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Employment in Europe



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Investment stimulation, with the example of housing



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European unemployment is the sign of a significant underutilisation of resources.... The crux of the matter is inadequate aggregate demand.

1. Introduction

1.1 Growth and employment in Europe

This paper is a follow-up to the recommendations made by Jacques Drèze, Edmond Malinvaud and colleagues in 1993 (Drèze, Malinvaud *et al.*, 1994). The key arguments that are of interest for discussion here are paraphrased below:

"For almost 20 years now, West European unemployment has been a major social problem and the sign of a significant underutilisation of resources at a time of substantial unfilled needs...."

The crux of the matter is a situation of inadequate aggregate demand, at a time when there does not seem to exist any leeway for fiscal expansion. The way out of this dilemma has been correctly identified by the European Commission, namely to find ways of stimulating investment without falling back too much on national budgets for funding. The emphasis on social and public investment is natural at a time when unused capacities limit the immediate prospects for business investment (which, moreover, would be labour saving).

Of course, needs, meaningful projects and funding possibilities vary between countries. But there is scope for social and public investments on a scale commensurate with a genuine revival. Many of these investments need not require long planning periods and could thus be implemented well before the current and expected levels of unemployment are eliminated. In particular there are major needs in the field of private housing, especially housing for low-income families. This is also an area where investment projects are relatively labour intensive, and where unskilled labour can be mobilised, if the costs of on-the-job-training of unskilled workers are duly subsidised. Recourse to initially unskilled workers could also be important since one wishes to avoid inflationary pressure on building costs.

The main incentive that we propose for the contemplated investments is in the form of employment subsidies, coupled with improved access to capital markets.

The principle of employment subsidies is to approve specific projects, or project areas, and to grant a subsidy proportional to the labour content of those projects. In comparison to interest or capital subsidies, our proposal has the merit of reducing further the wedge between the private and social cost of labour, and of slowing down the wasteful substitution of capital for labour."

Subsidising specially identified investment projects entails some administrative costs. But such an approach seems necessary if one wishes to concentrate the subsidies on projects which would not otherwise have been undertaken, and which yield adequate social returns.

This paper has been shortened by the editors from a longer report that is available from the authors.

From the macroeconomic viewpoint, investment is the key element of sustained growth.

Private lenders will, of course, be interested in financing some of these subsidised investments, but for projects with long pay-back periods, such as those considered here, market imperfections remain significant. That is why banks experienced in public sector funding should be given the responsibility of financing a good proportion of the investments. The European Investment Bank (EIB) and national long-term credit institutions, such as Crédit National, KfW, IML, etc., could be able to provide a significant sum. In the case of the EIB, a first step should be to extend its role, so as to encompass private housing.

In short, let us try to put involuntarily unemployed Europeans to work on worthwhile investment projects, such as housing or urban renewal. Temporary subsidies geared to the share of labour costs, accruing in any case to the Treasury should be (i) self financing, and (ii) instrumental in inducing private investors to step up investment. From a macroeconomic viewpoint, investment is the key element of sustained growth. But in order for the macroeconomic impact to be felt, the program should be carried out on a large scale. It should therefore be co-ordinated and implemented simultaneously in all member countries in the EU-15.

Building upon several recent studies (1), this paper is structured as follows. In Section 2 we develop the case for employment subsidies, with the example of housing. In Section 3, we review the main problems of implementation. In Section 4, we conclude with a look at the possible role of the EIB.

1.2 Timeliness of a European initiative

After averaging 3.3 percent per year over the period 1986-1990, GDP growth in the EU-15 has slowed down to 1.5 percent for 1991-96. The Autumn 1997 forecasts of the European Commission are more optimistic, being close to three percent for the period 1997-1999 (2). Employment is expected to increase by 2.6 percent and unemployment to abate by 1.2 percent, receding from 10.9 percent in 1996 to 9.7 percent in 1999. Budgetary deficits "at unchanged policies" are expected to come down further from 4.3 percent in 1996 to 1.8 percent in 1999. These forecasts are based on a more favourable assessment of prevailing conditions, characterised by sustained export growth, continued budgetary consolidation, appropriate wage trends, returning consumer confidence, and the high profitability of investment.

This is the background against which we are suggesting to step up investment. Is it really necessary? Is it timely? Our answer is that it is definitely useful; it might well prove necessary; and it is by all means timely to start preparations.

It is definitely useful, because the forecasts for 1997-1999 remain only moderately optimistic (3). A growth rate of three percent translates into some one percent for employment, and a decline of some 0.5 percent for unemployment. This is obviously very modest. A faster abatement of unemployment, calling for faster GDP growth, would certainly be welcome. If it can be achieved at unchanged, or only slightly affected, inflation and deficits, it would be definitely desirable.

1) Drèze and Gollier (1993), Drèze and Sneessens (1994), Sneessens and Shadman-Mehta (1995), Shadman-Mehta and Sneessens (1996), and Drèze (1997).

2) "The Community Economy in 1997-1999", document II/554/97-EN, October 14, 1997, p. 4.

3) The 1999 forecasts obtained on the basis of unchanged policies suggest there may be a need to take additional measures to achieve the medium-term objective of close to budget balance or surplus.

It might well prove necessary. There are three reasons to interpret the above forecasts with prudence. They are based on unchanged policies. But these policies remain contractionary, as evidenced by the expected budgetary consolidation of 2.5 percent between 1996 and 1999. The country forecasts include the domestic impact of domestic consolidation. But it is doubtful that they internalise the spillover effects on other EU members of the consolidation at work in a given country. And the consolidation is at work simultaneously almost everywhere (except in Denmark, Ireland and Luxembourg, which together account for three percent of EU-15 GDP). An optimistic bias in the forecasts cannot be ruled out on this score. More importantly, if it turns out that the 1997 deficits exceed the forecasts, emergency measures might be taken to bring the deficits in line with the EMU reference level of three percent. Such measures would again be contractionary, and entail spillover effects. The Stability and Growth Pact signed in Amsterdam will ensure that this issue does not disappear even once EMU is launched.

Second, the new European Central Bank will, with high probability, be eager to establish its credibility in forestalling inflation, and perhaps also in defending the exchange rate of the EURO against such currencies as the yen and the dollar. Contractionary monetary policies cannot be ruled out.

It is by all means timely, accordingly, to adopt general policies favouring investment, in particular policies of low real interest rates, but also to consider policies targeted at specific investments, which entail lags in preparation. We regard starting this preparatory work as a matter of urgency.

1.3 Investment as a tool for economic management

The Annex gives a more detailed theoretical framework explaining the logic that underpins the stimulation of investment.

We conclude from these theoretical arguments that policies aimed at stimulating aggregate activity and supporting more optimistic expectations may be needed to achieve faster growth, in particular of employment, when a relatively closed economy (like the EU-15) is suffering from persistent under-utilisation of resources. It should however be realised that such policies are not to be considered as pump-primers setting into motion a path of adjustment towards a self-perpetuating full employment equilibrium. Rather, they should be considered as the remedy to a co-ordination failure, which, even if remedied now, remains apt to reoccur at later dates. This is not a happy situation. In particular, under high levels of public indebtedness, it would seem unwise to attempt stimulating the economy through budgetary deficits (fiscal expansion), since there is no guarantee that the additional debt can be retired once the expansion has taken momentum. A safer course of action consists in identifying social needs that could be met through investment, and to speed up the realisation of these investments. That is also the approach suggested by Drèze, Malinvaud *et al.* and investigated further here.

An ambitious approach would call for the preparation of a portfolio of worthwhile investments, to be realised at times of unemployment. Thus, the pace of investment could be stepped up when employment stagnates, and slowed down when growth accelerates. That approach may seem exceedingly ambitious and suspect on grounds of "fine tuning". The more immediate agenda is to step up investment for the next few years, hoping that several years of sustained growth may bring unemployment back to a more tolerable range.

An ambitious approach would be to prepare a portfolio of investments, for implementation at times of unemployment.

2. Labour cost distortions and employment subsidies.

A situation of severe unemployment entails two severe distortions. First, there is a wide gap between the private and the social cost of labour. Second, there is a gap between the private and the social cost of advancing the use of idle resources.

2.1 The labour cost distortion

This distortion is well known, and well documented. Once more it is useful to restate the observations of Drèze, Malinvaud *et al.*

"The nature and extent of the gap between the private and social cost of labour must be properly understood. At times of full employment, the opportunity cost of labour to one firm is the productivity of labour in other firms, and there is no distortionary wedge. At times of underemployment, the opportunity cost of an unskilled worker is simply that of putting an unemployed person to work (a cost that ultimately could even be negative, if some unemployed workers would rather be employed, at unchanged net income). For other categories of workers, the situation is more complicated. Some categories are fully employed at their own skill level, so that the full employment rule applies. Other categories include workers employed below their own skill level, so that the opportunity cost should be evaluated (recursively) at the lowest skill level of actual employment for that category.

A rough measure of the wedge is given by the share in the private labour costs of social insurance contributions (SIC) and income taxes, possibly augmented by unemployment benefits (or a fraction thereof, to reflect the fact that only a fraction of new jobs go to the unemployed - a fraction typically of the order of one half). Table 1 gives an indication of the share of SIC and income taxes in labour costs at mean earnings - a share that ranges between 30 and 50 percent in Europe. (As is well known, it is distinctly lower in the US and Japan.). Including an element of unemployment, the wedge falls in the range of 40 percent to 50 percent."

Table 1. Social insurance contributions and income tax at average earnings (blue collar workers), 1991 (in percent)

	SIC Rates		Average Income Tax Rate	Wedge as a percentage of private cost
	Employer	Employee		
Belgium	41.9	12.1	11.6	46.2
Denmark	0.0	2.5	36.0	38.5
France	43.8	17.1	1.0	43.1
Germany	18.2	18.2	8.7	38.1
Ireland	12.2	7.8	16.4	32.4
Italy	50.1	9.0	14.2	48.9
Netherl	10.8	10.7	32.5	48.8
Portugal	24.5	11.0	0.9	29.2
UK	10.4	7.6	15.5	30.3
US	7.7	7.7	11.3	24.8
Japan	7.6	7.0	2.4	15.8

Source: OECD (1993).

In Box 1 we attempt a rough application of our proposal to residential housing in Belgium. The share of direct labour costs in value-added of residential construction is of the order of 50 percent, that of indirect labour costs (4) of the order of 20 percent; (see Durré, 1997). Using a range of 40 to 60 percent for the wedge between private and social labour costs, we conclude that total private costs (value-added, to a first approximation) exceed total social costs, on this score, by a factor of between 20 percent (i.e. 40 percent of direct labour costs) to 42 percent (60 percent of direct plus indirect labour costs).

2.2 The discounting distortion

The second distortion is less familiar. If the government gives up its tax revenue of labour, it does not lose the full amount, but only the discounted amount from the future date when the investment would have taken place. Obviously, the importance of this issue depends upon the size of the tax wedge, but the result is that the social discount rate is less than the private discount rate.

The reasoning just advanced does not, however, imply that housing should be financed at low interest rates when there is unemployment. To see this, consider the ancillary decision about the mortgage duration. A low rate would induce house owners to extend this as much as possible: they get a cheap loan, whereas they could invest their savings productively (5). So to correct the distortion, one *should distinguish between the real issue of advancing investment in time, and the financial issue of how the investment is funded.*

If one wished to correct the discount rate distortion through an interest subsidy to home owners, it is hard to see how the subsidy should be defined. Thus if the concern was to move forward next year's investment, a subsidy equal to one year of interest would do. But if one were concerned to advance investment from year five to year zero, the required subsidy would be five years of interest. How is one to distinguish between the two cases?

We conclude that subsidising the labour content of additional investment makes sense as a way of correcting a distortion in the pricing of labour.

The only practical solution is to eliminate the wedge through subsidising construction, but to leave the financing by home owners/occupiers alone.

We conclude accordingly that subsidising the labour content of additional investment makes sense as a way of correcting a distortion in the pricing of labour, in addition to helping overcome the macroeconomic co-ordination failure reflected in slow growth and high unemployment.

3. Guidelines for implementation of a European investment program

The foregoing sections have presented the case for subsidising the employment content of additional investment. Assume that one could: (i) identify investment projects that are not regarded as profitable at market prices, but would be undertaken if the subsidy scheme is implemented; (ii) identify the labour-costs component of such investments; and (iii) measure the returns to the Treasury associated with that labour component; then one could, in principle, define a subsidy program that stimulates investment at no budgetary cost. The macroeconomic benefits would come free. Each of the three conditions may be difficult to meet exactly, but could well be met approximately. No more can be expected from macroeconomic policies generally.

4) Labour costs embodied in intermediate inputs.

5) Also, at a zero rate, they would over invest in the non-labour part of the house (insulating materials, air-conditioning,...).

Box 1. The example of low cost housing in Wallony

A precise and detailed description of the situation prevailing in the European housing sector is obviously beyond the scope of this paper. We focus here on the situation prevailing in one region of Belgium (Wallony) and use the available information to provide rough measures of unsatisfied needs and of the supply responses that might be expected from a programme of investment stimulation.

Unsatisfied needs

Output and employment in the housing sector in Belgium decreased sharply with the 1981 recession. Value-added fell from eight percent to less than six percent of GDP, and the number of workers was almost cut in half. The recovery of the late 1980s produced only a slight improvement. The 1981 recession thus created a substantial excess supply. Estimates reported in a study by Boon *et al.* (1997) suggest a demand for about 6,500 new dwellings per year over next 18 years, compared to an average of 9,000 new dwellings officially registered every year in the recent past.

There are however clear indications of unsatisfied needs for low income families. A recent survey suggests that five percent of the existing dwellings would need substantial repairs in order to be considered salubrious. At least 30 percent of the existing dwellings can be regarded as inferior dwellings in terms of equipment and facilities. And at least 30 percent of low-income families (net income below the median) live in such inferior dwellings. While other families progressively improve the quality of their house, low-income families typically remain in ill-equipped houses during their entire lifetime. The cost of housing represents up to 40 percent of their income compared to about 15 percent for families with net income above the median.

Marginal projects

Programmes funded by the region to provide low-income households with access to low-cost housing are too limited to meet all demands. The investment programme decided by the regional government of Wallony means that less than 500 additional low-cost houses will be provided each year over the next five years, while the number of pending demands officially registered is 43,000*. This stock of unsatisfied needs represents an amount of about ECU 3 billion, for a region representing about one percent of the EU population.

Labour contents

The impact of housing investment on employment may be substantial. A ECU 25 million investment (about 300 dwellings) is estimated to generate about 500 person-years (349 in construction, 151 in intermediate input sectors; see Boon *et al.*, 1997). The ratio between the total and the direct employment effects so obtained (1.43) is slightly larger than the one found in the 1985 input-output table (1.33). This may reflect the under-representation of small enterprises in the latter. The total labour content in the residential sector amounts to about 70 percent (a 50 direct plus a 20 percent indirect content).

Supply response

Stimulating investment in the low-cost housing sector may thus have substantial employment effects if there are no supply bottlenecks. Looking at the effects of the recovery of the late 1980s and comparing them to the situation currently prevailing in the construction sector suggests that bottlenecks are unlikely. The recovery of the late 1980s took place without generating inflationary pressures in the construction sector, despite substantial production increases (value-added in 1991 was 30 percent higher - at constant prices - than in 1986; while its share of GDP increased from 5.4 percent to six percent). The situation prevailing today, by comparison with the late 1980s, is one of much less optimistic business expectations, reflecting under-utilised productive capacities.

Subsidy rates

The gap between the market cost of a dwelling and the cost that can be borne by prospective low-income households can be evaluated by looking at subsidy rates currently offered for low-cost housing. These rates can be approximated either by looking at the discrepancy between market and subsidised rental costs, or by looking at the subsidy received by the local associations in charge of running low-cost housing programmes funded by the region. The actual subsidy rate will of course vary from one household to the next.

Let us consider a specific case, corresponding to an average situation. The construction cost is ECU 75,000, with a total cost (including land, other charges, etc.) of about ECU 100,000.

The local association running the investment programme can borrow 90 percent of the construction cost net of charges from the region and must repay 125 percent of this amount over 30 years; the rest must be borrowed at market rates. If the latter is six percent for a 30 years loan (implying a total repayment of 218 percent), the total amount to be repaid by the local association is equal to 156 percent of the total cost. The implicit subsidy rate is thus equal to 28 percent.

Estimating the subsidy rate from rental costs leads to a similar order of magnitude. The maximum rental cost that can be charged by the local association for the type of house considered in our example is some ECU 400 per month. If we assume that the market rental cost is equal to about six percent of the amount invested, we obtain ECU 6,000 per year, or ECU 500 per month. The difference between the subsidised and the market rental costs is some 25 percent.

** This figure (cited in a report prepared by the University of Mons for the regional government) may entail double counting. A precise estimate should also take into account the number of households which do not introduce a demand through lack of information or discouragement. The existence of substantial unsatisfied needs is confirmed by heads of local associations in charge of running low-cost housing programmes.*

We propose a European programme of national employment subsidies, with an overall financial inducement coming from Europe.

With this background, we can now consider a European program under which employment subsidies would be set and funded by national authorities, with an overall financial inducement coming from Europe. We believe that a cooperative European effort is needed to maximise the macroeconomic impact.

3.1 Specific Issues

European co-ordination and incentives

The program would be limited so that marginal additions can be identified. In the discussion we draw on the example of low cost housing set out in Box 1. However, there may be other sectors where the same logic could apply.

It is expected that national authorities could prepare investment plans for, say, the next seven years. To the extent that such investments already benefit from various forms of public support, the implementation would be conditional on keeping unchanged the public support expected to prevail over the next seven years. It would of course simplify matters considerably if existing forms of support were replaced at once with employment subsidies as defined below.

A program tailored to an additional investment of ECU 150 billion to ECU 250 billion would remain well within the bounds of meeting real needs.

A remaining difficulty is that national authorities could be tempted to under-report investments that have already been decided. Perhaps the simplest safeguard in this respect is to announce national quotas for access to the program, possibly accompanied with an obligation to maintain a minimal ratio of investment outside the program.

Overall scale

The overall scale of the program can be approached from two angles: needs and means.

The current population of the EU-15 is 375 million people. The corresponding number of dwellings exceeds 100 million. Using that round figure as a reference, and using an average figure of ECU 60,000 per dwelling, it would require an investment of ECU 60 billion to improve the dwellings of one percent of the EU-15 population. Although we have not seen hard data, we feel safe in assuming that several percent of the EU-15 population occupy substandard dwellings. A program tailored to an additional investment of ECU 150 billion to ECU 250 billion would thus remain well within the bounds of meeting real needs.

How does one create incentives for member nations to participate? This could be achieved with low-interest loans from the EIB, though a special EU budget would have to be appropriated for this purpose.

The cost of the associated interest subsidies would build up rapidly. Assume that funding extends over 30 years. One percentage point of interest subsidy would mean an annual cost of ECU 750 million for ECU 100 billion invested at a six percent interest rate. This sum corresponds to three percent of the annual budget for the Structural Funds of the EU.

Adjusting scale to circumstances

Given the underlying macroeconomic motivation, it would seem appropriate to relate the scale of the program to the rate of unemployment. Given the specialisation of the program in the construction field, it would seem furthermore appropriate to relate the scale to the level of activity in construction. If a specific unemployment rate for construction workers could be defined meaningfully, that rate could be used as a single reference. Unfortunately, defining that rate meaningfully may not be feasible.

It should also be possible to tailor a programme to local unemployment and the level of activity of the construction industry in the region in question. An explicit formula including these variables could be constructed.

Such an adjustment of investment falls squarely into what is often referred to as "fine tuning", and will thus meet with standard objections on that score. Yet, the immediate intention is quite remote from fine tuning. It is to stimulate investment at a time when unemployment in Europe is shockingly high, and a long period of sustained growth is indispensable to bring unemployment down to more tolerable levels. We see no contradiction in using a "formula" to implement that program. The formula has the advantage of announcing clearly that the program is temporary, thereby reinforcing the inducement to shift investment forward, and should be non-inflationary.

National employment subsidies

It is well documented by now that the core of unemployment affects low-skilled, low-paid workers. At the same time, it is obvious that a hierarchy of qualifications are involved in building projects. If a set of new projects is initiated, it is unavoidable that some qualified workers will be displaced from other activities. Hopefully, they will be replaced there through upgrading of others next in line, until eventually vacant jobs are filled by unemployed workers. The extent of the displacements will of course depend upon the overall activity in the construction industry.

In order to provide maximum incentives for low-skilled employment, we suggest issuing subsidies per person-year, irrespective of wage levels. The overall amount of the subsidies for a project would be based upon the wedge calculated from overall wage costs. But the disbursement would take the form of a flat amount per person-year, so as to privilege numbers over pay. The administration of this scheme may or may not be straightforward, depending upon the extent to which actual employment on a given project can be monitored, and upon the number (hence average size) of projects at stake. The goal is to define a simple, easily monitored scheme. (Note that monitoring has equal difficulty whether the subsidies are proportional to wage costs or to person-years.)

In order to provide maximum incentives for low-skilled employment, we suggest issuing subsidies per person-year, irrespective of wage levels.

As a practical guideline, we offer the following suggestion. For a firm being awarded a building contract under the program, the average labour cost can be measured from the record of social insurance contributions, say over the last two fiscal years. Call that average cost, w' . Let the subsidy per person-year amount to x . If the total labour costs corresponding to the building contract are L , the subsidy will be set equal to xL/w' . This method automatically favours firms which rely more on unskilled labour, i.e. for which w' is relatively low.

An additional incentive for deepening the recourse to unskilled labour could be introduced by inviting firms to justify that average labour cost within the proposed building contract is below w' . But the burden of the proof would then lie with the firm.

Such a scheme would go a fair way towards favouring labour-intensive investments. It should prove straightforward to monitor, since the only variable to be checked is aggregate labour costs, and other items could be given in the tenders.

Targeting beneficiaries

Since the houses to be constructed would be sold (or rented) at below market rates, there is the issue of rationing demand. One could imagine a number of schemes including private builders, though there would be the risk that some of the benefits of the state subsidies would accrue to builders rather than the poor. A simpler method would be for the state to take responsibility for construction, by expanding its normal schemes for low cost housing. In this case, competitive tendering is, of course, essential to contain costs.

Public housing programs in different countries use different criteria to define priorities for occupancy (6). Income (or sometimes wealth) is a common criterion. It would seem preferable not to depart too much from national practices, with only broad guidelines agreed upon at the European level.

3.2 Summary

Summarising this section, we may now define somewhat more precisely the outline of a program aimed at stimulating investment in housing.

- The program should be a cooperative European effort (for macroeconomic impact); inducements to participate could take the form of low-cost funding for participating countries; a special budget should be appropriated; the size of that budget would *de facto* define the scale of the program; that scale could be big; it could be adjusted over time as a function of the rate of unemployment and of the level of construction activity.
- The program should be implemented in member countries through approval of investment projects and the issue of labour subsidies; these subsidies would take the form of a flat amount per person-year of employment on the approved projects; the flat amount should be such that overall subsidies correspond to the share of private labour costs accruing to the Treasury.
- The program would stipulate upper limits to the access of individual member countries to EU funding; it would delegate to national authorities the conditions of eligibility to occupy the dwellings.

Investment stimulation seems to be a natural approach, but our conviction does not seem to be shared by European political leaders.

4. Concluding remarks

4.1 On political feasibility

Political feasibility of a European program as outlined here remains doubtful on several scores.

- The starting point of the proposal is the conviction that slow growth and stagnation of employment in EU-15 reflect in part a macroeconomic co-ordination failure. Investment stimulation seems to be the more natural approach to overcoming that co-ordination failure, but our conviction does not seem to be shared by European political leaders and their advisors. This is evidenced by the lack of attention to the co-ordination of macroeconomic stimulation at the Luxembourg Employment Summit. A major revision of policy attitudes would thus seem to be called for, and there are no signs that such a revision is forthcoming.

6) See Coloos (1997) for an overview.

- The program we are advocating should be decided by the European Council, presumably subject to unanimity approval; there is no indication that unanimous support could emerge for a new program of this kind.
- An interest subsidy of 50 to 100 basis points on an overall investment of ECU 150 billion to ECU 250 billion would call for a budgetary appropriation of ECU 0.5 billion to ECU 2 billion per year over the next 30 years. There may arise difficulties to appropriations extending over such a long horizon, and there is the issue of how the corresponding revenue would be raised. This is an aspect not covered in the present paper.
- Participation of the member countries in the implementation of the program is essential, but the willingness of the Member States to organise and implement the suggested employment subsidies, and response of the sector to these incentives, are untested.

The present paper is an attempt to bring forth these problems and an invitation to study them. In a sense, we are simply charting out some of the ground to be covered if the Amsterdam request to the EIB is to materialise (7). The more ambitious goal of Drèze, Malinvaud *et al.* was to assemble a portfolio of investment projects, the realisation of which could be adjusted to macroeconomic circumstances. Given the lags involved in the construction of such a portfolio, we still feel that this should be undertaken at once. This task could be carried out by the EIB.

4.2 A role for the EIB

Regarding the role of the EIB itself, we offer the following suggestions:

- We urge the EIB to extend our investigation into the feasibility of stimulating investment in housing across the EU-15. Such an investigation should survey the situation in the different member countries, along the lines that we have followed for Wallony. Simultaneously, the operational way of fitting such a program into existing European programs could be investigated, and a detailed blueprint, covering both the financial incentives to participate, and the internal implementation within member states, could be prepared by the EIB.
- Our paper has concentrated on housing. The Drèze, Malinvaud *et al.* proposals also covered other aspects of urban renewal, together with urban transportation and investments in trans-European networks and environment protection. These other areas could also be investigated by the EIB.

These suggestions invite the EIB to exercise initiative in launching these studies and reporting to the European Council. Presumably, this was the purpose of the Amsterdam resolution.

We urge the EIB to extend our investigation into the feasibility of stimulating investment across the EU.

7) At the Amsterdam European Council, the Resolution of the European Council on Growth and Employment urged the European Investment Bank to step up its activities "in creating employment through investment opportunities in Europe".

Annex

Why stimulate investment? A theoretical framework

Outline

To set the stage, we review briefly a (non-standard) theoretical case for demand management, based upon contemporaneous thinking about incompleteness of markets. The argument proceeds in three steps: (i) incomplete markets justify price and wage rigidities as a second-best compromise between productive efficiency and risk-sharing; (ii) incomplete markets are conducive to co-ordination failures which, in the presence of price and wage rigidities, result in multiple equilibria, possibly accompanied by substantial underutilisation of resources; (iii) a multiplicity of equilibria in turn strengthen the incentives for downward price and wage rigidities, endowing the underemployment equilibria with persistence.

In this argument, incompleteness of markets refers to the pervasive absence of markets for futures and contingent contracts, in particular for labour services, but also for aggregate demand, hence for co-ordination of expectations.

Wage and price rigidities

We begin with wage rigidities, following Drèze and Gollier (1993) (8). In an economy evolving over time, under uncertainty about the future state of the environment, an efficient allocation of resources is not sustained by sequential clearing of spot markets (by a sequence of temporary equilibria). Insurance markets, or substitutes thereof, are required for an efficient allocation of risk bearing. Financial markets and insurance contracts serve that function, within limits. For labour services, multi-period contracts as studied in the theory of implicit contracts (9) offer scope for risk sharing between workers unable to diversify their human capital and shareholders holding diversified portfolios. In contrast, future job applicants (the young, the unemployed, the future re-entrants after dismissal or temporary withdrawal) have no access to insurance. They are left to bear the risk of labour market-conditions at the time of (re-)entry. If spot markets for labour contracts (both temporary or long-term contracts) cleared competitively at all times, the wages stipulated in these contracts would be subject to extreme fluctuations; in particular, they would fall to the reservation level of marginal workers under cyclically depressed markets. The resulting uncertainty for prospective job applicants would be severe. And yet, other agents (workers under contract and owners of non-human wealth) could theoretically provide insurance on mutually agreeable terms. But markets to that effect (markets for contingent labour contracts) do not exist. The resulting inefficiency (in risk sharing) can be alleviated, at some cost, through downwards wage rigidities (in bad states) and progressive labour taxes (in good states). A second-best allocation is achieved when the benefits from risk sharing just offset, at the margin, the costs of productive inefficiency (involuntary unemployment associated with the downward wage rigidities) (10). The reasoning justifies minimum wages or some forms of union wages coupled with unemployment benefits. A superior, but more sophisticated and less prevalent alternative would combine the minimum wages with employment subsidies, see e.g. Drèze and Sneessens (1994, Section 3.2) or Phelps (1997).

8) See also Bean (1984).

9) See Azariadis (1975), Baily (1979) and Gordon (1974), or the survey by Rosen (1985).

10) The second-best analysis assumes financial equilibrium, i.e. equality of the present values of unemployment benefits and of labour taxes, adjusted by a risk premium corresponding to the requirements of financial markets.

The corresponding argument for prices aims at explaining downward price rigidities in the face of underutilisation of capacities. The following statement is borrowed from Drèze (1997):

"Investment in productive capacity generates fixed costs. Under incomplete financial markets, these must be covered by surviving firms at all date-event pairs; this will typically require competitive firms to practice average cost pricing in states of depressed demand, thus explaining the downward rigidity of prices in the presence of excess capacity."

Co-ordination failures

Turning to co-ordination failures, consider an economy with price vector $p = (p_1, p_2)$, where 1 denotes a set of commodities (goods or services) with flexible prices and 2 a set of commodities with rigid prices. Let $p_2 = p'_2$ be given. A supply-constrained equilibrium is a price vector $p = (p_1, p'_2)$ and a physical allocation such that markets for 1-goods clear competitively whereas the markets for 2-goods clear through quantity constraints rationing excess supply (unemployment and excess capacities). It is shown in Drèze (1997) that, under standard assumptions and for arbitrary given p'_2 , there exist supply-constrained equilibria with arbitrarily severe quantity rationing of the supply of 2-goods (11).

There are two new elements in this result, relative to the literature of the 1970s on equilibria with quantity rationing. First, the result holds for arbitrary prices p_2 , hence also for prices p_2^* which, together with some p_1^* , form a competitive price vector p^* ; there is thus scope for excess supply at competitive prices, a phenomenon which is most naturally interpreted as a co-ordination failure. Firms do not hire due to lack of demand; unemployed workers do not buy due to lack of income; excess capacities build up and discourage investment. And yet, full employment of resources is attainable *at the same wages and prices*. Second, the extent of rationing is arbitrary, on theoretical grounds; the prevailing extent is apt to be path-dependent, and largely driven by expectations. Under pessimistic expectations about future relative prices and/or quantity constraints, firms do not hire or invest, resulting in low levels of activity and employment today. Yet, the expectations may be rational, i.e. realised tomorrow. There is no market mechanism to coordinate expectations and trigger adjustments of expected future prices and quantities towards full utilisation of resources today.

Persistence

The prospect of underemployment equilibria reflecting pure co-ordination failures helps understand the resistance of wages in the face of unemployment. Indeed, the same degree of unemployment is logically compatible with lower wages. There is no guarantee that lower wages will result in more employment, and no immediate evidence that prevailing wages are incompatible with higher employment. Policies aimed at overcoming the co-ordination failure through demand stimulation and support of more optimistic expectations define a superior alternative, especially from the viewpoint of workers. The wage resistance is thus understandable, even though the persistence of co-ordination failure equilibria is related to price and wage rigidities.

11) Technically, for any vector s'_2 of quantity constraints on the supply of 2-goods, there exists a supply-constrained equilibrium with constraints $s_2 < s'_2$.

Econometric confirmation

The theoretical analysis summarised above may be related to empirical work validating the presence of multiple equilibria, for instance Lubrano *et al.* (1996) or Shadman-Mehta and Sneessens (1997), following earlier alternative formulations by Blanchard and Summers (1987) or Manning (1992).

Lubrano *et al.* (1996) use Johansen's FIML method to analyse the econometric relationships between all the variables entering a theoretical model of wage and unemployment determination under imperfect competition and real rigidities. The model was estimated on Belgian data over the period 1955-1988. The advantage of the Johansen procedure (compared to equation-by-equation methods) is that it considers the system of dynamic equations as a whole, and allows us to test the status of each variable (exogenous or endogenous) as well as the number of independent cointegrated (structural) relationships. As expected from the theoretical model, the wage share, the unemployment rate and the capital gap (12) emerge as endogenous variables; all the explanatory variables of the theoretical model are weakly exogenous. The model satisfies all stability tests. However, one obtains only two cointegrating relationships. The dynamic system has thus no unique long-term equilibrium unemployment rate (NAIRU); the equilibrium unemployment rate is well defined only at a given capital stock (or capital gap). The value of this short-term equilibrium unemployment rate depends on past investment rates and/or on expectations about future sales (not explicitly modelled, but incorporated in the system's dynamics). Short-run equilibria are extremely (locally) stable, i.e., large shocks are needed to have a permanent effect on the path followed by the economy. Simulation exercises show that both demand and supply shocks have real effects on equilibrium unemployment.

Shadman-Mehta and Sneessens (1997) develop this analysis further by examining under what conditions such a continuum of under-employment equilibria can be obtained in a model with quantity constraints of the *EUP* type (see Drèze *et al.*, 1990). The crucial point is the effect of capital gaps on wage formation. As the unemployment rate and the capital gap progressively increase, the wage rate becomes less sensitive to the unemployment rate (i.e., the gap between labour supply and actual employment) and more sensitive to the gap between the capacity and the actual employment levels (i.e., the degree of capacity utilisation). It then suffices that prices be determined by a mark-up on costs (as in standard monopolistic competition models, with possibly a capacity utilisation effect) to obtain a continuum of equilibria indexed by the capital stock; the latter determines the "size" of the economy. The model is thus a particular case of Drèze (1997). Estimation of the model over the period 1955-1994 yields the same results as in Lubrano *et al.* (1996).

12) The capital gap is a combination of the unemployment rate and the degree of capacity utilisation. The three endogenous variables can thus alternatively be written as the wage share, the unemployment rate and the degree of capacity utilisation

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