

GIORGIO FUA'

**RURAL INDUSTRIALIZATION IN LATER DEVELOPED
COUNTRIES: THE CASE OF NORTHEAST
AND CENTRAL ITALY**

Reprinted from "Banca Nazionale del Lavoro Quarterly Review"

No. 147 - December 1983

BANCA NAZIONALE DEL LAVORO - ROMA

Rural Industrialization in Later Developed Countries: The Case of Northeast and Central Italy *

1. Introduction

The later-developed countries (later DCs), including Italy and the earlier-developed countries (earlier DCs), show a number of systematic differences in economic structure which have already been studied in detail (Fuà 1980). Two of them are particularly relevant in the present context. Firstly, a large proportion of the whole population of the later DCs still lives in rural areas.¹ Secondly, small firms account for a large part of productive activities in these countries and accordingly there is a high proportion of self-employed workers.²

The rapid substitution of this "decentralized" structure by a more "centralized" one (the concentration of the population in large towns and production in large enterprises) was commonly held, at least until recently, to be a necessary step for their economic development. But the idea that it is possible to pass from one economic structure to a completely different one in a short time has now been discredited. People have come to realize that it is easy to throw away a heritage of culture, organization and buildings amassed over the centuries, but a great deal of time is required to create a sound new way of life. Moreover, we must remember that the centralized structures of the earlier DCs were formed gradually over a long period of time by a

* This paper is adapted from the opening chapter of the book: G. Fuà and C. Zacchia (eds.), *Industrializzazione senza fratture*, Il Mulino, Bologna 1983.

¹ In 1970, 52% of the population of the later DCs (in Italy 49%) were living in rural districts or in towns with fewer than 20,000 inhabitants. In earlier DCs the percentage was only 25%.

² Establishments with fewer than 51 workers account for over 50% of total manufacturing capacity in Greece and Turkey and 40% in Italy and Spain. The percentage in Germany, however, was only slightly over 20% and little more than 10% in the United Kingdom and U.S.A. The contrast between earlier and later DCs is very marked in other fields too, particularly building and commerce. It would be even sharper if it were possible to take hidden employment into account.

process of modification of the previously existing decentralized structures.

The industrialization process which took place after the second world war in a number of Italian regions (which were essentially agricultural in the late '40s) conforms rather closely to this alternative pattern of development. The regions are Trentino, Veneto, Emilia Romagna, Tuscany, the Marche and Umbria. Taken together they account for nearly 30 per cent of total Italian population and area. As they are located in the North-East and Central parts of the national territory, they are termed "the NEC regions" in this study and their industrialization process is labelled "the NEC model".³

2. An outline of the NEC model

2.1 *The starting point*

Not all the areas included are equally industrial; some have already reached a high level of development, even in terms of per capita income; some have reached the half-way mark, while others are just beginning. Moreover, the differences between the various areas also lie in the choice of the path to be followed. Some of these differences may be due to chance, but many others can be easily explained by the diversity of geographical location, of natural resources and historical background.

We shall try to sketch out a model which can be used at a generalized level, to represent all, or the greater part, of the cases of interest (cases of the history of local industrialization in the areas under consideration). The geographical designation given to the model is of course only a rough generalization, by which we mean that the greater part of the areas included in the North-East and the Centre are characterized by a type of industrialization close to the model, whereas in the North-West and the South, its presence is limited.

A first important factor in the model is the environment. The original environment is typical of the Italy of the independent Co-

³ As a further point of reference, we may remember that the North-East and Centre increased their share of the Gross Product of the Italian manufacturing industry from 32% in 1961 to 38% in 1977.

munes, eg. Tuscany (as opposed to the territories of the ex-kingdom of Naples).

Thus the territory is rich in small and medium-sized towns — urban centres with long traditions of efficient and democratic local government and vigorously engaged in commerce, the professions and handicrafts.

The countryside is covered by a good road network, is fairly well served by infrastructures, and has reasonable access to services. The family-run, small-scale enterprise (owner, share-cropper or tenant) is common in agriculture. The rural population is large and has close links with the population of the towns.

In the whole population (rural and urban) there is a high proportion of self-employed workers. The economic role of the family is often not confined to consumption, but covers production too. A large part of the population has a house, a smallholding or the family shop to fall back on. Relationships within the extended family and with the neighbourhood are supportive and there is marked community participation and social integration. This sort of environment has a high potential for development.

We can identify some general elements in the area as a whole which explain why it becomes ripe for industrial development at a certain moment in time. There are three essential factors. The first is the world-wide tendency for employment in agriculture to fall, which, in the long run, will inevitably make itself felt in the NEC area. A second factor is the world-wide progress in communications and transport, which creates new opportunities for contacts between these areas and the outside world even with points a considerable distance away. Thirdly, while the world demand for industrial products is increasing, the more mature, centralized industrial systems are becoming more and more rigid, bureaucratic and expensive, thus leaving room for the development of new types of industrial system.

In addition to these factors which indicate that the time is ripe for a change, local agents spark off change. In some cases, the change comes about when work from distant firms is parcelled out to those who work at home; after a while the more enterprising of these workers set up their own business. In other cases, returning emigrants act as agents of change: in foreign countries, they have had the opportunity of acquiring industrial experience, of establishing contacts with overseas producers and markets, of putting aside some savings, and, when they come back home, they invest in small businesses of their own.

There are some areas where industrialization spreads from a neighbouring zone. Finally, we should mention the cases in which industrialization gets under way because capital and entrepreneurial know-how accumulated from other activities in the areas seek employment in other ways, eg. in industry. Examples of this are the initiatives triggered off by the accumulation of wealth from tourism and agricultural cooperatives in Emilia Romagna.⁴

In the following section we will describe the process thus set in motion.

2.2 The process of industrialization

On the one hand, we have a mass of workers who are no longer able to find satisfactory jobs in agriculture, but are unwilling to leave their homes where they feel integrated and protected, and are therefore looking for work as near home as possible. On the other hand, in this world of family businesses and self-employed workers, there is a wealth of management experience, a spirit of initiative and a sense of responsibility, and all these gifts, even in small doses, are wide-spread among the population. This potential is then mobilized to harness the surplus agricultural labour, and the result is the setting up of small, or even tiny, industrial initiatives.⁵

The new enterprises and their growth and propagation are mainly financed directly from family savings. Given the limited savings available, the investment strategy adopted proceeds by small steps. The enterprises are set up in places where local labour is available and where existing private and public infrastructures can be utilized; the enterprises are therefore scattered widely over the territory as befits a logic of development which exploits existing structures as far as possible, while minimizing the break with tradition.

⁴ There are also a few cases in which the initial impulsion to local small-scale entrepreneurship is due to large firms coming from outside. For instance, there is evidence that the operations of Agip and the Army Arsenal in Piacenza encouraged the start of the indigenous engineering industry; but in the case of Piacenza, we are just on the edge of NEC model. In many other cases, it seems, however, that the large imported enterprises discouraged rather than stimulated the growth of local industry.

⁵ A further development — quantitatively even more important in certain areas — lies in tourist projects, which are not dealt with in this study.

This type of industrialization also allows enterprises to avoid excessive wage claims and labour conflict. There are two points to consider here. Firstly, as they can continue to live at home, the new industrial workers find themselves in a favourable position (compared to those workers who operate at some distance from their home) as to the availability of supplementary activities, the cost of living, the quality of life, and social security, and this is one of the reasons for their moderation in wage claims. Secondly, there are few social distinctions between the new entrepreneurs and their workers; there are indeed often family ties, and, moreover, there is considerable social mobility, which favours a climate of cooperation.

The substantive and technological contents of production are at one with the other characteristics of the NEC model which we have outlined above. The new industry concentrates on those sections, technologies and types of product which do not present insuperable disadvantages for small-sized firms. It specializes, where it can, in a type of production which allows it to make use of local craft traditions. Production such as that described above rarely finds an adequate outlet in the neighbourhood. And so, a large proportion of the industries which develop within the NEC area, work chiefly for markets outside the region or abroad, which is possible because of recent progress in transport and communications.

We can now answer the question posed by those students of the economics of industrial location who ask whether the development of industry in certain districts rather than others depends on the presence of market outlets, the presence of raw materials or on other factors. Undoubtedly in the NEC model "other factors" play the largest role, even taking into account a small number of exceptions concerning specific localities and products. In this model, industrialization finds fertile soil in the local (if still latent) supply of entrepreneurial energies, labour and savings, and in the existence of a well-run society with its institutions, its culture and material infrastructures. The success of the model relies on its capacity to combine all the strong points and resources of the existing organization and harness them to modern development. This assumes that transplants and changes are not so drastic as to shatter the existing social pattern, thereby squandering valuable resources.

Two development phases. In the first phase, due to underemployment and depressed local conditions, the new enterprises are faced with an abundant and undemanding labour supply. Moreover,

both the local authorities and public opinion are favorably disposed to enterprises creating new opportunities for employment, and the regulations are not too strictly applied to these enterprises. On the other hand, in this first phase, new enterprises are unlikely to be able to compete on equal terms, technically and organizationally, with firmly established industries. These two characteristics of an industrial world still in its infancy — modest capacities and modest demands — offset each other. Enterprises which are still technically and organizationally inferior to established industries can be profitable and competitive if they pay lower salaries, lower taxes and do not have to conform strictly to regulations on working conditions and environmental pollution.

At a later stage, when the industry has grown, labour becomes more demanding and social controls more rigorous. The salaries, charges and regulations which are borne by the enterprises tend to equal those of established industries, and the firms can maintain their profitability and competitiveness only by raising their productivity.

In this phase, the NEC industries make rapid technical and organizational progress by perfecting the organization of the integrated system of small firms and increasing specialization in quality production, that of limited series ("Italian Style") or even made-to-measure production (for example, robots).

After this brief outline of the model as a whole, we shall consider it piece by piece.

3. A detailed consideration of the NEC model

3.1 *The entrepreneurs and the labour force*

The labour force comes mainly from the families of agricultural workers, at least in the beginning. The majority of the workers have some sort of family property (small-holding, shop or house), and so have a safety net to catch them in hard times. They are not "proletarians".

While earlier on, at the time of Giolitti, the leaders of industrial development (in the North) came mainly from the upper classes, those of the NEC development come from all classes. Indeed, the great

majority come from the lower-middle and lower classes.⁶ After the pioneers, the entrepreneurial ranks are swollen by people who started as workers and who have then set up their own business in the same industry.⁷

Social mobility, wide possibilities as regards choice of profession and great career flexibility are all general aspects of the NEC model and flow from its being a flexible system based on a large number of small units. Just as the model allows for an easy interchange between self-employment and subordinate jobs, so it allows the workers, at least in an advanced stage like that in Emilia, a wide range of choice in selecting a job, for example, a highly-paid job requiring extremely hard work, or a low-paid but light job. Brusco (1983) brings out the advantages of this situation in terms of a civilized existence and we can also profitably underline its value in terms of the utilization of resources. For it makes the most of entrepreneurial and labour skills which would be wasted in a more rigid structure. We may note that this situation has an effect on industrial culture; the enterprises of the NEC model are run on popular rather than on elite lines.

Class differences are not marked. Workers and employers come from the same or similar social backgrounds, and are connected by family ties and social mobility. There is "a continuum from the worker who, having family resources, is not entirely proletarian, to the working unit, to the craft industries, to the small and then medium-sized enterprises, and this cultural continuum blurs class relationships" (Bagnasco 1983).

Both workers and employers have a common work ethic handed down to them from the pre-existing society of family-run farms and craft activities. It is an ethic based on "the traditional conviction that there is a necessary relationship between effort and reward, between commitment to one's work and social success" (Becattini 1983). This leads to emulative behaviour and to labour relationships based on cooperation rather than strife. Even the problem of the loss of a job can be faced with less anxiety, when, as is most often the case, the worker

⁶ According to research undertaken in some localities such as Treviso, the first wave of entrepreneurs are of urban rather than rural origin (crafts, professions and commerce). But in other districts such as Fermo, rural origins are predominant.

⁷ According to some observers, this "dissemination" of new enterprises by those already existing is more marked in times of crisis. With reference to the Marche region, it was noted that it was the bankruptcy of some firms with the consequent dispersion of their staff which released fresh entrepreneurial energies.

has an economic base in the family which can temporarily give him refuge, and when a large number of ways are open to provide his return to the labour market. For this reason, enterprises face little resistance to plans for reconversion or retrenchment.

We may also note that, in this situation, a whole series of factors serve to keep wage claims within bounds. They are briefly examined below.

Wage levels and standard of living. In the first place, certain factors permit the achievement of a given volume of *real* purchasing power with a *money* pay lower than that which would be necessary under conditions of centralized industrialization. Thus, the average cost of housing is lower because old houses remain in use and the price of new dwellings is not so high as in large and populous cities. Family ties with agriculture mean that certain foodstuffs can be provided on favourable terms. Commuting between home and work is generally less expensive, both in time and money, than it is for workers who live in the cities.

There are many other advantages, which are not so easy to quantify in terms of money, but are none the less appreciated, and which accrue from the workers' remaining in their own surroundings. We will pass over these and take up one final point.

This is the high degree of utilization of the labour potential. The widespread existence of productive activities within the family and the close network of family and neighbourhood relationships creates the conditions for the employment — although without formal work contracts — of those marginal elements of the work force (housewives, retired people, students) who, in other circumstances, have difficulty in finding work. As well as giving employment to these "part time" workers, the surroundings favour a super-utilization of the "full-time" workers. Men who own small business always tend to work long hours, and they are numerous here. Wage-earners here often have a second job to which they devote part of the time left over from their primary jobs. These second jobs often consist simply in giving a helping hand in a family small-holding or shop. This is also the temporary solution to inactivity found by many workers when they are on the dole. And moreover it serves for some as a means of taking advantage of their holidays. We must note that there are anomalous cases: sometimes the time devoted to the second job is not taken from holidays or regular days off, but from fraudulent sick leave. These anomalous cases obviously cannot be counted among those of high labour output.

There are two important consequences of the high degree of utilization of the labour potential and the way in which it is used. Firstly, hourly wage rates show a wide spread and this can be explained by the great variety of the marginal elements in the work force and of the ways in which they are employed. The second and more important consequence is that a given *standard of living of the working population* is obtained through an average level of *real hourly rates* which is lower than in a centralized industrialization system, where the marginal elements of the work force remain largely unemployed.

The general situation of the entrepreneurs and the labour force depends on the persistence of a certain "ethic", i.e., a particular attitude to work. This is the attitude of the person who does not look on work solely as a means of guaranteeing a secure income and comfortable working conditions, but rather as a means of obtaining economic and social success, which has to be won by rolling up one's shirt sleeves and by taking risks. Here we are close to the attitudes of the small farmers and artisans of earlier generations and a long way from the bureaucratic world.

3.2 *The small enterprise as a system*

The small size of the enterprises is a key element. In these particular environmental conditions, it is undoubtedly the formula which gives the greatest possibility of success and also that which best preserves the environment.

It is the formula most suited to local entrepreneurs who would not be able to raise large amounts of capital or manage complex organizations even should they wish to do so. It is also what makes it easier to find man-power in an essentially rural area, studded with small and medium-sized towns. Such a territory does not offer a pool of labour suitable for large industrial agglomerations, but it *does* provide labour for smaller and more numerous industrial units.

Furthermore, industrialization based on small enterprises does not cause so much of an upheaval as that based on large concentrations, as regards not only urbanistic and landscape values, but also the existing social structure. For example, the system of small enterprises maintains the continuity of the productive role of the family and of the old work tradition, and does not upset the balance of democratic

local government as much as would the creation of large-scale industry.

Type of production preferred in the NEC model. Choices of types of product and technology seem to be influenced by three considerations, whose relative weight is modified as development proceeds.

Firstly, production lines are chosen which are within the cultural horizon and the technical and financial capacities of the local entrepreneurs. In the early stages of industrialization, this implies the adoption of technologies which are not too alien for a world of small farmers and artisans. Moreover, those industries are preferred which have a link with the earlier craft specializations of the individual areas. A large number of important industrial districts have an ancestry of this sort. We may mention the leather industry in the lower Arno valley (Valdarno Inferiore), the shoe industry round Fermo in the Marche, the furniture industry in the Natisone valley in Friuli and the pottery production round Sassuolo in Emilia. The fact that these industries evolve, without a break in continuity, from a preexisting craft tradition makes their first steps easier and does not stop them, as they develop and diversify, from gradually adopting advanced technology.

Secondly, the environmental conditions existing at the outset encourage the industries specializing in the type of product which allows them to take advantage of the relatively low cost of labour and the lack of rigidity in the regulations concerning the protection of the environment and the health of the workers. Where there is an abundant labour supply, this is bound to be reflected in relative costs and incline manufactures to prefer labour-intensive systems. Both cause and effect will disappear with industrial progress. It is more difficult, however, to justify the indulgence (and thus the implicit encouragement) of local authorities towards processes which cause pollution or are harmful to health. Underemployment can hardly be considered an adequate excuse for seeking low costs through the acceptance of these evils, and this political and moral blemish should be eliminated.

One last point. Those industries are preferred in which it is possible to break down production into stages or products without having to use inferior techniques. Thus, even a very small enterprise can, by concentrating exclusively on one stage of the process — and/or on a few component parts of the product — avoid any inconveniences arising from the fact that its small size may cause it to be below the optimal level from a technical point of view. We have left this point to the last, because, as we shall see in a moment, it has the most im-

portant consequences for the NEC industrial structures. Of the three points mentioned above, it is the one which remains valid for the longest time. It combines with the other two points to condition the entrepreneurs' choices in the early stages of industrialization. Then, as development proceeds, its influence increases, while that of the other two declines.

Division of labour and methods of integration. A high level of specialization in production implies a close-knit network of interdependent industries. In the case of production in the strict sense of the term a high level of specialization in work stages and end products can solve the problem of making small size compatible with an optimal technological level, but, in the case of other important functions such as financial administration, marketing and personnel management, the small firm finds itself at a disadvantage. It is, therefore, expedient for the small enterprise to entrust these functions to specialized agencies, which work on a reasonably large scale and serve a number of producers. We thus have a combination of two closely-knit networks: the division of labour among a number of manufacturers and the division of labour between manufacturers and tertiary firms offering the necessary services.

To say that enterprises make use of the division of labour is the same as saying that they form an integrated system, and, in fact, the development of a system of integrated small enterprises is one of the most commonly recognized characteristics of the NEC model. Writers have spoken of "industrial districts" (borrowing the name from Marshall), "area systems", "clusters of enterprises", or "constellations of enterprises". Each of these writers was obviously thinking of a different variety of the integrated system, which has indeed many different forms. Some systems are clearly circumscribed (the majority of transactions are carried out within the system,) while others have vaguer boundaries; some systems are restricted to a limited territory, while others are not, and, finally, in some systems the association of enterprises is formally regulated while in others it is not.

Methods of cooperation vary from financial participation to supply contracts, from simple family relationships to informal temporary agreements. In order to give a few instance, we can start by mentioning the coordination of small Tuscan industries by private export firms with offices in Florence, which not only coordinate foreign demand with Tuscan production, but at the same time carry out important complementary functions, giving mercantile and financial assistance and controlling quality.

In other cases, there are forms of association. The following, according to Brusco's (1983) description, is the role played by associations of artisans and small entrepreneurs in Emilia Romagna. Throughout the whole region, these associations have created centres which prepare wage packets, keep the books, pay VAT contributions, and fill in tax forms. In effect, these centres give small enterprises all the experience of large administrative agencies at an extremely low price. Moreover, these associations give rise to cooperatives for the sale of products, to firms giving technical advice and, perhaps most important of all, to cooperatives which act as guarantors to the banks for the solvency of the single entrepreneur and negotiate the most favourable interest rates possible.

Even in the Marche, which is still at a relatively early stage of industrialization, the two forms of integration considered above are in operation, both the one based on association (which is still of limited dimensions in this case) and the one based on private export agencies. An even more important role is played by the myriad of private professional agencies, many at a very humble level, to which the small enterprises turn for accountancy and all types of consultation.

Another method of integration present in the whole NEC area is the one in which a series of small enterprises are guided by a leading firm which is not necessarily larger than they are themselves. We will again quote Brusco (1983) who identifies the Morini motorcycle factory of Bologna as a typical example of this type. "The factory, which has only 100 employers, produces 5,000 motorcycles a year.... But anyone who visits the factory will find lots of workers on the assembly-line where work is not specialized. All the production of the motorcycle parts, except that of the driving shaft and the engine carrier, is carried out in decentralized factories, the chassis, the petrol tank, the shock absorbers, the handlebars, the brakes, the gears, the wheels, indeed all other parts, except the two mentioned above, being produced by subcontractors".

We may conclude these examples by considering the highly individual model of integration offered by the Prato wool industry. In this system "the leading enterprise often has no employees whatever, consisting only of the entrepreneur himself. It is he who designs the material, has the yarn spun, and commissions the weaving, finishing and mending from different firms" (Brusco 1983).

Industrial districts specializing in one product. A phenomenon found fairly frequently is the geographical agglomeration of small enterprises

either producing similar goods or vertically integrated; in other words, the formation of areas specializing in one type of product. This phenomenon has important effects, regardless of the ways in which the firms collaborate. It has therefore been the subject of considerable research, and some authors have used the term "area system" with particular regard to this phenomenon.

Making use of a rather narrow definition of the "area system", Garofoli, in a recent article (1981), has listed more than seventy agglomerations of this type in Italy. The majority are in the NEC area, but there are also a fair number in the North-West, and very few in the South. Many, though not all, of these area-systems are based on preceding local craft specializations. Many remain monocultural while, in time, others diversify, particularly in the sense of vertical integration. This is true of the "area-systems" of Prato and Schio, which, beginning as monocultures of the wool industry, have become important producers of machinery used in the industry. The "area-system" of the lower Arno valley began with tanning but now produces shoes as well.

It is a well-known fact that the contiguity of many industries producing similar goods creates a complex of economic factors and stimuli influencing each single industry, and for this reason, the process of agglomeration, once under way, has an avalanche effect, caused by the reciprocal strengthening of the firms inside the area as a result of the arrival of firms from outside and by the involvement of the surrounding territory through overspill or annexation.

The luxuriant growth of which these agglomerations are capable is, in the short term, an important component of the overall growth of the NEC industry, but, if it is not properly channelled, it runs the risk of causing long-term difficulties. There are two types of disadvantages to be overcome. Firstly, it is better to avoid the total, or almost total, dependence of highly populated areas on one very limited specialized product; the first crisis in the sector would cause a social disaster. Secondly, we must avoid a situation in which the "area-systems" act as magnets attracting a concentration of population and activities, thereby causing congestion within the area and abandonment outside it; should this happen, the underlying conditions from which the NEC model draws its strength would no longer exist.

Problems of services. As noted above, industrialization based on small enterprises following the NEC model demands and stimulates considerable growth in the supply of services for these enterprises.

This development is largely due to private initiatives, some of them extremely decentralized (for example, the professional offices cited above in connection with the Marche); others are concentrated (for example, the Florentine export agencies); others are organized on the basis of associations as in the example of Emilia Romagna quoted earlier.

The range of services offered by existing agents is rich and varied, but it could be improved. Not only are there certain services where both quality and costs leave much to be desired, but there is also a whole series of services that is excluded or seriously neglected. We refer to scientific services, to basic educational facilities and to all those other similar services, which a small firm (without the wider operational horizons of a large enterprise) is unwilling to pay for by itself, as in any case the greater part of the benefits produced from these services will not accrue to its own production alone but be spread through the system.

Given the fundamental importance of services to production in the NEC model and the gaps in the structures created by private enterprise, we must consider the possibility of supplementing them from public sources. Experiments on these lines have been carried out especially at local and regional level, but results so far have been modest. This is hardly surprising given the difficulty of finding forms of public aid compatible with the NEC model's way of working, ie. which invigorate it without spoiling it (by eg. bureaucracy, "welfarism", and nepotism). Thus, we must be careful, while not intervening rashly, to step up research into new and more promising forms of intervention.⁸

The service activities stimulated by NEC industrialization show a marked tendency to concentrate in the towns. This gives rise to a paradoxical situation in which a decentralized, rural industrial model leads to a tertiary model in the towns. This spontaneous tendency is reinforced by certain regional and local administrations who are planning to develop country towns or other metropolitan districts as capitals of the "tertiary sector".

If things continue in this way, and if, as is generally considered likely, the tertiary sector is destined to absorb an increasing proportion of the work force, there will be a growing tendency to abandon those

⁸ The institute in which this study was prepared, ISTAO, is itself, with its particular structure (an association of firms, public administration, and scholars), and in its own way, an attempt, among the many possible, to meet the needs set out in the text.

decentralized structures which today form the strength of the NEC model. This is not all, however. If this territorial dualism persists, whereby the services go to the towns, while industry remains in the country, the differentiation between services and industry will widen, and, in the final analysis, reach a complete antithesis. Should the service industries continue to offer higher wages and better working conditions, the feeling that the towns are prospering at the country's expense could be aggravated and thus — according to Becattini and his collaborators (1983) — could recreate a potential rivalry and distrust between town and countryside of the kind familiar to us in other situations in history, when "countryside" conveyed the idea of "poor workers on the land".

For all these reasons, we cannot but be preoccupied by present tendencies. It is, however, obvious that the development of service industries is to be encouraged, and that, as things are at present, workers in this sector secure considerable economies from a marked urban concentration. But the existing situation is also the result of the policies adopted, and we can attempt to change that by giving our policies a different slant in the future. In particular, we may envisage a policy aimed at taking advantage of the considerable possibilities for decentralization offered by new technological developments in telecommunications and telematics.

The strengths of the system. The analysis we have carried out shows the logic underlying the formation of the system of small enterprises. Small dimensions are adopted because this is the highway to a development based on local resources, and the enterprises must be linked together to form a system, in order to avoid the diseconomies which would otherwise stem from their smallness. We must now ask whether the results obtained — the system of small enterprises — is simply a poor man's second best, something which poor countries have to accept because they are not (yet) able to construct a system based on large enterprises, or whether the decentralized model may not in some ways be actually superior. The answer is that the system of small enterprises has certain strengths (just as it has obvious weakness). We will now review the most important of these.

We should first stress the favourable environmental conditions produced by the overall working of the NEC model, such as low cost of living, intensive utilization of the labour potential, and survival of the old attitude to the work. On the one hand, the small enterprises, as essential elements in the model, help to produce those conditions, and,

on the other hand, they benefit from them in terms of lower costs and more efficient business management.

Moreover, "smallness" allows faster adaptation to continually changing markets and technologies. In the first place, the small entrepreneur, who is less bound than the large businessman by the dead hand of bureaucracy and trade union rules, is quicker to modify the allocation and size of the labour force and other resources. In the second place, a system of small enterprises makes it possible, by the simple transfer of sub-contracts, to solve cases which would require closures and relocation of personnel in a large firm system. In the third place, the NEC system gives an outlet to the inventiveness and spirit of initiative of a large number of people, and encourages these qualities through competition and emulation. So, even though, as we have seen, basic research may be neglected, there is a profusion of the type of research which is the closest to industrial application and which leads to a continual flow of small innovations (almost of the "learning by doing kind"). And indeed there are many signs that applied research is giving better results in small industries than in large ones.⁹

Greater flexibility and a more open attitude to innovations make the small enterprise the most suitable one for production on a small scale or by single items. It therefore is at an advantage in those markets where demand is either fragmented for geographical or social reasons (down to the exceptional case of "customized" demand), or variable in time (rapid fashion changes or frequent innovations).

This position in the international division of labour gives the NEC model a lead, because the relative importance of these markets is increasing. The NEC-type industry can, therefore, seize on this opportunity. Indeed, it has already begun to do so. It can rely on its greater flexibility to beat the competition of more sophisticated economies as it can rely on qualitative and technological superiority to beat the competition of emerging economies with low wages.

⁹ We must distinguish between the advantages intrinsic in "smallness", from those which accrue from irrational regulations. We refer, for example, to the exemption of enterprises with fewer than 15 employees from certain requirements of the labour laws; to the limits of size which confer the possibility of benefiting from the status of craft industry; to the fact that evasion of Social Security and tax laws is easier for small industries. We must regret a situation in which certain enterprises prefer not to increase in size, not because they would become less efficient, but simply to avoid losing these advantages.

3.3 *Capital formation*

The following are the main characteristics of capital formation in the NEC model. Families have a high propensity to save, and these savings tend to be invested directly in the family. The investments are made with an eye to producing immediate results in terms of production (ie. the incremental capital/output rate is kept low). The result is that local industry achieves a good growth ratio relying on local savings and depending little or not at all on net capital from outside.

As to the characteristics of these, in the NEC model family savings are used mainly to build and improve the family's premises and equipment: the house, the small-holding, the workshop and the shop. This gives them two important qualities. In the first place, while serving as a reserve for the future and as an income-yielding asset, this type of savings, more than any other, satisfies the saver's desire for self-fulfilment. Secondly, it offers the saver a certain security as to maintaining the value of his money in times of inflation. These two considerations, self-fulfilment and security, help to explain why the family's propensity to save is generally higher in the NEC model than in other communities where centralization of settlements and productive structures offers less opportunity for direct investment.

It should be noted that differences in savings as shown in statistics reveal only part of the truth. Some of the time off from "official" work is spent in accumulating resources, eg. family house-building, during weekends. Activities of this kind create income, savings and investment which the national accounts ignore. Of course, this use of free time is found everywhere, but there are signs that it is particularly common in the NEC districts. This is not surprising, considering that the whole NEC rationale encourages and facilitates it.

The above description portrays a world of largely self-financing investors, and this is a strong point in the system in the sense that the enterprises are not deep in debt and are therefore less vulnerable. However, the substantial amounts of self-financed funds do not of course exclude the need for using the credit and capital market; and, even in the NEC model, the supply of these services conditions the flexible working of industry, its growth, and the efficient allocation of resources. The services offered at present do not satisfy the needs of the NEC model because the existing credit and financial structure, taken as a whole, has been set up to meet the needs of large and medium sized enterprises. New ways must therefore be found to render the credit and

capital market more sensitive to the needs of small firms. Borrowers' associations or warranty co-ops are a step in the right direction.

We shall now examine the characteristics of real investment, and first we must consider its volume. As the location of new productive initiatives tends to be chosen on the basis of pre-existing structures, past investments can be recouped, and there is a reduction in the new investments needed to launch these projects. This observation holds good for every type of infrastructure — from workers' houses to power lines and roads, and includes the whole network of services needed to create civilized surroundings. It is also valid to some extent for the factory buildings and plant. Small firms frequently start out in buildings not designed for the purpose and adapted, for example, from warehouses, storerooms or stables, with makeshift equipment. This allows them to begin production with a minimum of new investment. If production is successful, and as both the funds available and the cultural horizon expand, they will gradually adopt more sophisticated technological and logistic solutions. And so on, step by step, without great leaps forward. When one firm leaves its buildings and equipment for better ones, the old assets are frequently taken over by another firm which is trying to move one step up the ladder, too. So the progress made by one firm makes things easier for another, and, by a chain reaction, the whole group gradually moves upwards, making the maximum use of the capital available.

We must not expect the results of this investment model to be impressive from all points of view. They may not be so for technicians and town planners, as the model produces an industrial landscape dotted with provisional solutions consisting of makeshift buildings and outdated technologies. This may be cause for regret, but, given the limited quantity of investment, the model has the great advantage of allowing the largest number of people possible to find work and to improve their qualifications by experience. It should also be noticed that this gradual progress reduces the risk of serious errors.

We noted above that the existing financial and credit institutions are not able to satisfy the needs of the NEC investment model. The same is true for both the institutions concerned with technological policies and those dealing with area development and town-planning. As regards the latter, it may be useful to recall certain crucial points:

- 1) The attempt by town-planners to set aside zones for industry, and their refusal to permit even small enterprises to develop outside these industrial areas has proved unrealistic. It has led to one or other of

three results, all of them undesirable. The town-planning committee's regulations are either ignored or modified, and uncontrolled building development is connived at, or, in the few cases where they are rigidly observed, their effect is to make the setting-up of new small enterprises more difficult. Thus, there is now a growing conviction that the town-planning authorities' job in the future should not be to lay down the law as to the siting of small industries but only to specify those limited zones where the location of the industries would cause specific damage to the environmental balance or to the public good, and should therefore be strictly forbidden, without leaving room for those negotiations and arrangements which afflict the present policy.

Even the old idea that we should preserve the countryside from all types of industrial settlement is being challenged. This rigid exclusion, where it is really put into effect, penalizes the countryside because the lack of alternative employment to supplement agricultural incomes is one cause of emigration from the area.

2) Experience has shown which results can be achieved by providing industrial areas at favourable rates. This does not, to any great degree, lead to the setting-up of new enterprises (as some had hoped); it does, however, produce a different but equally interesting result, that of the transfer to these areas of industries which have already begun their activity on a smaller scale and are now ready to pass on to another stage of growth in more adequate surroundings. These transfers, as explained above, play an essential role in the NEC development. If we accept this, it is possible to direct and plan zoning policy more accurately, with a view to the gradual development, by degrees and in a chain reaction of all the enterprises together, including those at different stages of evolution.

3) A serious attempt must be made to consider how to avoid or reduce those obstacles which arise from the different timing of development from one region to another. In the Marche, for example, development began along the coastal strip and in certain river valleys, attracting the population down from the hills inland, thus causing underutilization and deterioration of the existing structures there. Later, development spread continuously and began to affect and revitalize the hill regions, but it was already too late to avoid some of the waste caused by the exodus. Other regions have had similar experiences and the problem will continue to make itself felt in new districts as the border line between developed and undeveloped areas shifts. It must

be stressed that the damage is not limited to areas which are suffering from depopulation but extends to those where population is increasing, because, where this increase exceeds certain limits, social cohesion is threatened. A more far sighted area planning policy is needed, although we find it difficult to suggest a precise model. We can, however, say that municipalities where development is going ahead should try to discourage immigration rather than attract it by ambitious growth projects.

4) Lastly, we must remind ourselves that, in the long run, the system of decentralized settlements (an urbanized countryside dotted with small towns) runs the risk of falling victim to agglomerative tendencies unless there is a policy deliberately designed to preserve it. Probably the most vital method of intervention is by transport and communications, including telematics. An adequate communications network is essential for the vigorous functioning of the decentralized model of development. The public authorities have great responsibilities but also great capabilities in this field. At a venture, we would suggest that, if the public authorities really want to promote NEC development, they should concentrate their resources on the creation of adequate networks of transport and communications and cut spending on less effective initiatives such as monetary incentives.

We must consider briefly another topic. Services which are markedly more economical when functioning on a large scale may suffer in this system of small towns, and a certain degree of functional and complementary specialization should be encouraged among individual towns. We must move towards a situation in which one town produces higher level theatrical services for all the towns around, while another produces better quality health services, and so on. It is easy to see the advantages of this coordinated system of specialization, but it is not clear whether the public authorities have the necessary tools to put it into practice.

3.4 Repercussions on Agriculture

While agriculture makes positive contribution to NEC industrialization, it is also important to examine the influence of this industrialization on agriculture.

It has been asserted that industrialization weakens agriculture by depriving it of its land and water but the extent of the damage is

arguable. On the one hand, the areas which are bid for and obtained by industry are a minute, almost negligible percentage of the whole of agricultural land. On the other hand, we have to admit that industrial demand is centred on those areas in the plains which are generally the most fertile. Industry's competition on the land market may well be both unimportant in its general effect, and yet so serious in its effect on a limited environment that it may cause there disturbing phenomena of agricultural shrinkage.

We must not, however, burden industry with greater responsibilities than it deserves. There has, to take a vital point, recently been a marked increase (both absolute and relative) in the price of land in general, which has reacted negatively on agricultural growth. But the demand for land for industrial development has undoubtedly been only of secondary importance in the price rise. The principal factor was the demand for land as a hedge and as a speculative investment. The problems involved are due to widespread inflationary tendencies rather than to industrialization.

Repercussions on the labour market are much more serious. NEC type industrialization brings wide-ranging opportunities for extra-agricultural work in rural zones and triggers the phenomenon of the "multi-activity family" (whose members are employed both in agriculture and in other types of work) which gives a breathing space to agriculture. The possibility of income from extra-agricultural sources helps the family to remain in its place of origin and thus averts the danger of the countryside being abandoned — so common in models of centralized industrialization. From a plurality of activities the family both derives a higher income and gains wider experience advantageous for agriculture. Those members of the family employed in extra-agricultural activities bring new technological and administrative skills to the management of the family farm, and employ their savings in agricultural investment, with possibly profound changes in agriculture. This is the case of a district in the province of Modena, where new forms of specialization and division of labour among farms have been developed and have led to marked increases in productivity and income (Brusco 1976). Finally, we must also remember the ability of multiactivity families to weather the seasonal variations in agricultural work. The changes produced in agriculture by multiactivity families may, however, in some cases have negative effects. Significant examples are to be found in many hilly areas, such as Oltrepò Pavese and the Senigallia hills. The increase in the opportunity cost of labour, the investment

funds available and calculations of profitability have caused a massive shift in these districts to cropping techniques and patterns which rely heavily on mechanization and chemical inputs, utilizing a small labour force and neglecting work on hydrogeological factors. The result has been not only the transformation of the traditional agricultural landscape but also the progressive degradation of the soil through erosion (Anselmi 1980, Orlando 1983).

Negative effects of the type exemplified above do indeed require attention, but once they have been identified, they can be easily remedied by minor improvements in the present system of public intervention in agriculture.

Agrarian policy will, however, have to face dramatic choices in the future, following the effect of industrialization on young people's professional ambitions. Among today's multi-activity families, the leading role in the small family farm remains, on the whole, in the hands of the older generation. The younger generation is not interested in taking over, because youth find extra-agricultural employment more satisfying and less demanding. Of course, a great many young people appreciate the fact of belonging to a family owning a smallholding, but very few are anxious to run it themselves. If this trend continues, the small family farm, which is one of the pillars of the NEC model, will gradually cease to exist for lack of new generations willing to take it over. A policy must be devised to cope with this possibility. On the one hand, we should ask ourselves whether it is possible to concentrate on a really substantial package (in education, finance, public services, prices, etc.) that would make small farm management attractive to young people again. Following the same line of reasoning, we should also consider a plan to change the small farm into a diversified business e.g. agro-tourism, which would make its management both financially and personally more rewarding. Looking at things from the opposite point of view, one might suggest a policy which would accept the decline of the small farm and favour the setting up of farms large enough to permit the exploitation of brilliant managerial capacities and thus attract the best qualified type of youth. We need not even dismiss the possibility of separating the two functions present up to now in small family farms; indeed a system could be envisaged in which large farms take over market production, while family smallholdings produce for domestic consumption.

There is a great variety of possible solutions or combinations of solutions, and the time is ripe for decisions as to which of these should form the basis of our agrarian policy.

4. Prospects

There is widespread agreement that, up to now, rural industrialization as followed in the NEC model has been a relatively successful experience. Without an explicit plan, it has succeeded, area by area, in rallying local potential for business enterprise, work and savings, and in using to advantage the material and social structures, probably with better results than would have been possible using imported models and resources. The material well-being and the cultural level of the population have improved substantially; social integration and mobility have been strengthened, and there has been no serious disruption.

This on the whole bright picture, however, is not without some shadows. Industrialization has brought with it certain evils which a more sagacious public policy could have avoided. These evils include harmful industrial processes, pollution, planning chaos, and hydrogeological damage in hilly areas. But the positive results greatly outweigh the negative ones.

While an assessment of the results obtained can easily be made, future developments are controversial. We have to consider whether, precisely as a result of the progress made, the decentralized model which has been the basis of the NEC economy (small enterprises, low territorial concentration, fundamental importance of the family and the agricultural environment) is destined to lose its pride of place to a completely different model of development, characterized by large enterprises and complex organization, by metropolitan concentration and a sharp break between town and countryside. Should the NEC economy develop in this way, it would be a repetition of events in earlier DCs. There, too, industrialization began in a decentralized form, and only became centralized in a second phase of development.

The history of earlier DCs, however, presents a third phase which has been manifest for some time, and which gives cause for reflection. Urban congestion and huge industrial centres have begun to make their negative effects felt (ungovernability, sclerosis, lack of individual responsibility), and this has led, both in theory and in practice, to a new movement towards decentralization. Clear confirmation of this movement is provided by the population census results, which show that, in the greater part of the earlier DCs, people have begun to move away from large cities to small towns, thus inverting the previous ten-

dency.¹⁰ For trends in the size of firms, too, there are indications of a shift in employment towards the smaller enterprise in various countries.¹¹ In the political and academic fields, there has been a noticeable surge of interest in the small firm.

The fact that the earlier DCs are now considering the problem of decentralizing their structures should serve as a warning to the later DCs. We must ask ourselves why the latter should slavishly copy the policy of centralization, only to discover one fine day — too late, as usual — that they, too, will have to make a U-turn and begin to decentralize again.

We cannot do better than repeat the reply we gave to the question on a recent occasion: "Countries with modern centralized structures are now facing the task of decentralization; we, whose structures are still not entirely modern, though fortunately decentralized, should endeavour to modernize them without too much centralization. Instead of following paths already trodden by others, we have the opportunity of striking out in a new direction, which is better for us and will allow us to preserve healthy economic elements that others have dissipated during their past development and are now seeking to recover.

This approach has beneficial psychological effects too. If we think of development as a race, we have the depressing feeling of being left behind. If, however, we think of it as the choice of an individual direction, it is no longer so clear who is in front and who is behind".

The prospect of the NEC economy, even after it has reached a certain maturity, continuing to base itself on small man-size enterprises, on the system of small towns, on the ubiquitous importance of agriculture, has given rise to the objection that, if we insist on the decentralized model, increases in income will be lower than they would be in a more centralized model. However, this thesis is difficult to prove when the contrast is formulated so generically. And, in any case, the rapidity of the growth of income cannot be considered the only criterion that counts, particularly when a country (like ours) is already above the income level necessary to satisfy the basic necessities of its people.¹²

¹⁰ The latest statistics show that a similar deconcentration of the population is occurring in Italy too.

¹¹ We refer the reader to the study carried out by Birch on five million American firms registered by Dun and Bradstreet, which shows that small firms are at present responsible for the expansion of employment in the U.S.A.

¹² Below a certain income level, there is a close connection between the average income of the country and the state of health and life expectancy of its inhabitants. The less poor populations have a longer life expectancy than the poorer ones. Above this level, there is not the same

The acceptance of a lower rate of increase in income may well be repaid by greater success in achieving social integration and ecological balance.

The solution suggested here has little chance of being automatically adopted. In an earlier phase of NEC development, it was precisely those factors grouped under the titles of "automatic economic mechanisms" and "cultural survivals" (Bagnasco 1983) which led society towards decentralized development, without any specific plan having been adopted. On the contrary, the few choices explicitly formulated on this subject by national and regional planning committees at that time tended to favour, though neither coherently nor incisively, a centralized model (large industrial poles of development and industrial areas) which, unlamented, succumbed under the impact of spontaneous forces.

Today, however, the situation is different, and the automatic bias in favour of centralization is now growing stronger, and threatening the decentralized model. Thus the increase in income and international contacts through business, tourism, and education abroad have all led to the adoption of "consumistic" models, and are creating "a vicious circle between frivolous consumption and hectic production" (Becattini 1983). Young people who now have easy access to higher education want safe careers such as are afforded by large bureaucracies. Commercial attempts to "sell" the consumer model of life are highly organized on a world scale; whereas there are no similar organizations to sell competing models.

The progress of the NEC development in a way which will guarantee the advantages of the decentralized model cannot therefore be left to chance, but calls for a clear realization of the situations and an explicit plan, in the hope that, this time, the planning will be more effective than in the past.

There are two types of action to be planned. In the first place, a fundamental condition must be respected; the public must be in substantial agreement with the continuation of decentralized development. This requires an educational campaign in schools and by the mass media. We must make sure that certain values which we have the good fortune to enjoy thanks to the NEC model, such as the system of po-

correlation. Rich countries do not have a longer average life expectancy than the less rich ones. Italy is included in this upper income level, together with countries slightly less rich, such as Greece and Spain, and much richer countries like Germany and the United States. In spite of the difference in income which divides us, we are equal as regards life expectancy.

pular entrepreneurship, the symbiosis between town and countryside etc. are fully appreciated. People must realize that these values may be envied by richer countries than ours, and that they deserve an all out drive to preserve them.

In the second place, we must resolve all the difficulties in the fields of credit policy, technology, town planning and so on mentioned above. It would be easy to add to the list. We are not interested in drawing up an inventory here, but only in underlining the importance of working within a consistent pattern of development in seeking to solve individual problems. For example, the choice of agrarian policy, as set out in the last lines of section 3.4, must be made, not only on the basis of product, cost and protection of the environment, but also taking into account that intense interaction between agriculture and industry flowing from the fact that most industrial workers have a farmer in the family. This link obviously weighs against the choice of a system based solely on large enterprises.

We cannot conclude without answering a question frequently posed: "Does the NEC experience suggest a recipe for development in Southern Italy?"

The answer to this is easy if we accept the point of view expressed in all the earlier pages of this paper. The NEC industrialization is entirely based on the resources and structures existing on the spot. The continuity with local history and traditions is doubly valuable. It is something positive in itself, and it is a source of strength in achieving other positive results. Hence the system's merits.

If this is our starting-point, it is not important to establish which of the concrete projects successful in the NEC area could be copied in the South. This would mean continuing the disappointing policy pursued in the South in the past. This policy consists in concentrating on models to *transplant* in the South, rather than trying to *recover* local potential by creating a model suited to it.

The most important message of the NEC model to those engaged in Southern development policy is to persuade them to change their methods, to consider undertakings based on endogenous development and on human and material continuity rather than on transplants which imply a break with tradition.

Ancona

GIORGIO FUA

REFERENCES

- ANSELMi, S.: *Idee per uno studio critico sullo sviluppo marchigiano*, "Proposte e ricerche della sezione di storia dell'agricoltura dell'Università di Urbino", 1980 n. 5.
- BAGNASCO, A.: *Il contesto sociale*, in G. Fuà and C. Zacchia (eds), "Industrializzazione senza fratture", Bologna 1983.
- BECATTINI, G., BELLANDI, M. and FALORNI, A.: *L'industrializzazione diffusa in Toscana: aspetti economici*, in G. Fuà and C. Zacchia (eds), *op. cit.* (1983).
- BIRCH, D.L.: *The job generating process*, Cambridge (Mass.) 1979.
- BRUSCO, S.: *Agricoltura ricca e classi sociali*, Bologna 1976.
- BRUSCO, S.: *Flessibilità e solidità del sistema: l'esperienza emiliana*, in G. Fuà and C. Zacchia (eds), *op. cit.* (1983).
- FUA, G.: *Problemi dello sviluppo tardivo in Europa*, Bologna 1980.
- GAROFOLI, G.: *Lo sviluppo delle "aree periferiche" nell'economia italiana degli anni settanta*, "L'industria" 1981 n. 3.
- ORLANDO, G.: *L'impatto sull'agricoltura visto da un economista agrario*, in G. Fuà and C. Zacchia (eds), *op. cit.* (1983).