchange of one's work-time is the generalised way of obtaining the

⁸ An individual can increase labour supply also by postponing his consumption.

⁹ The adaptation process is generated by the 'mechanisms of integration': see Parsons and Shils (1959, pp.133-142).

¹⁰ The set of exchange entitlements of an individual is not to be linked only to his actual structure of time utilisation, and more specifically to A, but also to the relative market value of A. In modern societies at least the labour market is 'segmented'. Individual agents can move towards a 'higher' segment of the labour market – and hence towards a higher wage for unit of time.

commodities required to implement the self-production process and the consumption process should be relaxed. It is more a consequence of the incompleteness of the categorical system most economists use to describe the economic process, than a useful heuristic hypothesis. In fact, non-market transactions allow part of the population to command the needed amount of commodities, totally or partially, without having to perform paid-work. It follows that the redistributive patterns prevailing within the social networks in which the individual operate – the family and the State – must play a role in individual decisions concerning the structure of time utilisation. Therefore, the redistributive function of the family and of the State has to be taken as the starting point of an analysis of labour supply.

A family is a network of emotional relationships, that typically has a non-economic nature, with which a network of economic relationships is associated: (a) non-market transactions of property rights, (b) team production and joint ownership of funds. The family operates also on the basis of a set of informal norms which governs the allocation of the time of the family members – and which regulates the access to the funds owned collectively by the family.

There is a basic interdependency in the structure of time utilisation of the family members¹¹. Accordingly, for a given family the aggregate labour supply cannot be explained as the sum of independent individual choices. The total labour supply emerges from the equilibrium position of the family unit. The search for this equilibrium is constrained by the set of norms that govern the redistributive function that it performs, by the set of capital stock (and hence technology) on which individual and collective self-production processes are based and, finally, on prices.

The set of norms that governs the redistributive function *changes over time*, being an aspect of cultural evolution: a family can obviously move from one pattern of behaviour to another. It is also different in different societies. (The technology of self-production differs too, as a consequence of accumulation of fund-elements and technical progress.) Consequently, *the structure of time utilisation of the family evolves over time as an effect of changes occurring in this set of norms* – and not only because of changes in individual values and motivation.

The family may decide to reduce the amount of paid-work performed because some of its members wish to move to patterns of consumption with a higher time intensity and a lower commodity content Or it may reduce the amount of self-production because some of their members wish to move to patterns of consumption that require more expensive inputs and hence

¹¹ For an institutionalist approach to the study of family see the important studies presented in Anderson, Bechhofer and Gershuny (1994).

decide to increase the total paid-work offered in order to reach the needed (higher) income. The effect on total labour supply of the two changes is rather different.

As well as the family, the State too performs a redistributive function by supplying collective services, by allowing access to artificial and natural funds, and by redistributing resources. The range and depth of this function differs deeply from one country to the other and has changed radically during the last four decades in many countries. The set of norms that shapes the redistributive function of the State by modifying the set of 'exchange entitlements' an individual can acquire affects the utilisation of time of individuals and, consequently, the total labour supply¹².

Under the constraints and opportunity associated with the redistributive functions of the social networks to which he belongs the individual structure of time utilisation of the family members converges towards a specific pattern through the kind of adaptation process described in the previous paragraph. The difference is given by the fact that the norms governing division of labour and redistribution within the social network play a key role in this adaptation process.

4. Cultural changes and labour supply

On the basis of the analysis carried out in the previous pages, it can be affirmed the *individual labour supply* depends on the desired pattern of consumption, that is, on the desired structure of time utilisation. To move from individual to total labour supply the *diffusion* among the population of specific patterns of time utilisation and patterns of consumption has to be considered. Therefore, to understand the evolution of labour supply over time *it is necessary to analyse the diffusion of specific patterns of time utilisation within the population*.

Any population can be described *at time t* in terms of the *diffusion of a certain set of structures of time utilisation*¹³. The evolution of the overall utilisation of time of the population – and, hence, of aggregate labour

¹² On the notion of 'exchange entitlements' see Sen (1981, Ch. 1, Appendix A).

¹³ The elements of this set will have an ideal-typical character, and their construction is the first step to be taken in order to accomplish a research strategy grounded on the methodology of 'population thinking'. Although it is not often stressed, 'population thinking' in social sciences requires a greater attention to be given to the categorial framework which will be used in the explaining process. For a restatement of the importance of the shaping of concepts and categories in social science, and therefore of description, see Runciman (1983).

supply – is then to be understood in terms of the *modification of the relative diffusion of the set of ideal-typical structures of time utilisation*.

As I stressed above, a given utilisation of time is best interpreted as a behavioural pattern, that is *a system of actions to be performed*. The symbolic representation of an action or system of actions may be called a norm (or an institution)¹⁴. By definition, a norm may be interpreted as *an abstract pattern of behaviour* (or action) to which an individual may decide to conform or not. The interest in conceptualising the behaviour of individuals using the notion of norm stems from the fact that it makes it possible to describe the population in terms of its normative orientation, that is in terms of the number of individuals following specific systems of norms¹⁵. The dynamics of labour supply can then be interpreted in terms of *propagation of norms*¹⁶.

The speed of the propagation process of the set of relevant norms is very important to understand the trend in labour supply and unemployment in advanced countries. It is to be compared with the speed with which the

¹⁴ See Dopfer (1991, 1994). In the text 'institutions' and 'norms' are synonymous (some authors consider an institution a behaviour grounded in a norm: cf. Crawford and Ostrom 1995). However, I believe that the notion of 'norm' – for instance as presented in von Right (1963) – should be taken as the basis of the analysis. It has a more precise semantic meaning than the term institution. Moreover, and more important, the notion of 'norm' lies in the overlapping area of different social sciences, playing a crucial role in any interdisciplinary research programme. With the expression 'institutional evolution' I refer to a change in the normative orientation of the population. A change in the normative orientation – which can be driven by different kind of reasons (cf. Dopfer (1994)) – manifest itself in the form of an higher number of people following a given norm (or system of norms). Institutional evolution does not require normative innovation, that is the emergence of a new norm: it can be only a matter of diffusion of norms already existing and followed. Institutional evolution, however, requires in some cases institutional innovation too: it is case the of collective norms. With collective norms it is a case of diffusion (number of people who decide to abide to the norm) and of normative innovation. Institutional innovation, then, is rooted in changes taking place in the individual systems of action and in the collective system of action.

¹⁵ One can then follows different approaches. Either to rely on the research strategy implied in the notion of 'embedded behaviour' – cf. Granowetter (1985) and Wrong (1961) – or to assume a cost-benefit perspective (as in the New-institutional economics and also in some strands of evolutionary thinking in economics). The two approaches do not exclude each other. An interesting approach to this fundamental question has been developed in Dopfer (1994).

¹⁶ If, as in many studies of the propagation process, a symmetric exchange of behaviour over time is assumed, the propagation process may be described analytically as in Witt (1989).

amount of jobs potentially available grow over time. The issue of the pace of the propagation process is tightly related with the approach to be followed to study the propagation process itself. The standard approach of contemporary evolutionists is to represent the propagation process by modelling some kinds of 'symmetrical interchanges of behaviour' taking place in 'absolute time'. It is questionable whether the resulting differential equation is a description or an explanation of the process. However, the institutionalist tradition offers a different methodological perspective to analyse the propagation process.

What is needed for a long-term analysis of the labour market is an *explanation* of the dynamics of labour supply. In fact, what is required in order to *understand*, and not only describe, the trend of labour supply is an *interface* which would allow economists to use as inputs of their analyses 'stylised descriptions' of the institutional and cultural changes that have taken place in a society over a certain period of time (and of which the trend in the labour supply is a consequence¹⁷). If the economic system is conceptualised as an 'open system' the evolution of institutions and values can be connected – on the basis of a linear or cumulative circular causal relationship – with the outcomes of economic interactions¹⁸. A systemic approach seems to be very useful to supplement standard analysis of institutional evolution.

I shall now consider three stylised patterns of structure of time utilisation, just as an example. Their relative diffusion among the population seems to be relevant for the explanation of the evolution of labour supply in industrial societies over the last four decades. They can be called respectively (a) the 'acquisitive orientation', (b) the 'parity orientation', (c) the 'work orientation'.

In the case of the acquisitive orientation there is a tendency to increase the amount of the total paid-work offered by the family in order to have a pattern of consumption with the highest possible 'commodity content'. Therefore, a family that has an acquisitive orientation reduces the time intensity of consumption, decreases the amount of housework *and increases labour supply* – regardless of the level of welfare already attained. By

¹⁷ Cf. Kapp (1961, 1976a).

¹⁸ On the 'open system character' of the economic system cf. Kapp (1976b). A general treatment of the notion of 'open system' is to be found in von Bertalanffy (1969). The interpretation of the economic system as an 'open system' is the hallmark of much interdisciplinary research done in economics during the last for decades by authors, among others, as Georgescu-Roegen, Myrdal, Hirsch, Hirschman (for an analysis of Hirschman's research work from this perspective see Calafati (1996)).

postponing consumption the family can further increase current labour supply.

The 'parity orientation' within the family has marked the last four decades to the same extent as the acquisitive orientation. By this expression I refer to the constant reduction of housework and time content of the consumption process of women (and men). A reduction necessary to accommodate for an increase in the amount of paid-work they perform outside the family¹⁹. This evolution in the values and attitudes of women leads to a great difference in the activity rate of women, and hence in the labour supply²⁰. A world of increasing participation rates of women was not the world envisaged by social sciences and social thought until the 1940s.

The 'work orientation' is playing an increasing role and it is an evolution that will probably affect the labour market very deeply in the next decades too. With the term 'work orientation' I refer to the desire to exchange one's time on the market for reasons different from the quantity of exchange entitlements one wishes to obtain. There are two aspects to take into consideration. Firstly, disutility of work does not apply in modern society to all agents and to all jobs. This phenomenon might have two causes: a) the reduction of working time; b) the improvement of working conditions. In a growing number of cases *working is a good*, that is a 'final state' in which one wishes to be. Working may be a good for different reasons. It may depend on the relationship between the personality and features of the social network to which the individual belongs. The relationship between aspiration, education and performing paid-work also plays a role. In many instances, working means to implement a coherently pursued life plan. Moreover, working can be namely *the prevailing modes of integration in the enlarged social network*²¹.

The three ideal types just considered have to be considered as some possible elements of a set of ideal-typical structures of time utilisation that could be used to describe the population at a specific moment of time in

¹⁹ The important aspect to observe is that there are significant differences between the European countries as to the actual diffusion of this norm of behaviour. Clearly in most countries there is still scope for a further diffusion of the cluster of norms that lies behind this evolution.

²⁰ As to the reduction in the time content of the consumption process of women, for instance, Veblen's description of the leisure class can be compared with the attitude towards work in many contemporary societies: see Veblen (1989).

²¹ Certainly an education that aims specifically at acquiring the skill to be used at the job place will greatly increase in society the number of people who see working activity as a way of fulfilling their life plans and not only as means to have access to a certain amount of exchange entitlements.

relation to the objective of studying labour supply. Changes in the relative diffusion of the patterns of time utilisation chosen to describe the population may be called *cultural evolution*²². As shown in Figure 4.2 the trend in the labour supply may be said to be caused by cultural evolution in the sense that it depends on the relative diffusion of a specific set of structures of time utilisation. In turn these structures are norms (of behaviour) and studying the propagation process can be interpreted as studying the changing normative orientation of the population.

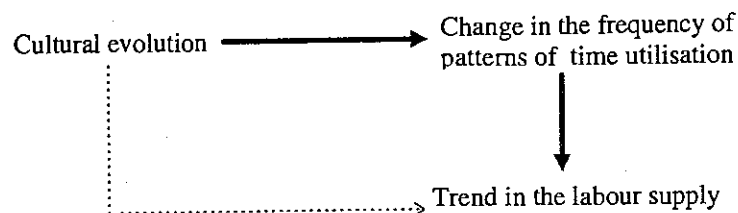


Figure 4.2 - Dynamics of labour supply

5. Unemployment and the evolution of the economic system

Leaving aside short-term fluctuations in the level of economic activity, labour demand can be seen as rooted in the amount and type of artificial funds accumulated in the economy, in which technical progress is incorporated. The constellation of factors which govern the accumulation of funds and technical progress belongs to a sphere of social interaction which seems different from the sphere which is relevant, according to what I put forward in the previous pages, for the interpretation of labour supply.

Unemployment in advanced industrial societies with no wage flexibility may then be interpreted as a *discrepancy* (or inconsistency) between the *desired* commodity content of the consumption plans of the population and

²² To consider the linkages between cultural evolution and the evolution of the economic system is the vantage point of the institutionalist paradigm. Ayres's work – see Ayres (1944) – is a notable and early example of the utilisation of this approach, which has been developed, among others, by G. Myrdal, K.W. Kapp, F. Hirsch, A Hirschman.

the level of *accumulated* artificial funds and organisational knowledge in the economy.

Then, unemployment is a state of the world that might well be observed. The elemental and traditional questions here are the following: *are there feedback loops linking unemployment to the supply and demand of labour? what is the nature of these feedback loops?* Reliable and effective *negative retroaction chains*, both on the side of labour supply and labour demand, would make the system a self-regulating system.

Before turning to answering these questions it is appropriate to call attention to the differences between the 'virtual retroaction' implicit in the operating of the price mechanism and the 'real retroaction' on which institutional evolution is based.

Firstly, one has to consider that the *existence* of institutional adjustment mechanisms for a given economy in a certain period *does not imply that states of disequilibrium are not observable*. A 'correct' institutional evolution is an evolution that makes a state of disequilibrium transitory or temporary: it has the effect of reducing the magnitude of disequilibrium. A 'wrong' institutional evolution stabilises or even enlarges the magnitude of disequilibrium. Institutional evolution is firstly a matter of propagating of systems of norms among the population and, secondly, of introducing (and enforcing) exogenously introduced norms by way of a collective decision. The propagation process follows a pattern that is specific to each norm and determined against the background of a set of *de facto* conditions. Even if such a propagation process goes in the right direction, one cannot by any means assume that it will end within a short time or even instantaneously. On the contrary, it might prove to be very slow in many relevant instances. Collective actions too cannot be assumed to be instantaneously implemented after observing the disequilibrium state. Moreover, the same process of individual orientation to the new norms needs time. In an economy that relies on institutional evolution to cope with states of disequilibrium it is quite normal to observe, for given periods of time, states of disequilibrium.

Secondly, one must consider that by definition any adjustment mechanism 'perceives' the state of the system as a 'disequilibrium state' only when *the difference between the actual and the desired magnitude of the pertinent variable reaches a given threshold*. Before institutional evolution is set in motion, the state of disequilibrium must be 'significant'. Therefore, for example, only when the level of unemployment reaches the threshold value does it start to affect institutions.

The notion of threshold is a key concept to understand how feedback loops operate. However, the determination of the magnitude of the

threshold is a complex question. In the case of totally artificial systems the threshold of the control mechanism of the systems is determined by design. In the case of natural systems, for instance ecosystems, it may not be so easy to discover. In the case of individual human beings and societies too the thresholds in the retroaction processes which characterise these systems are difficult to detect and determine. For instance, *for how long* must an individual look for a job before he decides to give up his search? And how high unemployment has to be before policy-makers decide to react in one way or in another? As far as human beings and social systems are concerned there may even be a change in the magnitude of this threshold over time. This aspect is quite important when we consider the action of calibration of the economic system performed by the policy-maker. The threshold may be raised or lowered through a collective decision.

In an economic system that evolves over time labour supply may progressively become higher than labour demand. When this *difference* is perceived by the adjustment mechanisms – if there are effective adjustment mechanisms –, *it begins to decrease*. To the extent that the retroaction is brought about by a collective decision the moment in which the adjustment process begins depends on the value of the threshold, which is determined by a collective decision too (see figure 5.1).

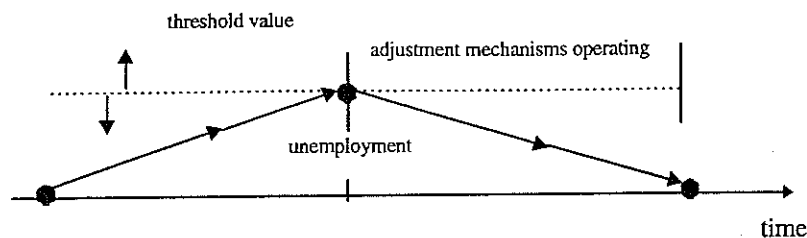


Figure 5.1 - Threshold value, pace of adjustment and persistent unemployment

It is necessary to stress that a self-regulating economic system *may experience persistent unemployment*. Only in a world where self-regulation is ensured by 'virtual negative retroaction' are disequilibria not observable²³. Differently, in a world where 'real retroaction' operates, persistent unemployment is an observable phenomenon which has a

²³ «Persistent unemployment has been a persistent problem for economic theory» (Solow (1990), p.28). In fact, in the Neoclassical paradigm a self-regulating system cannot be in a state of dis-equilibrium.

magnitude associated with three 'parameters'. Firstly, it depends on the length of time it takes unemployment to reach the threshold value. Secondly, it depends on the value of the threshold. Thirdly, it depends on the length of time of the adjustment process.

But before turning to the question of the existence of a feedback loop between unemployment and labour supply it is necessary to interpret the concept of unemployment against the background of the adjustment process discussed above. Unemployment is *measured* by statistical offices. But the operationally defined notions of unemployment, to which such a great importance is given in the policy debate, has constantly been a source of misunderstanding. When unemployment is measured on the basis of the standard practices one is in fact referring to agents' plans, without it being possible to say whether these plans are equilibrium plans or not. That is, without it being possible to affirm to what extent they incorporate the constraints stemming from social interactions. Indeed, a problem of interpretation arises when the behavioural dimension of labour supply is retained *and* the adjustment mechanisms are not operating in virtual time. As a matter of fact, in a Walrasian framework the term 'unemployment' – a state of 'disequilibrium' – describes a virtual state of the labour market while the adjustment process *is taking place*. Since the adjustment process takes place in 'virtual time' the term 'unemployment' (and 'disequilibrium') does not have by definition any empirical content. According to the standard paradigm disequilibrium states are not observable. Hence, statistical offices cannot measure unemployment: they can only measure 'voluntary unemployment' – which by definition is not a disequilibrium state.

If adjustment processes are considered to take place in 'real time' – as in figure 5.1 – the adjustment process *has a time length and unemployment has an empirical dimension*. Statistical offices are really measuring unemployment. However, an elemental question arises: *what are they actually measuring when they measure unemployment?*

From the previous analysis a straightforward interpretation of unemployment follows: individuals *have preferences as to their structures of consumption that cannot be turned into reality*. When statistical offices measure unemployment then, they are measuring *the number of individuals for which the actual consumption structure (utilisation of time) is different from their desired consumption structure*. They are measuring the number of individuals who are not implementing their consumption plans. But social sciences have to find out which kind of equilibrium – or *degree of order* – stems from the attempts of individual agents to accomplish their plans: individual plans in themselves do not convey any information on the

degree of disequilibrium. In fact, the operationally defined notion of unemployment cannot be taken as a measure of disequilibrium without many caveats. The difference between the actual consumption process of the individuals and a standard consumption process – introduced as a normative judgement – ought to be taken as a measure of disequilibrium. In the Classical and Keynesian tradition unemployment causes by definition unsustainable patterns of consumption, and then disequilibrium states. But the effects of persistent unemployment on the consumption patterns of the population can be turned into an empirical question – especially when an affluent market society is under consideration (and one with a developed ‘Welfare state’)²⁴.

6. Unemployment, permanent unemployment and relative poverty

Once ‘real time’ is introduced, independently from the *nature* of the feedback loops governing the supply and demand of labour, the relationship between the concepts of ‘unemployment’ and ‘disequilibrium’ becomes more complex. Even though *there is* a negative feedback effect at work, the fact that the adjustment process requires time has profound implications.

There is no *a priori* justification to assume that while the adjustment process is taking place – assuming that it is taking place for the sake of the argument – all the unemployed at time t will be also unemployed at time $t+k$. Instead, in principle it may happen that *all the unemployed at time t are employed at time $t+k$* .

In other words, when ‘real time’ is introduced the notion of unemployment has to be supplemented with that of ‘permanent (or long-term) unemployment’. By shifting from virtual to real time the interpretation of a state of disequilibrium in the labour market is not straightforward. Indeed, what matters is not simply ‘being unemployed’ at time t , but rather the length of time during which an individual *has been unemployed at time t* .

For this simple but nonetheless crucial reason the magnitude of ‘unemployment’ does not convey any significant information to policy-makers as to the effects of unemployment on the welfare of the population. But to know the structure that links *aggregate unemployment to the welfare*

²⁴ A country where this issue has been widely investigated from an empirical perspective is certainly Germany: see, for instance, Strittmatter (1992), Hess-Harstein-Smid (1991).

of the individuals making up the population it has always been necessary to interpret unemployment.

Since equilibrium in the labour market has two dimensions – the first referring to optimal (or full) utilisation of resources and the other referring to a ‘fair’ distribution of social product – it may be appropriate to speak of ‘equilibrium’ even in a situation of unemployment: it depends on how the ensuing distribution of social product is evaluated.

The distribution of social product, given the wage structure, depends firstly on the distribution of total work-time (labour demand) required by the market sector among the population. Secondly, it depends on the existing pattern of redistribution. Even without taking into account the features of the redistribution taking place through non-market transactions it is clear that the standard notion of unemployment does not convey any significant information about the distribution over time of total work-time and, *a fortiori*, on the distribution of social product.

Unemployment is not at all incompatible with equilibrium once equilibrium is interpreted as *intertemporal equilibrium in the distribution of the total paid-work required for the whole economic process*. In principle, one cannot rule out the possibility that the labour market – understood as the negotiation process of paid-work – has the capacity of redistributing intertemporally among the individuals the amount of paid-work actually demanded over a given period.

The distinction between unemployment and long-term unemployment introduces a second level at which negative retroaction could be found²⁵. The system might be endowed not only with a mechanism to reach aggregate equilibrium in the labour market, but also with a mechanism ensuring a ‘fair’ *intertemporal allocation of available jobs among potential workers*: a mechanism that brings about a turnover in the people employed²⁶. If such a mechanism were at work the labour market would retain the feature of assuring a ‘fair’ redistribution of the total paid-work among the active population.

A society in which there is permanent unemployment may still be considered in equilibrium to the extent that a fair distribution of social

²⁵ On the notion of ‘permanent’ or ‘long-term’ unemployment see, for instance, Benoit-Guilbot and Gallie (1994).

²⁶ The often implicit importance given to this aspect is reflected in the explicit importance of the rate of created and destroyed jobs. The hypothesis that unemployment is transitional is more likely to be correct in a world where people keep changing job because work places are continuously ‘destroyed’ and ‘generated’.

product is attained²⁷. In any market society the distribution of social product relies to a great extent on non-market transactions. Although the relevance of non-market transactions seems to be obvious²⁸, economists have not always been ready to acknowledge it. To simulate the effects of a 'perfect' labour market a society should be endowed with mechanisms that secure that the ongoing economic process takes place under the following condition regardless of the actual state of the labour market²⁹: *all the individuals should have a consumption structure such that their level of welfare is over the poverty line.*

Since not all the population is employed, the above stated condition may be ensured only if there is the necessary amount of redistribution of resources. This crucial redistributive function is in most countries characteristically performed by the norms which govern the personal interaction *within the family*. If the distributive role of the family is considered the ongoing process should take place under the following condition: the family should have an amount of resources sufficient to put all members of the family above the 'poverty line' – once the redistributive function has been performed. A state in which unemployment is equal to zero is, in terms of fairness of distribution of the social product, 'equivalent' with a state in which the number of poor is equal to zero. The redistributive function of the family is in most advanced countries supplemented with that of the State ('Welfare State'). In fact, one can affirm that the redistribution of social product has constantly been at the centre of the policy agenda since the II World War.

As shown in Figure 6.1 one has to address the 'transformation' in the notion of disequilibrium brought about by the separation of the issue of full (or optimal) allocation of human resources from the issue of the fair distribution of the social product. As I shall stress in the following section each level is embedded in a specific set of norms, therefore economic systems – and the evolutionary pattern of every economic system –

²⁷ In order to highlight the welfare implications of labour market disequilibrium the category of 'person's resources' as developed in Sen (1992) may supplement the 'entitlement approach' (Sen (1981)).

²⁸ The role of non-market transactions in the market economies was stressed by K. Polanyi (1946) in his classical work. It has assumed a central importance in contemporary discussions on the notion of inequality (see Sen (1992)).

²⁹ It seems justified to assume that in an industrial (affluent) society a distribution of the social product *does* exist according to which all members of the population are above the poverty level (however defined). This may not be true in a 'backward' country.

distinguish themselves one from another in terms of how they perform at each of the three levels.

The relationships between unemployment and relative poverty (let us assume relative poverty as a measure of the distortion in the distribution of social product) differ greatly from one social system to the other. Two social systems with the same level of unemployment may have rather different levels of 'permanent unemployment', and the same level of permanent unemployment may produce different levels of relative poverty. From this perspective if a policy-maker is interested in the welfare implications of unemployment, *he should measure directly these welfare implications and not infer them from unemployment.*

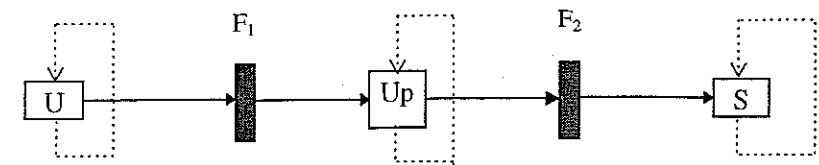


Figure 6.1 - Systems of norms which regulate the effects of unemployment

In order to understand the effects on the distribution of the social product of a state of disequilibrium in the labour market the notion of 'filter' may prove useful. In this context a 'filter' may be defined as a 'set of institutional features' which reduce or amplify the signals coming from a different subsystem of the social system. Societies with the same level of permanent unemployment, for instance, may differ strongly with regard to 'unfairness' of the distribution of social products because of the norms governing welfare redistribution within the family. Or because of the redistribution performed by the state: the extension and effectiveness of the welfare state is not equal in all industrial economies.

The 'filters' that transform a given level of unemployment into a different amount of permanent unemployment, and a given level of permanent unemployment into a certain amount of relative poverty *are made up of systems of norms which are partly artificial.*

7. The regulation of labour supply

The main conclusion reached so far is that the interrelation between labour supply and unemployment is not the only sphere in which to address the issue of disequilibrium, and in which to look for mechanisms of self-regulation. By no means, however, does this imply that the link between unemployment and labour supply is unimportant to understand the dynamics of economic systems. Over the last two decades regulating (or constraining) labour supply has not been at the centre of policy-making. However, the regulation of labour supply was and might be again in the future of central importance.

Although economists are familiar with at least two kinds of 'spontaneous institutional evolution' which tend to reduce labour supply when unemployment is greater than zero, the link between unemployment and labour supply *has an essentially artificial nature*: labour supply reacts to unemployment as a consequence of 'actions of calibration' decided by collective agents.

A first well-known mechanism which self-regulates unemployment is based on the circular causation between unemployment and population growth. The endogeneity of population was one of the most discussed hypotheses from the time of Adam Smith until the beginning of this century. One of the most dismal aspects of Classical political economy was in fact its attempt to look at population as an endogenous variable. However, by the time of Wicksell it was well established that population growth had to be regarded within economics as an exogenous variable³⁰. When looking to population growth from a modern perspective, the hypothesis of a meaningful link between unemployment and population has to be relaxed³¹.

A second 'spontaneous' circular causation is that implied in the behaviour of a 'discouraged worker', a phenomenon which has attracted

³⁰ This change of perspectives has important consequences, which have been often underrated, for instance by growth theory. In the second half of this century *there has been a 'population cycle' in most advanced countries*. Population changes have been a continuous source of significant shocks to which the economy has had to adjust. Standard growth theory rules out these sources of shocks *assuming* a constant rate of population growth (and an unchanging age structure within the population).

³¹ Although not often stressed in public discussion of unemployment different governments expect to solve the current problem of unemployment through demographic change, and hence they are prepared to live at least two decades with unemployment. Some governments may be even looking with fear at the coming shortage of potential labour supply. This position seems to be held by the Deutsches Institut für Wirtschaft (1990), which sees present unemployment as *temporary* (in the meaning in which this word was used in Classical political economy).

some attention³². It is an interesting example of institutional evolution based on adaptive preference. Suppose that a relevant number of individuals follows the following rule in changing their desired structure of time utilisation: the amount of the paid-work they offer at time $t+1$ is equal to zero if they were unemployed at time t . An individual no longer wishes to exchange his time if he does not get a job within a certain interval of time (a month, a year). In a society in which individuals follow this rule, unemployment is a self-destructive phenomenon. (It may be interesting to observe, however, that one of the reasons why this kind of adjustment does not take place for every individual may be the 'dissatisfaction' with the welfare content of the consumption pattern towards which the individual would converge if unemployed.)

Regardless of their attractiveness, the two mentioned mechanisms have not played a significant role over the last four decades. On the contrary, collective action has deeply influenced the evolution of labour supply operating in two quite different spheres of social interactions. Firstly, collective actions have constrained the relationship between population and paid-work offered in terms of hours per year. Secondly, collective actions have greatly influenced the level of population regulating immigration (and emigration).

Indeed, there are three collective norms whose modification has played a fundamental role in constraining the supply of labour: A. the age of retirement; B. the minimum age to work; C. the length of the working day. Labour supply – which can now be measured in units of time offered in the market, and not in terms of the number of individuals who offer part of their work-time in the market – is constrained by these norms.

Undoubtedly the normative value of these parameters has undergone a significant change in this century, but their values have not changed so much in the last two decades. Whatever the interpretation of these norms³³,

³² The empirical relevance of the phenomenon of the discouraged worker is well-known, but there is no general agreement on its interpretation. The 'discouraged worker' may be still considered an 'unemployed individual'. In most countries total unemployment is measured with and without discouraged workers. It is not a technical issue. It is a matter of interpreting the exchange of one's own work-time as a 'right' or not.

³³ Introducing collective norms forces us to introduce the notion of the normative orientation of the population: see Witt (1986); Vanberg (1986). In this case the problem seems to be the authority of the collective agent to interfere with the spontaneous process of norms propagation. This is a difficult issue. If a population with a strong normative orientation is considered, one can study the evolution of the parameters governing labour supply as the consequence of collective decisions. Otherwise these parameters can be considered as natural norms, that is norms

it is nonetheless apparent that the trend followed by such parameters *has been pointing in the direction of reducing labour supply*, that is the amount of work-time offered in the market by the population. (In Europe, at least, the evolution of the labour force determined by changes in participation rates, has been overwhelming since the 1960s: the increase in the participation rates has reversed and not simply counterbalanced the effects of the trends of the above mentioned norms.)

Governments have also greatly influenced the level of population regulating immigration (and, whenever possible, emigration). Although the subject has been widely studied, economists tend to underrate the role played by (net) immigration in equilibrating (and disequilibrating) the labour market. In most European countries it was immigration that accounted for the necessary increase in the labour supply during the 1950s and 1960s. What is interesting is the peculiar dynamics of net immigration, due to its substantial and non-economically determined asymmetry. Democratic societies cannot afford to take into consideration 'induced' emigration as a way of reducing labour supply. Even in the mild form of economic incentives to emigrate, public policies aiming at fostering emigration appear to be unacceptable. Many countries have even attempted to stimulate emigration of foreigners in various ways. These policies, which for moral and political reasons were not pursued convincingly, did not prove successful and were abandoned³⁴.

Regardless of the important question of asymmetry just stressed, control of immigration ought to be regarded as the most important policy measure devised and implemented in the post-war period to reduce the state of disequilibrium in the labour market in industrial societies.

The level of labour supply observed at time *t* is the *outcome of a process of cultural evolution and collective regulation*. On the basis of the analysis carried out in the previous paragraphs there are three classes of norms (institutions) within the set of exogenous and endogenous norms governing labour supply (see Figure 7.1).

Class 'a' is made up of norms which are determined by cultural evolution – *and are not influenced by the state of the labour market*³⁵. Women's attitude as to the amount of paid-work they desire to perform is a notable example of the role played by cultural evolution in the labour

emerging from private interactions. The collective decisions concerning them can then be considered as a ratification of the diffusion of such norms among the population.

³⁴ See Werner-König (1984); Hönekopp (1987).

³⁵ Certainly not in the span of time which is relevant for the policy-making process.

market over the last decades in many industrial societies. This evolution has followed a pattern which is unrelated to the state of labour market.

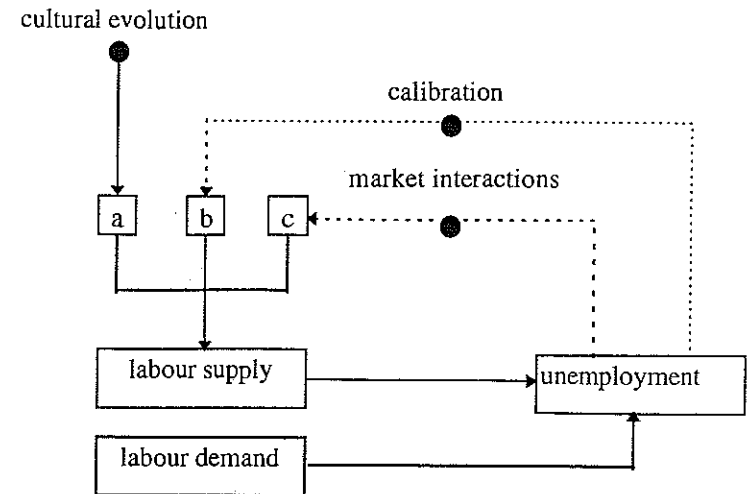


Figure 7.1 - Levels of interactions between unemployment and labour supply

Class 'b' contains parameters whose trend is influenced by the state of the labour market through collective decision. The length of working time and the minimum age to work, for example, are exogenous norms whose magnitude can be calibrated by policy-makers.

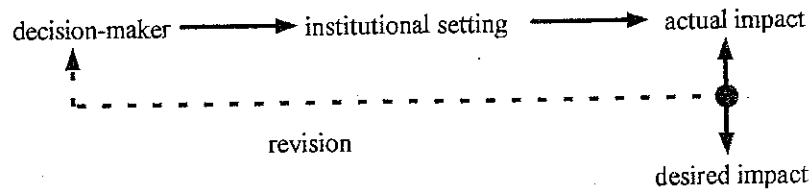
And finally there is the class 'c' which contains norms whose relative diffusion changes spontaneously as a reaction of the appearance of unemployment in the economic system. A change of preferences as that occurs in the case of the discouraged worker is an example of this class of norms.

8. Unemployment and the policy-making process

In the previous paragraph I have sketched a framework to address the issues of *calibration* and *'natural' negative retroaction* in the sphere of labour supply. Calibration brought about by collective decisions more than

the operating of 'natural' feedback loops emerged as the more effective level of regulation. It is now important to stress and make clear that calibration and the operating of natural counteractive feedback loops do not exhaust the issue of self-regulation.

Calibration operates as in figure 8.1. The decision-maker observes the impact of the change in the institutional setting and introduces a new change if the *actual* impact is different from the *desired* impact.



8.1 - Calibration in the sphere of institutional evolution

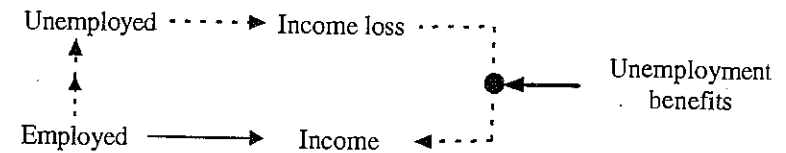
Calibration (i.e., to set the magnitude of exogenous variables at the desired level) is not the only way to modify the system which is relevant in the context of self-regulation. A second way is to build adjustment mechanisms in the system, that is to insert *artificial* counteracting feedback loops or to eliminate the obstacles to the working of existing *natural* counteracting feedback chains. Instead of regulating the system from outside, the decision-maker endows the system with a control device³⁶. A notable and pertinent example is the counteracting feedback loop created by introducing unemployment benefits (see figure 8.2).

The introduction of unemployment benefits closes the loop creating an artificial adjustment mechanism. To build the mechanism in the system is a collective decision, but once inserted the mechanism operates automatically on the basis of individual rational behaviour.

There is a further level of collective intervention which has to be considered with reference to institutional evolution. An economic system may be modified by reducing the interdependencies within the system. The decision-maker by introducing or eliminating certain norms may 'cut' unwanted linear causal relationships or disconnect undesired cumulative interdependencies. The introduction of a national health service, for

³⁶ If an artificial control device does not operate as expected it can be revised or calibrated. In fact, one can speak of calibration also with reference to a modification of a control mechanism (an interacting set of parts) and not only as a modification of a part of the system.

instance, make the amount of health service an individual can consume independent from his income and, hence, from the position he has in the labour market. By removing the causal relationship between unemployment and the reduction of the consumption of health services, the welfare effects of unemployment are greatly reduced.



8.2 - Unemployment benefits as a built-in counteracting feedback loop

An important example of undesired reinforcing feedback loops is given by the effect on skills and motivation to learn of remaining unemployed. Training for the unemployed and similar policies aim at interrupting the operation of this positive feedback loop³⁷.

The kinds of intervention I have now discussed are pertinent for each of the spheres indicated in figure 6.1: unemployment, long-term unemployment and relative poverty are determined by their specific set of linear and circular causal relationships. The two set of institutions making up the 'filters' are also subject to the same kinds of intervention.

Once the systemic dimension of unemployment is stressed, the role played by the policy-making process in the regulation of the economic system makes the issue of interpreting unemployment quite complex. From a systemic perspective there are no reasons why policy-makers ought to evaluate unemployment in isolation. Rather they should evaluate simultaneously a constellation of features of the economic process, associated with unemployment, which are in principle interdependent (see Figure 8.3). Having often relied on a strictly 'closed system' the hard fact that policy-makers evaluate an interdependent system and not only the labour market has been underrated. But it is a question that cannot be bypassed. Moreover, since, by definition, this evaluation process has a political dimension history plays an important part.

³⁷ The effect of an undesired reinforcing feedback can also be counterbalanced by building in the economic system a counteractive feedback loops operating on the same elements of the system.

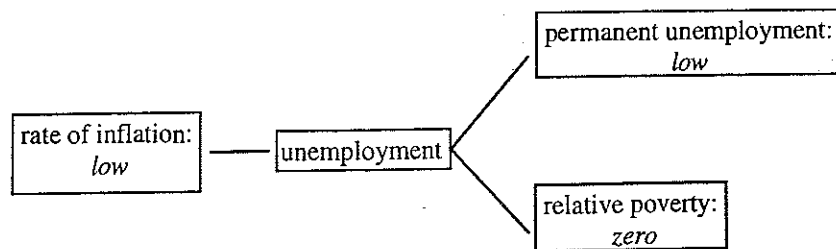


Figure 8.3 - Unemployment and its constellation of hypothetical effects

There is a second issue to consider. The structure that links the set of features (or state of the system) shown, as an example, in Figure 8.3, is made up of linear and circular causal relationships. As implied by the previous analysis, this structure is to be regarded neither as fixed nor as natural. The structure of the system is artificial to the extent that, as previously stressed, there are artificial institutions. Then, a constructivist approach to unemployment is unavoidable: not simply the scale of the economic process but also the structure of the system can be changed.

For some decades after the 'Keynesian Revolution' and the 'Neo-Classical Synthesis' the complexity of the issue of self-regulation with regards to unemployment was often neglected. The Keynesian approach to unemployment – similarly to the approach stemming from the Neo-classical synthesis³⁸ – has for many years underrated the relationship between unemployment and other states of the system. In a complex and evolving economic system to interpret unemployment as a 'disequilibrium state' is no longer obvious (whereas *it is obvious* if one moves from the Walrasian or Keynesian paradigm). It depends on the theoretical perspective from which policy-makers observe the state of the economic system and on the set of values from which they evaluate the state of the system.

An economic process which is associated with high unemployment but with low permanent unemployment and low inflation may be regarded by a policy maker as desirable. Therefore, instead of reacting to unemployment the decision-maker may react to long-term unemployment and decide to reduce, for instance unemployment benefits and to implement training

³⁸ Cf. Solow (1990, Ch. 3)

measures for the unemployed. Moreover, it may be interested in the degree of relative poverty and react to this feature of the economic process.

For some decades there was a prevalence of policies of demand regulation and expansion of the Welfare State. In terms of figure 6.1 it is clear that these two policies implemented to contrast unemployment belong to a much larger set of possible policies. In fact, it seems hard to deny that during the last decade in many countries there has been a shift in the attention of policy-makers toward a different subset of policies. A very large amount of institutional modifications are being implemented which aim at changing the relation between unemployment and long term-term unemployment, *and namely at having an economic process which produces a lower level of long-term unemployment starting from the same level of unemployment*. To create an economic system able to generate a very low permanent unemployment – whatever the level of unemployment is – seems to be the new policy paradigm.

The systemic approach I have followed has made it possible to show that reacting to unemployment is not the only strategy policy-makers have with respect to unemployment. They may look at unemployment from the perspective of the consequences of unemployment and focus on the unfair distribution of the social product rather than on the waste of resources (reduction of social production). Policy-makers may assign no importance to 'unemployment as waste of resources' and care only about the distortion in the distribution of the social product³⁹.

Furthermore, the system of values that the policy-maker maps onto the structure that links the features of the economic process is chosen by the political system and subject to change over time.

9. Conclusion

In this paper I have addressed the issue of self-regulation, in relation to the phenomenon of unemployment, for an economy with fixed wages. I have argued that an economy where wages are fixed by no means is to be regarded as an economy where there are no adjustment mechanisms. In fact, in a market economy institutional evolution can be seen, at least in part, as influenced by counteractive feedback loops. In principle it can be assumed that some of these loops ('natural loops') are established in the economic system as a consequence of the patterns of private interactions taking place among individuals. However, other loops are created by

³⁹ For a forceful criticism of this position see Lunghini (1995).

collective decisions. In an economic system which is largely artificial – in the sense that individual behaviour is embedded in a web of formal norms – rational policy-makers react to disequilibrium states in two ways. Firstly, they calibrate the system changing the institutional setting. Secondly, they insert artificial negative feedback loops, that is they change the *structure* of the system.

After having developed a metatheory of labour supply I addressed the issue of the relationship between labour supply and unemployment. I came to the conclusion that in an economic system characterised by an ongoing institutional evolution *labour supply does not react spontaneously to the appearance of unemployment* in a significant measure. Nevertheless, labour supply is embedded not only in a web of informal norms but *also in a web of formal norms*. Therefore, there are different norms that could be changed by the collective decision-maker in order to adjust labour supply so as to reduce unemployment. There is much scope for calibration in this sphere.

In the paper I have also questioned the often implicit hypothesis that *unemployment is by definition a disequilibrium state*. In fact, unemployment can be seen in terms of a waste of resources and in terms of a distorted distribution of social product. I have argued that the relationship between unemployment and the distributive effects of unemployment is very complex, with a variety of institutional features of social systems playing an important role. If unemployment is not causing an unsustainable distribution of social product, it could not be regarded by policy-makers as a disequilibrium state. Unemployment may not induce a calibration in labour supply, for instance, because policy-makers do not perceive it as a disequilibrium.

However, the institutional evolution of the economic system might be influenced by a 'distortion' in the distribution of social product. But these 'distortions' or 'disequilibrium' might not counteract on the institutions governing the level of unemployment, but rather on the institutions regulating the effects of unemployment on the distribution of social product. I have argued that these effects can be analysed within two spheres. Firstly, there is the relationship between unemployment and long-term-unemployment. Secondly, there is the sphere of redistribution of social product where the family and the State play a crucial role.

In the paper I have not analysed the adjustment mechanisms which may be found in these two spheres. I have, however, suggested that by considering these two spheres the issue of self-regulation in relation to unemployment becomes much more complex than it is normally considered to be. Firstly, there are two sets of norms – that I have named 'filters' –, partly natural e partly artificial, that transform a given level of

unemployment into a certain level of relative poverty. Being made up also by collective norms such filters may be objects of calibration. Secondly, both long-term unemployment and relative poverty might be influenced by negative and positive feedback loops. And again, negative feedback loops may be natural or artificial.

Finally, I have stressed that to conceptualise a given state of the world as a 'disequilibrium state' is a normative judgement. Moreover, in an economic system the state of the sub-systems are interrelated. A constellation of interdependent states associated to unemployment – and not only unemployment – is normally evaluated by the policy maker. Unemployment may persist because the policy-maker do not react by calibrating the system in way that would reduce unemployment, but would also worsen the state of other sub-systems.

The current impasse on the issue of unemployment is caused by the transition which policy-making is experiencing. Aggregate demand management and collective redistribution (welfare state) were the two levels at which unemployment and the welfare effects of unemployment was contrasted for some decades after the II World War. In recent times unemployment has come to be seen as related to the states of other subsystems – inflation or features of labour negotiations, for instance – while the private transaction process (market and non-market transactions) has come to be regarded as more efficient than collective transactions to achieve the desired degree of redistribution. Having a normative dimension these shifts are hard to question. However, it may be worthwhile stressing that they certainly imply a radical transformation of modern societies, and the transition towards this new structure is a complex question.

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