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OPPORTUNITIES FOR SMALL FACTORIES IN COUNTRIES
AT EARLY STAGES OF DEVELOPMENT^{1/}

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We regret that some of the pages in the microfiche copy of this report may not be up to the proper legibility standards, even though the best possible copy was used for preparing the master fiche.

What particular types of manufacturing activities deserve consideration by development planners and technical assistance experts who are seeking to promote the beginnings of modern industry in countries at early stages of development?

A book on Modern Small Industry for Developing Countries by Richard Morse and the writer of this note explores in detail, both analytically and on the basis of empirical evidence from countries at various stages of development, the characteristics that tend to make a given kind of small-scale manufacturing a suitable candidate for inclusion in an industrial development programme under various circumstances likely to be found in developing countries. ^{1/} No attempt will be made to summarize that discussion here. (A very brief summary showing five principal types of products that may be economically manufactured by small-scale industry can be seen in an Appendix of the paper by Frank L. Turner (ID/WG. 109/3)). However, it may be useful to present below a brief part of the discussion which relates to "Sequences in Small Industry Development" and specifically to the early stage of industrialization: ^{2/}

"What product mix does the above evidence lead us to expect in a country's small factories as modernization proceeds?"

"The suitability of a product for small-scale manufacture depends, as we have stressed, on many factors in the economic environment which can only be determined by firsthand study. There will be quite divergent types of opportunity for small industry even in neighboring countries, and in different parts of the same country. Nevertheless, a certain general progression may be noted as a country moves from the traditional economy through the transitional stages of development toward a modern, industrialized economy.

^{1/} See Modern Small Industry for Developing Countries (especially Part 2, Chs. 5, 6, 7) by Eugene Staley and Richard Morse, McGraw-Hill, New York, 1965. (The original edition is out of print, but the International Student Edition, issued from Tokyo by Kogakusha Company, Ltd. in cooperation with McGraw-Hill, is available. A Spanish translation is available from Ediciones Robles, Mexico City. A French translation is being published).

^{2/} Ibid., pp. 183-5.

The Traditional Environment

"Household and artisan production typify the manufacturing of the traditional sector. In the modern world, imported goods impinge on artisan products, cause unemployment in traditional lines, and raise the problem of adapting to new competition, new demands and new methods. At the same time, improvement of road, river, and rail transport, growth of output in agriculture, forestry, and mining, spread of cash transactions, and rising incomes, stimulate industrial beginnings in the port cities and a few up-country centers. Usually among the first small-scale manufacturing units, aside from traditional household and artisan activities, are:

1. Simple processing plants for products of agriculture and forestry: rice mills, flour mills, sawmills, oil seed presses, cotton gins and presses.
2. Rudimentary mill spares and parts for transport and other equipment, as an activity of repair and service shops.
3. Simple consumer goods: bakery products, laundry soap, soda water, furniture, buckets, pails, trunks.

Opportunities with Early Industrialization

"Now let us assume that the economy moves on toward new manufacturing opportunities under various stimuli, one of the most important of which is increased agricultural productivity. This generates rising incomes, making it possible to introduce new consumer goods, and creates demands for new tools and equipment, irrigation systems and storage facilities, fertilizers, and other supplies for crop growing and processing. If agricultural improvements are accompanied by road building and by other public works such as school construction, water supply, sanitary facilities, and hospitals, sufficient demand may be generated to justify local manufacture of a variety of new products. Provided technical skills and entrepreneurial initiative are available, emerging small factories may appear during this transitional stage in production of the following types:

1. Agricultural implements and hand tools. Repair and service shops may install foundry and machine sections, proceeding from production of mill

and engine parts to such items as ploughs, harrows, cultivators, wheelbarrows, chaffcutters, cane crushers, insecticide sprayers, irrigation piping and equipment, pipe fittings and valves, hand pumps and eventually diesel engine pumps, hammers, screwdrivers, chisels.

2. Agricultural supplies: bone meal, fertilizer mixing, pesticides, poultry and cattle feed, barbed wire and wire mesh, fishing nets, rope and twine, boxes and crates.


3. Agricultural, animal, and forest products: fruit and vegetable canning and preservation, rice bran oil, starch products, kiln-dried lumber, charcoal, tanning extracts, leather tanning, glue, gelatin.

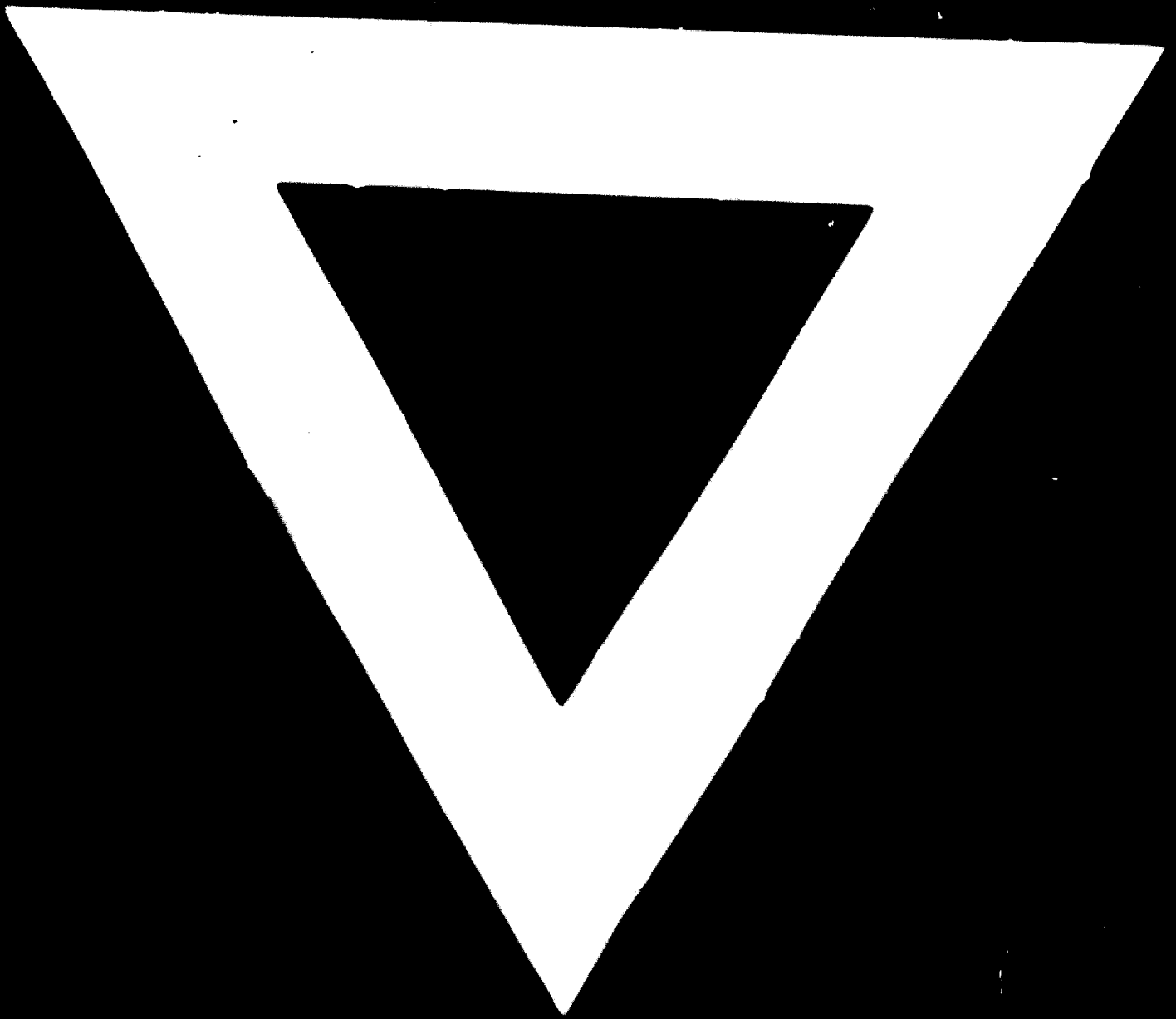
4. Construction materials: bricks, clay pipe and water filters, concrete pipes, posts, poles, blocks, floor and roofing tiles, wood fittings and standard furniture, building hardware, wire nails, wood screws, paint, varnish and lacquer, electric insulators, lamp holders, copper wire drawing and insulation.

5. Consumer goods: knitwear, wearing apparel, brushes, metal utensils, kerosene lamps, oil stoves, bicycles, sewing machines, radios (last three offering scope for repair, parts production, and assembly), umbrellas, flashlights, buttons, wallets, book satchels, watch straps, plastic goods, toys, sports goods, writing paper and envelopes, and other stationary articles.

6. Institutional supplies: hospital and office metal furniture, surgical cotton, adhesive tape, educational training aids, school scientific equipment, printing and publishing.

" These lists are not exhaustive, but illustrate the importance in early industrialization of resource processors, transport-intensive products, simple assembly articles of clothing, leather, and plastics, and relatively low-precision metal articles adaptable to diversified production facilities. Such essential but relatively uncomplicated products offer entry to entrepreneurs with little or no manufacturing experience, and they provide practical training in managerial as well as technical skills. Advance to more complex manufactures depends heavily on the success of these pioneers in establishing efficient concerns that stress progressive cost reduction and quality improvement."





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