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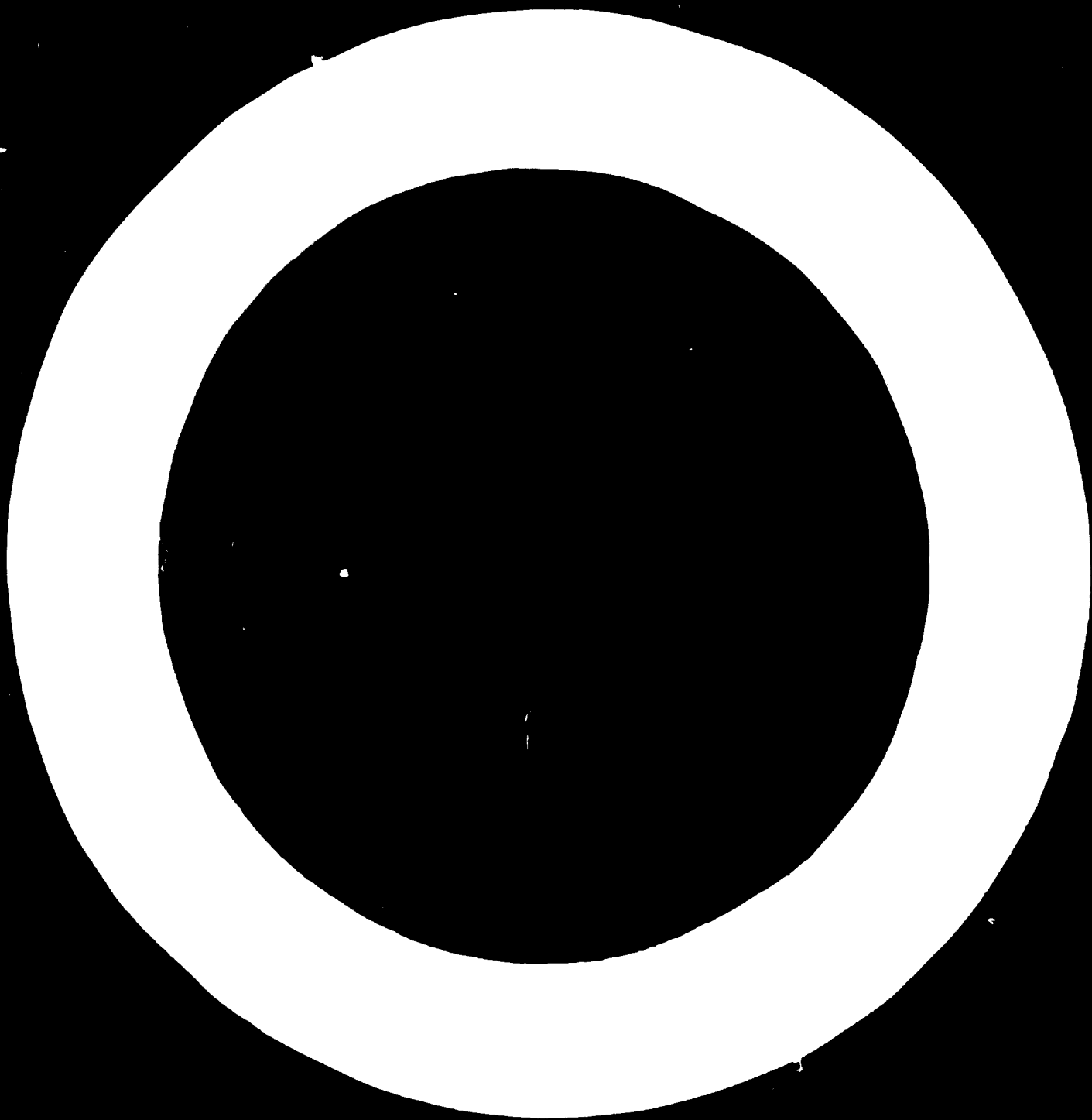
Development of Metalworking Industries in Developing Countries

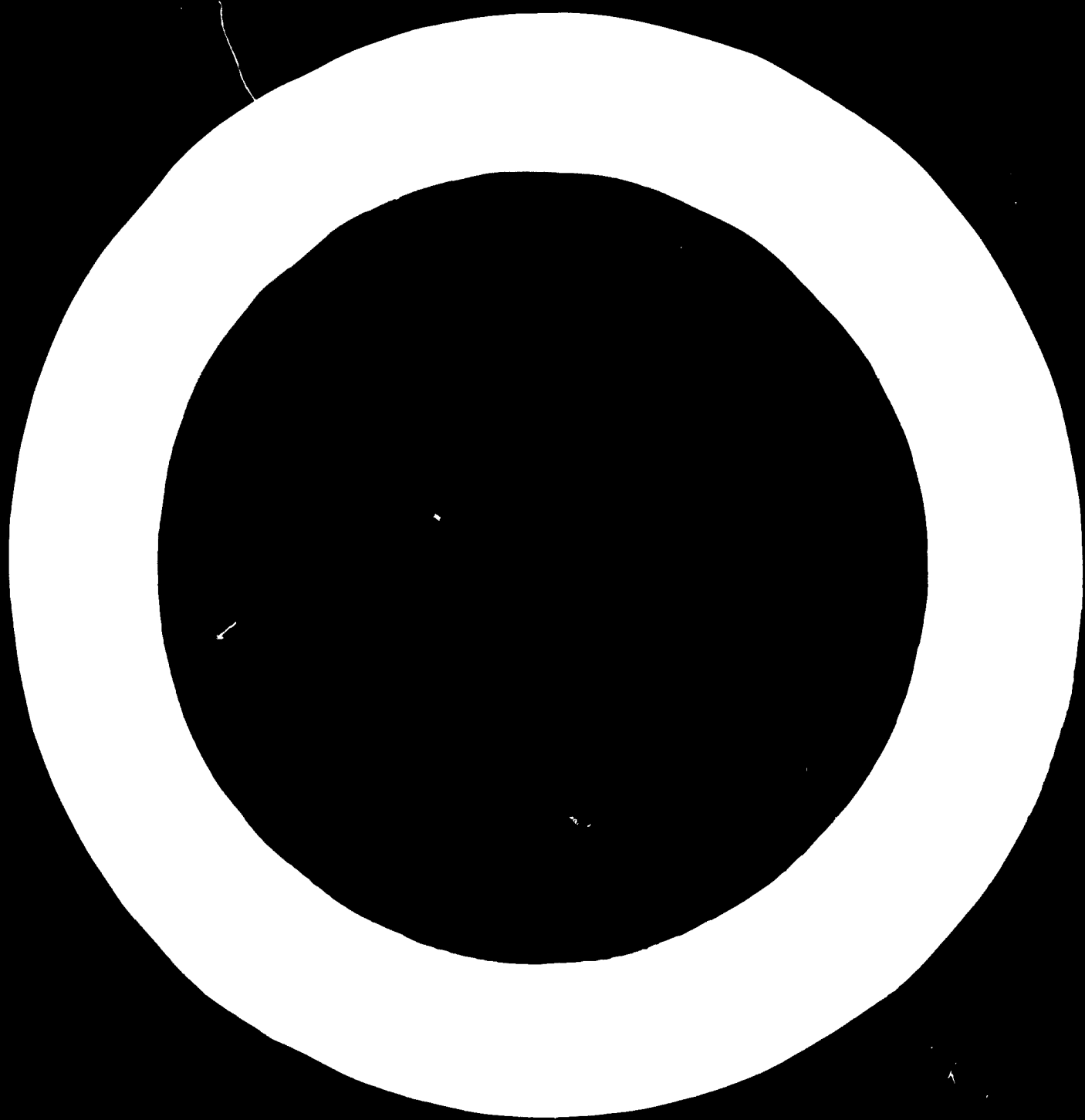
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METALWORKING INDUSTRIES IN SOUTHERN ITALY

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The evolution of metalworking industries in Italy's northern section offers no features of immediate interest to the developing countries. But the effort under way towards the industrialization of the southern regions, known as "Mezzogiorno," offers experiences that may be useful to most.

As in these countries, in the Mezzogiorno the *per capita* income is still low, farming the prevalent occupation and industrial activities little developed. Metalworking industries, if numerous small repair and maintenance workshops are excluded, represent a modest part of over-all manufacturing activities. Notwithstanding that there are already in operation some considerably large plants, the metalworking industries of the Mezzogiorno, in *per capita* terms, represent less than 10 per cent of the level existing in the northern industrial triangle (Turin-Milan-Genoa).

While in the Mezzogiorno the local-market oriented industries (standard foods, soft drinks, woodworking) and certain base industries (petrochemicals, steel) have already reached a notable degree of development, the same cannot be said for metalworking. Accordingly, further industrial expansion must be focused on the metalworking industries whose market opportunities may expand at national and international levels, with large labour employment opportunities.

Similar problems and approaches to industrial expansion are found in the developing countries.

The main characteristic of the metalworking industry in these countries is production almost exclusively intended for local markets. In the larger countries, production (assembly and manufacture of relatively simple products) can cover about half the domestic demand, although at high costs; in smaller countries, the metalworking activities concentrate essentially on repair work.

If the development of metalworking industries is to be one of the aims of industrialization in the developing countries, realization clearly entails sales in wider markets. This, in turn, entails the attainment of competitive cost and quality levels.

The problems of competitiveness are still there even when a wider market is achieved through economic integration agreements with other countries. Here again, the Mezzogiorno offers an interesting case study for the developing countries, as it is part of the European Economic Community; its metalworking industries must compete with those of the major industrial concentrations in Western Europe.

Attainment of efficiency and competitiveness at European levels is a central problem of the industrial

policy of the Mezzogiorno. Specifically, such policy aims at creating in the new industrial areas of the South those "external economies" of which the metalworking industries of the great industrial centres of the North are benefiting in terms of: effective technical and social infrastructures; skilled labour; interindustry relations.

To foster the establishment of such an environment, "areas of industrial growth" have been mapped out, endowed with the necessary infrastructures and backed by large public works through which they are connected, or soon will be, directly to the major production and consumption areas in northern Italy and the European Common Market. An adequate infrastructure system, especially transport facilities, is one of the very necessary requisites of industrialization.

The problem of local shortage of skilled labour was tackled in the Mezzogiorno through various programmes. In addition to strengthening and expanding primary education in general, special vocational courses were set up by public bodies to give an initial training which is then completed in the factory. To assist businesses in this direction, the Government grants funds to help run interfirm schools organized by industries operating in the same area. This is particularly helpful for the smaller firms that cannot afford to train their own employees.

Screening and training locally hired manpower is perhaps the most difficult of the many tasks that any production plant starting operations in the Mezzogiorno has to handle. Experience teaches, however, that the men learn quickly and well, and if the operation is effectively organized, the time required for local labour training, plant erection and production run-in can be kept within reasonable limits.

Experience in manpower training in southern Italy can, to some extent, benefit developing countries still unequipped with appropriate vocational training systems. Conversely, technical and supervisory personnel should be trained, at least in the early stages of industrialization, in foreign industrialized countries. This offers opportunities for interesting and feasible technical cooperation between developing countries and economically more advanced countries, as well as with international organizations. A successful example of this can be seen in the International Labour Organisation Training Centre at Turin.

Lastly, fundamental importance attaches to the complex industrial interrelations which metalworking industries need and can be provided only in highly industrialized areas.

In these areas, the metalworking industries find the

specialized firms that provide maintenance and overhauling services for their machinery and equipment; firms that manufacture on order components and assemblies to become part of their end products; stores of industrial standard and catalogued products, and all the specific services required by the industry.

The existence of all these ancillary and supporting activities and services embodies that technological specialization which is the hallmark of the modern metalworking industry. It enables the firms availing themselves of such co-operation to reduce investments in plants and machinery, to attain higher degrees of saturation of equipment capacity, to reduce the rates of skilled labour, to use manpower more efficiently, to keep material inventories down, and generally boost productivity.

It is clear that supporting and allied activities can be established and operated economically only if they have enough customers, and this explains why they developed to a lesser extent in areas where the metalworking industry is still in its initial stage.

This basic problem has been investigated, with actual reference to the Mezzogiorno, in a recent survey conducted for the European Economic Community by ITALCONSULI under the direction of Professor E. Tosco. In its conclusions, the case study proposes for the Bari-Taranto industrial area the promotion at the same time of a number of new major metalworking industries. Such industries would be sized to compete on a European level and tailored to a minimum input demand to support a whole range of tool manufacturers, maintenance and repair workshops, and manufacturing and processing subcontractors, to be themselves sponsored and established in the area. The over-all dimension of such an

industrial set-up would justify also the establishment of several other industrial services. For the first time, the industries there established would enjoy, in addition to the customary tax and financing incentives, the basic benefits of that *milieu industriel* that now can be found only in the areas of high industrial concentration.

The study has been approved by the Italian Government and has already entered the promotional phase. The implementation of its recommendations, not unattended by difficulties, is an experiment to be followed with interest by the developing countries that must tackle comparable problems.

Obviously, a distinction should be drawn between countries where metalworking industries are in their early stages and those where they have reached some measure of growth. In the first, an initial nucleus of integrated, up-to-date metalworking industries should be established to become a future pole of industrial development. The major industries of such a nucleus should be selected from those that, while calling for not overly large facilities, and a relatively low rate of skilled labour, would as a whole generate sufficient demand for goods and services to promote and support the most essential ancillary industries.

In countries where mechanical engineering has already made some progress, even if not along well balanced or integrated lines, the current Italian experiment might offer ideas for completing the ancillary industries system by promoting major metalworking industries with high requirements for ancillary materials and services, this in order to attain such structural balance without which no acceptable levels of efficiency and competitiveness can be achieved.



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