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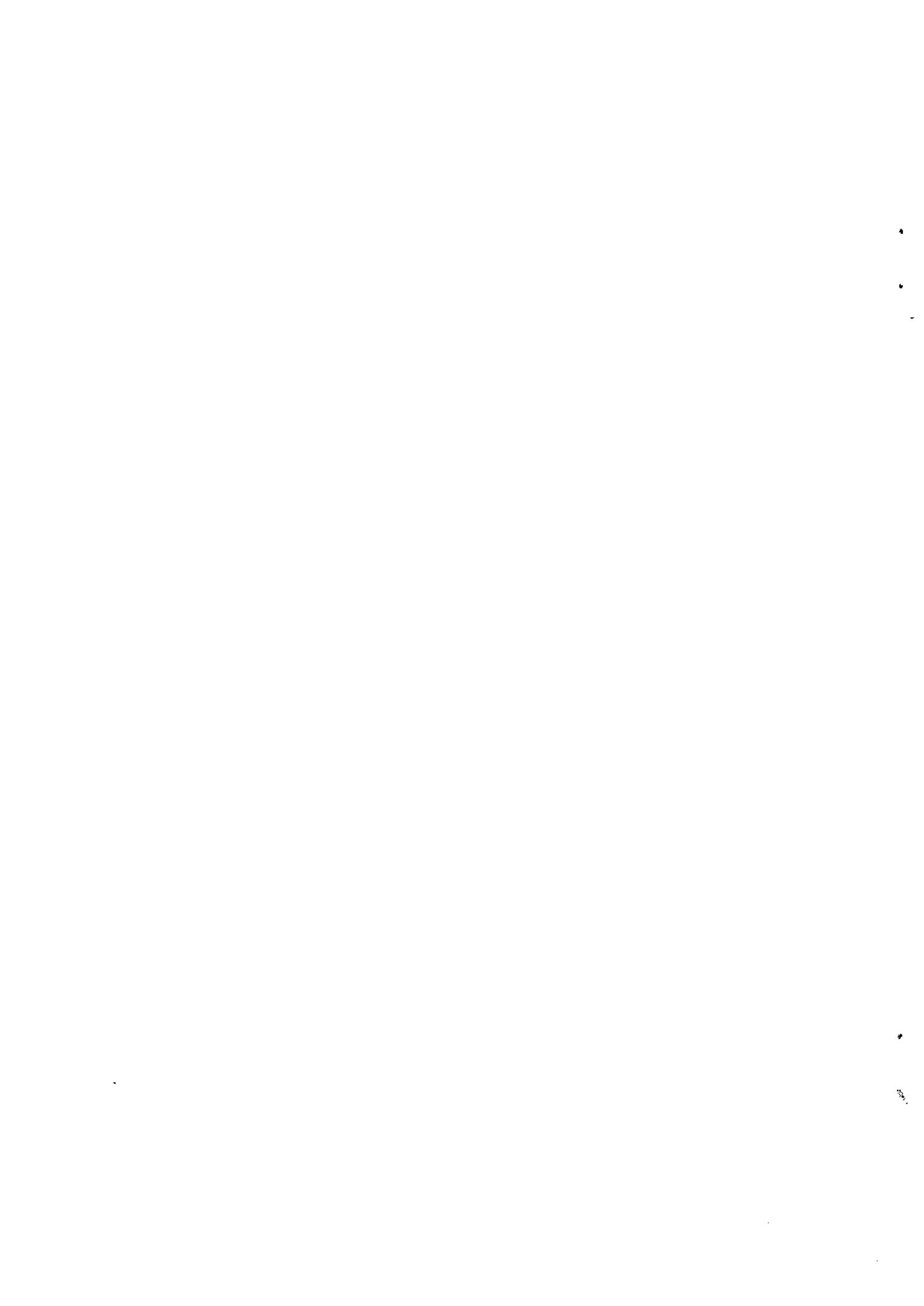
## Serie Research Memoranda

### Target Groups for Industrial Policy The Case of Rural Indonesia

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Research Memorandum 1990-89  
December 1990





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## TARGET GROUPS FOR INDUSTRIAL POLICY

### The Case of Rural Indonesia

Hermine Weijland

#### 1. Introduction

Rural industries (RI), and particularly rural small industrial enterprises (RSIE), have drawn the attention of development planners since the end of the seventies. Especially in the regions where large-scale industrialization and agricultural commercialization created duality and undesirable rates of urbanization, governments and international donor organizations started to direct some funds towards RI. However, it has become clear that their centralized agencies are badly equipped for the promotion of small industries [UNDP *et al.* 1988]. They have little knowledge of the prospects and actual bottlenecks of the various rural non-farm activities, and lack the proper instruments to reach the rural enterprises. Moreover, most governments are already hard pressed for assistance by the larger urban enterprises, which are more accessible and therefore easier targets for development policies. Hence it is not surprising that little has been done for RI in general, and virtually nothing for RSIE in particular.

Nonetheless, the arguments in favour of more support to the scattered RSIE are manifold. For one, RI can gainfully utilize local surplus resources such as underemployed capital, labour and primary materials. Particularly RSIE can share labour, equipment and housing with farming, and thus raise rural incomes. For another, RI encourages agricultural commercialization through the processing of local materials. Many of its activities have high export potentials, low capital requirements and low import contents [UNIDO 1978]. Furthermore, RI can repair and produce simple machinery and equipment for the farmers and local entrepreneurs who cannot afford sophisticated products or are not able to communicate with urban enterprises [UNDP *et al.* 1988]. So rural industrialization might be conceived as a panacea for many economic diseases ranging from agricultural backwardness to international indebtedness.

Indonesian policy-makers have become more aware of these beneficial aspects of rural industry, and hope that RI will help to alleviate the employment problem. The five-year plans Repelita III and IV (1979-89) therefore included so many special measures for small enterprise that it would seem that almost all categories and branches of industry could gain access to some kind of assistance. In addition, and probably even more importantly, government policies have favoured agriculture and rural infrastructure. For the period 1976-85, farm yields have been growing at an annual rate of some five per cent [World Bank 1987], and the rural communication network has been improved substantially, so that not only rural industry as such, but also the environmental factors conducive to its development have been attended to in an integral manner. It was

therefore not unreasonable to expect that rural industry would respond favourably, and indeed, some surveys at the beginning of the eighties did show remarkably high growth rates for rural enterprises, including micro industries [Heinen and Weijland 1988a]. Employment growth in rural cottage industry was recorded to have accelerated from some 2.5 percent annually in the seventies to 15.0 per cent in the early eighties [BPS 1985].

However, 1986 Census data show that employment in rural Cottage Industry has fallen, while employment in the next size-category (Small-Scale Industry) has not risen sufficiently to compensate that fall [Dawan Rahardjo 1987:5; BPS 1987:94]. On the other hand, the urban medium and large enterprises are growing at disproportionately high rates. Such results were not expected; on the contrary, Repelita IV even foresaw a growth for micro- and small-industry employment of about 5.5 per cent. So the apparent stagnation of CI surprised many economists. Some of them ascribe it to protectionist macro-policies, while others put more emphasis on the ineffectiveness and inefficiency of the sector policies [Dawan Rahardjo 1987; Hasibuan 1987]. Both arguments, however, are not convincing. The protectionist trade policies have not been sharpened since the seventies, so that it cannot easily be explained why they suddenly have begun to affect Cottage Industry. The same applies to the sector policies, for only a very small part of Cottage Industry was ever assisted, and a change in policy or drop of funds could not have mattered much. It is therefore more plausible that the explanation for this unexpected decline can be found within the industrial sector itself.

According to the classical literature on industrial development, the decline of traditional Cottage Industry is a normal phenomenon that corresponds with the rise of modern industry, and therefore should be accepted as a fact of life [Staley and Morse 1969; Anderson 1982]. However, it is premature and undesirable in a country like Indonesia, where CI still employs more than half of the industrial work force and often functions as an income source of the last resort for a large part of the rural poor. It is therefore understandable that some effort is spent on the formulation of policies for the support of these small enterprises.

This paper investigates the scope of policy-making for rural small industries within the larger framework of rural industrialization. It stresses the diversity of the various categories and types of enterprises that can absorb rural labour. It is argued that there are at least six distinct types with specific functions and potentialities. Some types can be effectively supported, but need not or should not, whereas others ought to be assisted, but cannot be reached in any meaningful way. It is recommended that, given the wide variation in technological level, economic function, viability and reach, policies should be tailored to serve the various categories in a more effective and efficient way.

## 2. Polarization or Differentiation?

Industrial statistics in Indonesia distinguish four size- categories of enterprises: Cottage Industry (CI) with less than 5 workers; Small Industry (SI), with 5 to 20 workers; Medium Industry (MI), with 20 to 50 workers; and Large Industry (LI), with 50 and more workers. According to the economic census of 1986, CI employed more than half (53.7%) of the industrial work force, SI 14%, MI 7.3%, and LI 25%. Since 1975, the average employment growth rate in CI was negative (-2.8%), whereas in SSI it was 7.3%, and in MSI and MSI together even 9% [BPS 1987]. So industry is divided into two broad categories: a stagnant CI at the one side, and a fast growing LMSI and SSI at the other. This growth pattern corresponds closely to the classical dynamism of dualistic development with a formal/informal, or modern/traditional sectoral division. Although the dualism model is heavily criticized [Bromley 1978; Moser 1978; Harriss 1980; Peattie 1987], it still find adherents among students of the rural economy. For instance, in his analysis of rural industry in Asia, Mukhopadhyay [1985] stresses the validity of the concept, stating that one can observe a clear-cut, visible difference between the two sectors. His impression is that the modern sector has a stable, hired work force and a sophisticated technology; it is market oriented and aims at expansion. The traditional sector then has obverse characteristics: its entrepreneurs are working only seasonally or part-time, often alone or with a few family members. They use primitive techniques, and serve only local markets. Typically, their businesses would tend to decline. Thus defined, this unstable and poorly endowed sector cannot develop at all and should not receive any economic assistance but rather some relief, preferably organized by public welfare centres or NGOs. Such a view seems to be supported by Sethuraman [1985:25], when he remarks that the CI workers are no common entrepreneurs but a special category of persons who should be assisted by special institutions.

If all CI workers were to be identified with the above poorly endowed category, their diminishing numbers would reveal progress rather than stagnation, and could be considered even a policy success. However, given the dismal situation of the labour market, a large part of CI might yet contain socially desirable and economically necessary activities, and in that case its disappearance should alarm the policy makers.

According to the economic census of 1986, 3 per cent of CI employment was in Metal products, which is a branch with relatively low economies of scale but high earnings. Some 43 per cent was in Textile Garments, Leather, Wood, and Non-metallic Mineral products, which subsectors have, on average, lower but not dismally low earnings. So the viable CI branches and subsectors together might employ about half of the CI work force. For analytical and policy purposes it would therefore be expedient to distinguish two CI categories, according to level of earnings and development potential. Such a distinction is also useful for the larger industrial categories, SSI and LMSI, as the larger size of their work force does not warrant higher levels of technology and growth potential. In Indonesia many 'large' enterprises are still producing with traditional techniques.

Given this wide variety of enterprises, it is plausible that most policy instruments have specific positive or negative effects for distinct categories of industries, whether defined by level of technology, size, or workers' characteristics. It is therefore recommended to first distinguish a number of specific target groups, then to attach priorities to certain groups, and finally to formulate development policies in such a way that each group benefits optimally from the scarce funds that have been earmarked for them.

### 3. Differentiation of Target Groups

For policy purposes it is expedient to define target groups corresponding with easily identifiable characteristics, existing development institutions, and generally practised policy instruments. The first distinction therefore refers to the level of technology, including access to capital, technological and managerial information and public utilities. Each level should be served directly by specific institutions, which should support their particular clients with appropriate instruments in the field of training, finance, and infrastructural services.

Second, it may be useful to differentiate according to size, market orientation and market organisation, as marketing is a major problem in rural areas, and economies of scale through the widening of the market is one of the more common aims of rural planning.

Furthermore, in order to be able to give priority to the more important or more dynamic income sources, it is necessary to consider the function of the rural enterprises for the rural households. So it might be expedient to differentiate at least between primary and secondary income activities.

Finally, attention should be given to the wider network of linkages and dependency relationships. Many large and small rural entrepreneurs can make crucial decisions only with the approval of the owners or lenders of their business capital. Those who have hired their workshops, mortgaged their equipment, or have made subcontracting arrangements with middlemen, are in a bad position to adopt innovations and receive technical assistance. It is also possible that enterprises are linked to activities with higher priority for support.

With the above considerations in mind, the following main target groups can be distinguished:

Technology	Size
Modern:	Small to Large Modern Industry
Traditional:	Small Workshops to Large Traditional Industry
Primitive:	One-person to Extended Household Industry

The proposed division assumes that mobility occurs predominantly within and not between the technologically defined main categories. The differences between large and small are not accentuated; within the three technological categories small and large business constitute a range



rather than two opposite modes, and the transition from small to large can be done smoothly in infinitesimal small steps. However, jumping to a higher level of technology is considered almost impossible. Such structural changes are supposedly beyond the reach of the individual entrepreneur living in the countryside. Modern entrepreneurs start from a higher technological schooling level than can be found in traditional enterprise; they usually have a better family background and better access to credit facilities and essential public services [Harriss 1985:142-43 Weijland et al. 1986]. Traditional entrepreneurs are unable to reach the modern level, but they can move within the range of their technological and managerial capabilities which stem from innate capacity and informal training. They can respond to improvements of communication and consequent changes in the local product and labour markets. Although these changes may encourage the establishment and growth of many traditional rural enterprises, they cannot achieve that the semi-illiterate traditional workers become technicians or modern businessmen. For the workers in primitive household industry the prospects are even worse, because their level of schooling and industrial skill is lowest, and the scope of individual progress correspondingly slight.

#### 4. The Main Groups and their Activities

Modern industry has a high level of mechanization and capital intensity. As its technology is complicated and precise, it requires highly schooled workers and management, and sophisticated machinery and equipment.

Modern Small Industry (MSI) tends to specialize in differentiated products and services with small scale economies. Examples are printing, engineering and automotive services. Most MSI clients belong to the local upper or middle class. Modern Large Industry (MLI) tends to even higher degrees of sophistication and capital intensity. It produces mainly standardized, complicated, bulky or heavy products with large economies of scale. Examples are large agro-industries, beverages, spinning, basic metals, chemical products, cars, and electronic equipment.

Traditional industry has a low level of technology and a correspondingly low capital intensity. It produces mainly traditional products with traditional machinery or equipment such as looms, sewing machines, lathes or presses, which are usually driven by hand or foot, or harnessed animals. Its equipment is often bought second-hand, and may date back to the turn of the century or even before. In Indonesia, common traditional products are sea-salt, brown sugar, krupuk, tahu and tempe, kretek cigarettes, garments, sandals, copper kitchen-utensils, artistic products, wooden furniture, bricks and tiles. The typical small traditional enterprises operate with some 5 workers in small open workshops, but the larger traditional firms may have the appearance of genuine factories. The latter are classified as traditional as long as their production process has not been mechanized. When market conditions are favourable, small traditional workshops (TSI) can develop into large traditional enterprises (TLI), which may

employ thousands of workers, as is the case in kretek industry. The latter industry is exemplary for the traditional growth process, as its hosts of female cigarette rollers still use exactly the same simple equipment as is deployed in the very small traditional units.

Small Traditional Industry can be distinguished from the even smaller and more primitive Household Industry by its specialized production, craftsmanship and employment of hired workers or apprentices. Even the smallest units tend to practise some division of labour. The entrepreneurs are usually permanently engaged in their trades which are their primary occupations. Artisans such as blacksmiths, carpenters, tailors, cobblers and bakers represent the historical base of this sub-category. Often their crafts require years of training, and have been passed from one generation to the other. Most small traditional enterprises sell only to local customers or small traders.

From the point of view of the policy makers, another important characteristic of traditional small entrepreneurs is that they tend to work at easily accessible places, preferably in open workshops in village centers or at crossroads, where customers and traders can find them working at regular hours. This accessibility also facilitates their assistance by development agencies.

TSI employs mainly male workers and, in some countries (but not in Indonesia), many apprentices. The larger TLI tends to employ more women and children for the simple jobs, as it uses more division of labour (e.g. in textiles, tobacco and cigarette industry). Hired work in traditional industry is often irregular and paid at a piece rate.

Household Industry, in the sense as it is used here, has no full-day specialization, virtually no division of labour, practically no specialized equipment, and consequently a very low level of technology.

The working pattern is irregular, workers (housewives and farmers) have other jobs to do as well, or are not allowed or unfit to work long hours in a distant workshop (children, and particularly girls, and aged people). As the products are made with primitive techniques and little or no equipment, prices and earnings are very low. This holds especially for single-person activities that are started only because of lack of alternative employment in the given household situation. Examples of HI activities are basketry, mat-weaving, and food production. Such HI products are commonly sold on own account and marketed locally for a limited clientele, often only family members and neighbours.

Household industry can be upgraded by putting-out trade or subcontracting. This requires standardization, and often brings a more regular production pattern, so that productivity increases. In many cases the putting-out or subcontracting system raises primitive household industry to the technological level and size of small traditional industry (TSI). Subcontracted HI products may have a wide market and are sometimes sold all over the world, as is the case with handicrafts. In such cases subcontracted Household Industry may look like Traditional Industry, but its dependence on middlemen and contracting firms makes it function more like traditional

labour than traditional enterprises. Development agencies may try to lessen this dependence through improvements of the traditional marketing channels.

Travelling through the countryside, one can easily see and hear the differences between the three main categories. Particularly the differences in fixed assets are easily observed. The typical modern enterprises have a fixed capital worth of more than Rp. 10 million per worker, the traditional ones can work with less than Rp. 500,000, and household industry with less than Rp. 50,000 per worker. Only when putters-out or outcontracting firms enter the latter industry does the worth of HI equipment tend to rise, but contractors usually keep the ownership of the machinery and equipment.

There is also an audible difference: modern industry managers usually speak English, traditional entrepreneurs master the national language, and household industry workers often can be approached only in a local language or dialect. This tendency reflects the wide schooling differences between the three groups, which range from academic to illiterate. The traditional artisanat usually has had primary schooling and is just able to do some simple book-keeping. The illiterate workers in HI have great problems with keeping track of their economic activities, and it is not unusual that they end up with less earnings than the lowest current wage rate, or even with a deficit [*Liedholm and Mead 1986:79*]. Wages in the distinct categories vary accordingly. For example, in Aceh the lowest HI activities undertaken by women fetched in 1987 on average only Rp. 1000 a day, while in some cases a deficit occurred. The lowest wage for unskilled adult males in TSI was 2000, and in TLI 3000 rupiahs. A highly skilled labourer in TLI even reported a wage as high as Rp. 17,000 [*Beuningen et al. 1987:48*]. It has to be noted, however, that these discrepancies in earnings did not reflect the overall differences in the levels of living of the various workers, for the lower-end activities served only to obtain supplementary household incomes at irregular intervals, whereas the higher-end activities yielded primary incomes for entire families. The primary activities were undertaken more regularly and for longer hours per day. In the given example of Aceh, the women who earned Rp. 1000 worked only a few months a year in their industry (salt boiling), whereas the man who earned Rp. 17,000 worked regularly more than 8 hours a day (as a tile presser).

The different ways in which the poor and rich rural households allocate their various types of labour to a number of activities with decreasing returns have been elaborated elsewhere [*Heinen and Weijland 1988c*]. In the framework of this study it may suffice to show that the industrial categories tend to have distinct earnings functions, which should be taken into account by the policy makers.

The wide discrepancies between the three industrial groups pictured above might be more typical for rural than for urban industry. Because of isolation, labour market imperfections are larger in rural areas, so that labour income in the Household Industries of remote villages can be considerably less than in the Traditional Small Industries in the larger village centres.

Isolation also leads to less communication, and correspondingly wider differentiation of technology levels among the industrial (sub)categories. Furthermore, village entrepreneurs cannot buy second-hand machinery as easily as their colleagues in larger communities, and neither do they have access to formal credit. All these disadvantages add up to wider differentiation in levels of technology and income. It should be emphasized, that the above discrepancies occur just as well within as between branches of industry. For example, in Indonesia roof tiles are produced in various ways. The most primitive technique without any division of labour is applied in isolated villages, where part-time and seasonal household workers use wooden boards as presses, and piles of firewood for baking. Nearer to the market centres, tile production becomes a specialized traditional trade, requiring at least four persons with distinct tasks and special equipment, and a small brick oven. Finally, the industry tends to grow into large (traditional) brick yards with huge kilns, employing more than hundred workers [Sandee and Weijland 1989].

It appears that there are many viable rural industrial activities at all levels of technology. They can compete with urban ones as they have locational advantages based on local resources, market isolation, the nature of their product, or the cheapness of their labour [Heinen and Weijland 1988a]. However varied in nature and location, the activities in rural areas seem to obey certain rules derived from their different technological levels, so that they become identifiable as rather homogeneous clusters of activities which tend to assume an identity of their own. So it seems justifiable to distinguish categories of rural industry that need specific assistance that agrees with their levels of technology. Such a division should be reflected in a matching supportive framework. As in practice it has appeared as yet impossible to build an effective single institution that can serve all three types of industries without being biased in favour of one of them, it is recommended to separate the outreach activities for the three main categories, or at least distinguish them and earmark special funds for each.

##### **5. Rural Modern Industry; Prospects, Problems and Policies**

Rural MLI and MSI have in common that they are modern and capital intensive, but there are also some notable differences. They have usually different markets. Where the small enterprises can serve local markets with limited quantities of advanced and differentiated products (e.g. irrigation pumps, automotive services), the larger ones must sell large quantities to wider urban or foreign markets (e.g. rubber, coffee, sugar, paper). As a consequence, the small units are located mostly in province centres and large villages, whereas the larger ones prefer locations at grand trunk roads in the country side or at estates in semi-urban areas. The rural location of large industries is usually due to dependence on locally produced materials of a primary nature (agro-industry, forestry, mining), but it can also be chosen because of the need of vast tracts of land for processing or storing. MLI is hardly ever attracted to the countryside by cheap labour, as it needs trained workers and technicians, who are scarce in rural areas.

The origin of rural MLI is mostly non-rural and foreign, in the sense that it has been planned and financed elsewhere. Large urban trade-houses and industrial companies are often the initiators. In Indonesia, also the government plays a role in founding rural industry.

The typical Modern Small Industry, MSI, has 10 to 20 workers, but it can be just as modern as MLI. This holds particularly for its owners/managers, who are usually well schooled and trained and often have attained the level of engineers or business economists [Harriss 1985; Weijland et al. 1986:11]. The labour force is predominantly male and skilled, and earns wages as high as in MLI. The larger part of MSI is in the Metal and Wood Products sector, and Automotive Services. Like MLI, it has hardly any roots in local industrial tradition [Ibidem]. However, its owners/managers are often familiar with the location through trade experience or family relations. That is how they found out that there is a market for their products.

Because of its local orientation, MSI has little scope for expansion beyond what the growth of local income allows. Growing big within a short period would involve a structural change in product design and marketing, so that many MSI entrepreneurs do not dare to venture such a step. Although MSI might sell to urban markets, it usually cannot do so directly. Its small size makes it inefficient to travel and trade small quantities of products in distant towns. So it would have to turn to traders like it does for the buying of inputs. Due to its dependence on many modern, often imported, inputs, MSI is much favoured by a liberal trade policy and a good regional trade system [Keddie et al. 1987].

As it is more alien to its rural environment than MSI, Large industry faces more problems. Although rich in assets, large enterprises find it difficult to procure the right quantities and qualities of inputs at the proper time. Sometimes they have to pay much higher prices than their traditional local or modern urban competitors. The same problem occurs with their labour force, which is very difficult to find, and often can be kept only at extraordinarily high wages. Other cost problems may arise because of protectionist trade policies of the government. Overvalued exchange rates, import quotas and investment licenses, all work against the isolated large rural enterprises that have to use more intermediaries to obtain their imported goods and trade licenses.

In Indonesia, it has often been tried to establish large agro-industries in the sparsely populated, resource-rich provinces. They have not been invariably successful; many abandoned sites can be observed in the country side. According to project evaluation reports, the efficiency and viability of large-scale agro-processing in rural areas should be seriously questioned. Production is often more efficient if it is dispersed over smaller traditional units and collected by middlemen, as is done for instance in coffee drying, tobacco fermenting, oil pressing, and sugar boiling. This method is less dependent on capital, good roads and sophisticated inputs [Beuningen et al. 1987].

If valued at shadow prices, large industry in Indonesia might turn out to be less efficient than small industry, as has been observed in other countries [*Liedholm and Mead 1986:74*].

Because of the imminent danger of protecting inefficient industries, policies in support of MLI in rural areas should be predominantly of the indirect type. It is essential for MLI's future that its advantages of rural location are strengthened through improvements in infrastructure and marketing. Liberalization policies might be more effective for rural MLI than special measures in favour of large industry as such. The latter measures would favour urban rather than rural MLI, because the former has better access to the administrating agencies.

Governments may try to offset unfavourable general policies by sector-specific policies in favour of rural industry through concessional credits, special licenses, tax holidays, the provision of cheap land, buildings and utilities. However, such privileges have usually high prices, and are not easily obtained by the entrepreneurs, and the paper work gets the more complicated the longer the distance between the entrepreneurs and the government offices. In the long run, a good transport and trade system and good technical schools might serve better to ensure profitable production of MLI in rural areas.

For MSI, policies should be more direct and specific than for MLI. As the modern small industries are concentrated in provincial centres, they are very sensitive to their local environment, where many essential inputs might be lacking. Moreover, small industry also has problems vis-a-vis large industry, which competes for capital, scarce inputs and utilities. This battle for resources is almost always lost by the smaller enterprises if left on their own. Therefore it has been frequently argued that MSI needs special government organizations to serve its interests [*ISS 1987*].

The classic answer to the MSI problems has been to set up special industrial estates, which have to ensure regular provision of scarce inputs and utilities. These estates have been a success in (semi) urban areas, where MSI was allowed to establish itself in the vicinity of its clients; but they turned out a failure where they were planned in isolated places. It has been hard to earmark proper sites for MSI, as centrally located land is usually expensive.

Although world-wide experience indicates that the efforts to build industrial estates were mostly ineffective [*Chuta and Sethuraman 1984:147*], this does not mean that the estate concept is theoretically incorrect. The cluster idea should be maintained wherever the market is wide enough to allow for a number of similar establishments, because through specialization and subcontracting practices MSI can reach a higher degree of efficiency. Therefore industries from similar or complementary branches keep close together.

Moreover, in an over-regulated economic system it should be useful to have government officers as estate managers, because of the needed licenses and infrastructural utilities. It has been observed that a well-managed estate can be very dynamic and prosperous. Unfortunately, civil servants are not always qualified for the management of industrial estates, and in Indonesia they

have an additional problem because of their very low salaries. So the functioning of estates depends not only on the capabilities but also on the financial and political power of their managers.

In addition to problems about utilities and inputs, MSI has financial problems. Its high technological level requires large investments in machinery and equipment, and also sizeable amounts of working capital. Such high amounts cannot always be provided by family capital, but it would seem that commercial banks might be interested in lending to the more credit-worthy MSIs. However, it appears that most Indonesian banks are not well equipped to serve MSI, and therefore a special credit programme was launched. The KIK and KMKP scheme for small industry seemed appropriate for modern industry, but it was unclear why it should receive credit at concessional rates. Obviously, capital intensive MSI was very eager to borrow cheaply, and, as the application procedure was prohibitive for Traditional Small Industry, MSI could get away with most of the earmarked funds. According to the programme's evaluators MSI was able to make good use of the cheap credit. Unfortunately, rural enterprises could not find access to this programme [Groot and Keddie 1987]. This was one of the reasons why the programme was dropped in 1990.

In conclusion, it appears that isolated rural industry has little access to specific programmes, and therefore benefit more from indirect, general policies such as trade liberalization, infrastructural improvements, and, most importantly, agricultural development policies. Particularly integrated package programmes appear to be ineffective and inefficient [Haggblade et al. 1989: 1191]. Only some target specific projects score better, especially with MSI, which cannot afford in-house training and research. If some specific direct services should be needed, the question remains whether small modern enterprises can be served by the same institutions as the large ones. Usually the answer is negative. Separate institutions make sense particularly in over-regulated economies, where MSI cannot compete with MLI for its most essential inputs, unless it operates in groups that are protected by special government agencies. For purposes of industrial planning, however, the development of the small and large modern enterprises should be considered in an integrated manner, as the two types have many potential linkages, which might be overlooked if they were treated as separate categories. The fact that both size categories have similar high growth rates gives proof of their complementarity. There are already some examples of such linkages in the densely populated rural areas in Central Java, but there are also cases of inefficient competition between the MSI and MLI in less densely populated provinces. It would therefore be recommendable that the various government bodies for the promotion of the two size categories of modern industry should at least co-ordinate their planning activities.

## 6. Traditional Industry

Traditional Small Industry (TSI) is truly traditional in that it has a long history. Its artisans were the most specialized but poorest work force of old civilizations [*Lenski 1966*], and they still work as in ancient times, in easily accessible, open workshops, often surrounded by apprentices. In the cities the artisanat is clustered trade-wise, and also in the country side this pattern is kept wherever possible. Thus one is bound to find clusters of blacksmiths, carpenters and tailors in all larger provincial centres, while the Indonesian villages show an even more clustered pattern of specialized villages. One village may have wood workers, the other copper smiths, while there are also villages without any noticeable industrial activity. Clustering has great advantages for marketing and technology. It helps consumers and traders to find specific products and make the best choice. The clustered artisans, on the other hand, have easy communication with their potential clientele and their competitors, and therefore are in a better situation than are the isolated artisans to innovate their products. The latter usually serve only small local markets, whereas clustered artisans tend to serve also wider urban markets, as it can be quite profitable for middlemen to trade the products of many small producers of the same village, however isolated. So some artisans' clusters in Indonesia have become famous exporters. This is not an uncommon phenomenon in Asia, where especially the handicraft sector has found distant markets in high-income countries.

The artisanat is trained mostly through informal apprenticeship, but there is little apprenticeship tradition in Indonesia as compared to other Asian countries such as India and Pakistan [*UNDP et al. 1988*]. Only few TSI workers are trained at a young age [*Sethuraman 1985:19*]. The larger part of the workers come from the poor landless agricultural labour class or the small farmers' families. Most of them were not able to finish primary schooling, and therefore tend to be weak not only in their crafts but also in business. Their poor situation might be exploited by middlemen, who often turn out to be indispensable suppliers of inputs and buyers of the artisans' products. In fact, putters-out or contractors may take over the management of production and treat the artisans as casual labourers, often without the latter being the worse for it.

This is not to say that there are no competent TSI entrepreneurs in Indonesia. There are excellent craftsmen, but there is a large variation between and within the clusters. Depending on the branch and the personal capabilities, some workers may earn four times the incomes of their colleagues. Some young artisans have even succeeded in becoming MSI entrepreneurs, as they have obtained concessional loans under the BIPIK programme, and have been trained to handle modern machinery and manage their businesses. But these are rare cases in rural areas [*Sethuraman 1985:15; Groot and Keddie 1987*].

In general, TSI in Indonesia faces many problems. It is weak in finance, technology and marketing; it is usually indebted; it has hardly any machinery and only outdated equipment; it



lacks marketing know-how and design knowledge; it has difficult access to the necessary materials; and it is badly housed, without adequate space to work, often no electricity, no ventilation. In addition, there is the continual interference of family problems. Not surprisingly, a large part of the artisanat is run inefficiently and in need of structural reform. Some units in the metal and wood branches should become Modern Small Industries, while others should grow into Traditional Large Industries, or vanish. Only few will be able to survive in the long run as TSI, and these are mostly in Handicrafts and client-oriented industrial services such as Tailoring [*Liedholm and Mead 1986:77*].

The upgrading of TSI requires a broad programme, which is far beyond the means of developing countries such as Indonesia. Therefore many Technical Assistance projects have been started in this field, but they have not been very successful [*Groot and Keddie 1987*].

A general problem TA officers meet with TSI is the latter's traditional independence and a correspondingly negative attitude towards direct assistance. Thus, according to a recent international survey of Rural Small Industrial Enterprise, the typical TSI entrepreneur is unwilling to delegate: he repairs or even designs his own equipment, trains his own labour force, finances his enterprise from personal savings, and often has a strong-minded and precise perception of his fundamental problems [*UNDP et al. 1988*]. So he tends to discard suggestions that are not in line with his own ideas, and it requires not only sound technical knowledge but also social capabilities to convince him to change his working methods or attend some technical or managerial course. A village study in Central Java showed that this negative attitude is particularly observed with the elder and poorer entrepreneurs; the younger ones with larger businesses tend to be more open for innovation, they are more willing to attend courses, and their tendency to introduce new products or production methods is significantly stronger. However, the overall tendency to innovate in TSI is very low indeed [*Rietveld and Gorter 1988*].

World-wide evaluations of Technical Assistance in this sector report that the most favourable results have been scored by the projects that aimed to assist in only one defective aspect, such as finance or technological backwardness [*Liedholm and Mead 1986:109*]. The same studies also reveal that it is more effective and efficient to address only the existing TSI entrepreneurs with vocational experience and adequate schooling. Such entrepreneurs can function as models within clusters of TSI. This model approach is similar to what will be proposed for Traditional Large Industry, but, unlike in TLI, for the development of TSI it is not sufficient to create examples of good entrepreneurship. The financial and technical weaknesses and other problems in this sector should also be addressed. For such an integral support to become effective and efficient it is advisable to specialize support per branch or product line, and direct the effort only to clusters of entrepreneurs. This has also been the recent Indonesian policy towards TSI; in 1985, 1,562 out of approximately 6,000 clusters were involved in some industrial programme [*Dawan Rahardjo 1987:25*]. In addition, the government has established 37 Common Facility Centres, and started courses for business training and marketing promotion. Social workers have been sent to the villages to encourage clustering [*Spence and Weijland 1990*].

However, the implementation and maturing of these policies will take a long time, and there has been much discussion on the precise ways TSI has to be approached. The Indonesian government prefers a co-operative approach, through which all artisans in a village are reached simultaneously. This might do for homogeneous groups, but for stratified clusters the co-operative method is not very successful, as it has little to offer to the entrepreneurs with the highest development potential. The latter would withdraw and look for individual assistance. In this way the government would have to support two programmes in stead of one, which it can ill afford. It is therefore recommended to differentiate TSI policies according to branch or product line. In the branches with economies of scale in production, the emphasis should be on selected entrepreneurs with the capability to become managers of larger units. On the other hand, in the branches with little scale economies in production, but considerable economies of scale in the purchasing of inputs and the marketing of outputs, the approach should be the co-operative one. As the latter demands comprehensive and locally adjusted guidance, the government could leave much of this task to local authorities and NGOs.

There is also a need to differentiate between the ways services are offered in the various rural regions. In densely populated regions with many accessible clusters, most of the industrial services might be offered in the province centres that can be easily reached by the target groups. In sparsely populated, isolated regions where the entrepreneurs cannot easily reach province centres, they have to be visited by mobile teams or field workers, or served by local institutions. As the latter extension services are usually not available, industrial development in such regions might be started with modern or traditional large industry, which makes use of the regional resources.

Traditional Large Industry (TLI) can be distinguished by its large labour force and traditional equipment. Its work force counts many unskilled workers who function as helpers or apprentices, but its management is often quite modern and able to calculate whether the business runs efficiently and whether it is profitable to introduce advanced machinery. TLI is typically a family enterprise; some younger family members are schooled for the future management of a modernized plant.

Rural TLI is usually firmly rooted in the country side as processor of primary inputs of local origin, and/or employer of cheap local labour. Its markets, however, reach much further and can stretch to foreign countries. Its marketing activities are therefore mostly left to traders. Along with rich farmers, the latter are also the most common initiators of TLI.

As TLI technology does not require sophisticated inputs, its location need not be in the vicinity of urban centres; but for the supply of its large labour force it has to stay in populated areas, and for the marketing of its products it needs easy access to high roads. Consequently TLI is found predominantly in densely populated regions with good infrastructure.

TLI can be very profitable, and according to various studies it ranks among the size categories with the highest socio-economic efficiency [*Liedholm and Mead 1986:69-74*]. This finding is not surprising, as TLI uses relatively little fixed capital but much cheap local labour and local materials, while it applies as much specialization and division of labour as is possible under the circumstances. Nevertheless, many TLIs face serious problems, which are mostly of a technological nature and related to the traditional quality of their products. Part of TLI produces traditional commodities that are being replaced by the more standardized products of MLI. Sugar, salt, woven fabrics, cigarettes, leather and leather products, bricks and tiles, all are products of TLI that tend to become the domain of MLI, unless the government plans otherwise. Through a number of measures and programmes it is possible to encourage TLI to modernize its products without changing its labour-intensive production methods.

TLI is a relatively easy target group for promotional policies. It offers good prospects to become modern, as its size and business records are such that local banks might be interested in acting as financial intermediaries. Government agencies need to operate only in the field of product design and marketing and corresponding updating of machinery and equipment. However, the development authorities should be concerned with the effects of modernization and consequent mechanization on the rural labour market, particularly in those areas where agricultural development has already created adverse employment conditions. In many places TLI employs the poorer segments of the rural work force, and especially the poor women. Modernization would mean that fewer workers are needed, and that better schooled and trained men will replace precisely those workers who are in dire need of employment. At this point the support of intermediate technologies becomes relevant. Such production techniques are often already existent but not common knowledge for all entrepreneurs. Promotion of communication among TLI managers or technicians through collaboration and training programmes might suffice. The use of local entrepreneurs and craftsmen in such programmes makes upgrading effective and cheap. These activities, however, have to be attended with macro policies that ensure correct factor price relations. Concessional lending to TLI would have to be avoided, and the price of its machinery should not be subsidized through overvalued exchange rates. The same regime would have to be followed vis-a-vis TLI's competitors, the MLI enterprises. In some countries it even has become a rule to suppress competition from modern large industry through product reservation, taxation and licensing of investments. In Indonesia, however, industrial policies have not generally turned in favour of TLI. This would not be rational anyway, because the prospects for TLI vary by province, according to population density, human resources, and natural endowment. Therefore it would be more appropriate to formulate differentiated strategies and corresponding policies for the various provinces.

Under the current Indonesian legislation, TLI is protected only if its capital investment is so small that it is formally classified as Small Industry. The BIPIK programme is directed to enterprises with less than Rp. 70 millions capital worth. Many medium or even large traditional firms might apply for the privileges offered in this programme and its extensions by Presidential Decrees. Thus they can benefit from product reservation, tender systems and price preferences, and have access to Technical Services and Research Centres. Although there are no specific data on TLI, it is plausible to assume that this industrial category has been able to benefit disproportionately from the government programmes that were initially destined for smaller enterprises.

#### 7. Household Industry

Household Industry (HI) is widely dispersed over the Indonesian country side. Every village, however small, has some HI. It is the original form of subsistence industry, and traditionally undertaken by almost each villager during a shorter or longer period in the day or the season [Weijland 1985]. The activities take place after having worked in the fields, during the hottest period of the day, sitting at a shaded place in the hut or yard. Many women work in secluded places, behind closed doors or in walled farm yards. Thus most HI activities remain unnoticed by occasional visitors of the villages. HI technology is the lowest imaginable. Some production techniques are passed from parents to children, but many are invented by trial and error. Specialized equipment is typically not available; whatever is used serves also farm work or household chores. Consequently, HI technology tends to be the lower the poorer the household, and this is unfortunate, for HI is more important as a source of income for the poor than for the rich households [Weijland 1985].

For many workers, HI activities are only a passing occupation, as they satisfy only the needs of the own or some neighbouring household. Traditional Household Industry (THI) is predominantly oriented to small home markets, and it usually follows the detailed wishes of familiar clients, who have provided the necessary raw materials or given an advance. In this way the very poor villagers can earn some additional income without taking any risk. Another mode of THI is directly linked to own farming, mining or gathering activities, and involves the processing of materials in slack seasons, or, when there is an urgent need for cash, during the times of the day that are usually reserved for resting [Heinen and Weijland 1988c:5-6].

In many Asian countries, middlemen and contractors have taken advantage of rural impoverishment, and found the poorer HI workers willing to produce according to standardized patterns. Thus traders bring materials and fetch finished products, paying by piece. In order to raise the quality and quantity of production, they sometimes also provide machinery and equipment. As the majority of HI workers are women, children or handicapped persons, family members can take an intermediary role, and travel to village centres in order to meet the

traders or buy the necessary inputs [Keddie et al. 1987].

It seems that in Indonesia, like in other Asian countries, subcontracting and putting-out modes of HI have been growing fast during the eighties, and this process has not been limited to women, it has also extended to the traditional artisans who became indebted and could no more afford to buy their inputs or maintain their equipment. It has even reached the artisans who found it more profitable to deal regularly with middlemen in stead of badly paying customers. In this way, part of the artisanat is drawn into Household Industry and might retreat to the home yard.

For the traditional HI workers industrial activities have low priority. Usually they have no attachment to the badly paid work, and they are looking for better employment or higher earnings in their other occupations which are mostly in agriculture or trade. So, when they find other employment, they tend to drop the HI activities altogether [Heinen and Weijland 1988c]. Therefore it is not realistic to put much emphasis on the support of THI when the workers themselves are hardly interested. Also, even if they were willing to specialize in one of their irregular industrial activities, supportive services may not be recommended if training would take too long and provision of adequate equipment would be too expensive. Even when assistance might be given at low cost, it still might turn out to be a dubious effort because the workers cannot be expected to be able to run a business on their own, as they have no experience in marketing and business management. It therefore would seem better policy to improve the position of the workers who evidently have already made the decision to continue working in HI through contracts with middlemen or subcontracting firms.

As the traders and contractors can take care of almost everything except training, the most important problem of their subcontracted HI workers might be low productivity arising from lack of skills. When the work is bad, traders use to reject it and they may end up rejecting the workers as well. Traders encourage HI training for their own benefit, but usually are not able to set up training courses for many dispersed and isolated persons. However, the required skills are rather common, and might be found in the more well-to-do local families. This is why a number of local training activities in Indonesia can be initiated by the richer members of the communities. Another obvious method to improve HI is through co-operative activities. But, like in traditional small industry, the wide differentiation among the workers appears to be a big obstacle for joint action [Beuningen et al. 1987].

For the government, direct involvement in the development of HI activities is an almost impossible task. Probably it is more effective to approach HI indirectly and improve its social and economic environment through infrastructural and agricultural development policies. However, it is possible to encourage HI more specifically through the activities of foundations such as Pekerti, which promotes handicrafts production and marketing, and supports regional

Non-Government Development Organizations in their village outreach [Pekerti 1986]. Furthermore, the government could assume a more lenient attitude towards informal clustering of village industries, and it should encourage any informal co-operative action in the field of savings and credit systems through which HI activities can be financed. However, the records of such systems show that there is relatively little demand for industrial credit at the village level. If villagers are able to secure loans, these are preferably invested in non-industrial activities [UNDP et al. 1988:60]. This again points at the low priority HI activities have for the Indonesian village households.

#### 8. Strategies for Rural Industrialization

It is generally acknowledged that, compared to modern large urban industry, the smaller rural industry sector has many favourable functions for LDC economies [UNIDO 1978]. Aside from its contribution to regional decentralization, it has been found to make better use of abundant domestic resources such as primary materials and cheap labour, whereas its import content is low and export potential high.

This outstanding macro-economic record is achieved mainly through linkages with agriculture [Haggblade et al. 1989:1183]. For one, RI encourages agricultural commercialization through the processing of local materials. Furthermore, it can absorb seasonally and daily underemployed agricultural capital and labour, so that agricultural inputs are shared with industry, which, in principle, raises the efficiency of both activities. In addition, it may produce machinery and equipment for farmers who cannot afford sophisticated products or are not able to communicate with urban producers. All these linkages tend to increase output or decrease cost of production, and therefore raise rural income and savings.

Aside from linkages with agriculture, RI has positive effects on rural transport and trade, as it stimulates rural-urban trade, and decreases transport cost through its auto-motive services [Keddie et al. 1987:13]. Lastly, RI makes a substantial contribution to the informal training of entrepreneurs and industrial workers [Ibid.:15].

Although it might be possible that the RI sector as a whole performs all the above functions, it is not likely that all its diverse categories play the same role. Some are active in exports, others sell only to urban markets, while there are also RIs that sell only to small rural markets. Their employment effects can also vary substantially. Some raise only urban income, others contribute only to the rural rich, but there are also industries that improve the standard of living of the poorest rural households. Unfortunately, the enterprises with the highest market or linkage effects do not always have the most favourable employment and income effects. Consequently, in order to attain optimal benefits from rural industrialization, the distinct economic characteristics of each RI category should be analyzed and evaluated, and this exercise might be extended to the branches within the categories. However, for the selection of the proper industries and target

groups it does not suffice to know their potential contribution, as their specific growth constraints also have to be taken into account. The problem is that most categories can develop only in a specific rural environment with a certain critical minimum of infrastructure, resource endowment, market size or income level [UNDP *et al.* 1988:25]. So, for instance, it would not be very realistic to encourage Modern Small Industry in sparsely populated poor regions, because it would not have sufficient clients; neither would it be advisable to start Traditional Large Industry in such regions, because it would not find sufficient workers. Obviously, the particular environmental conditions for the diverse rural industries have to be satisfied before the industries can be further developed through direct assistance. For the formulation of consistent policies, therefore, it is not only necessary to know the distinct functions of the RI categories but also the basic conditions for their existence and development. It is highly probable that certain developments in the rural economy and have adverse effects on particular types of RI, so that it is bad policy to encourage all rural sectors and all types of rural industry simultaneously.

Recent studies have identified a number of general preconditions and factors favouring rural industrialization [UNDP *et al.* 1988; Weijland 1985, Heinen and Weijland 1988a]. The most important are:

- strong industrial tradition and good apprentice system
- high rural population density
- well developed rural transport and trade system
- broadly based agricultural development
- intensive use of agricultural machinery and equipment
- high regional income
- liberal macro-economic trade policy

Of the listed factors none is absolutely necessary, but each can play an important role in the development of particular types of industry.

Industrial tradition and apprenticeship are most important conditions for the development of a strong, competitive rural industry. They are no common phenomena in all Indonesian provinces; industrial tradition is strongest in Java, and weakest in the sparsely populated but otherwise well endowed islands Kalimantan and Irian. The apprentice system is weak in all islands. Consequently, primary technical schooling should be given relatively much attention in all rural areas. However, there is a great lack of schools and teachers in this field. Most of the relevant schooling and training is done in the towns, which practically excludes the rural youth. In the villages some basic vocational training is organized by NGOs, but these programmes are meant for adult workers only. It would seem that this situation cannot be remedied easily, and it will pose a fundamental obstacle to rural industrialization in Indonesia for a long time to come.

Population density encourages rural industry as it widens the market and stimulates specialization. Where population is dense, small traditional industry tends to cluster, also large

traditional industry thrives in densely populated regions because of the availability of much cheap labour. This facilitates a concentrated, branch-specific support of industrial activities, which has been proven to be an effective approach [*Liedholm and Mead 1986*].

According to a series of cross-section studies of Indonesian provinces and villages, the most important environmental factor affecting RI is transport [*Weijland 1990*]. This finding is supported by surveys in other countries [*UNDP et al. 1988*]. Improvement of the rural transport system has a favourable effect on almost all RI categories, as it widens the rural markets of capital, labour and material inputs, and therefore increases the potential scale and number of rural enterprises.

Both modern and traditional large industries are primarily dependent on good highroads leading to their urban markets. They also need feeder roads for the regular supply of their raw materials. In addition, for the supply of its labour force, traditional large industry needs good connections with its hinterland.

Modern small industry depends on highroads for the regular supply of its modern inputs. Traditional small industry (artisans) depends on good feeder roads for its customers to come from the remote villages farther away in the country side, while putters-out and traders need roads to reach the village workers.

However, the very traditional, subsistence-oriented household industry may be affected negatively by transport improvements, because better access to village centres or (semi) urban areas would facilitate the male cottage workers to find employment outside their own settlements, and it would make it easier and cheaper for the villagers to buy modern substitutes for the traditional HI products made by the women and children. Consequently, the most primitive activities in HI industry would lose workers and clients, and might be abandoned altogether.

The distinct functions of the various Rural Industry categories for urban or rural markets make each category dependent on specific types of transport networks. Consequently, the structure of RI adapts to the road system created by the central and local authorities. The government can force RI to assume a certain development pattern by the phasing of its infrastructural activities. For instance, if priority is given to the grand trunk roads, and feeder roads are neglected, MLI would be encouraged to concentrate at those places at the highroads where raw materials can be produced at a close distance, preferably in plantations with private feeder roads. Such MLIs tend to concentrate land ownership; small farmers may be evicted or urged to sell their land. Then part of the local population would leave the country side, others might join the modern work force, some would be able to set up transport and trade enterprises, and many would find only marginal employment in petty services and food stalls at the road side. For the development of small industry, however, the local market would be too small as long as no better roads have been constructed to connect the newly created modern enclave with the isolated villages.



The potential size of the local market for small rural industry is determined by population density, transport facilities, and the local level of farm technology and income [Keddie et al. 1987:10-12]. For the development of the various types of traditional small industry, specific critical minima of market sizes must be reached. Whether these industries will be able to realize their full potential depends on the quality of their products and the local preferences. The quality of the products can be improved gradually by local competition and communication with other (urban) production centres. The government may try to speed up this process by the establishment of training centres and other extension services. The preferences of the local consumers, however, cannot be influenced directly. They are often bent towards modern urban products because of unequal elitist agricultural development. A broadly based, egalitarian agricultural policy widens the market for RI.

In an unequal, dualistic agrarian society with many members living below the poverty line, Household Industry has a dubious advantage over other industries. It might be the only category that gains workers. Increasing numbers of landless families have hardly any other choice.

According to the aforementioned cross-section studies, women tend to work more in HI when they are under the poverty line, which indicates their tendency to enter the traditional low-income activities as household income falls. This would mean that such activities should not be encouraged in regions with broadly based agrarian development. This in contrast to regions with dualistic development, where poverty or inequality tends to increase for certain groups. Under such circumstances, policies to alleviate poverty should also address the lowest industrial categories and try to upgrade productivity and earnings through training and marketing services. These can be most economically offered to clusters of HI workers [Beuningen et al. 1987].

Together with the HI workers, the artisans in small industry are among the weakest in the rural economy. As was argued above, they tend to be rapidly outcompeted by modern urban industry in a dualistic economy, and even in densely populated, more egalitarian rural societies they have a hard time competing with the modern local entrepreneurs. As local incomes rise, rural households spend their incomes disproportionately on modern products. Yet there are certain product lines that can be reserved for traditional producers if the latter are able to adapt their technology and product design somewhat to the current fashions as dictated by their clients. In densely populated but isolated areas, mobile service units can be deployed for the technological upgrading of clusters of artisans [UNDP et al. 1988]. In less densely populated regions, however, it is very difficult to serve the isolated and dispersed artisans in an efficient manner [Beuningen et al. 1987]. In such regions it might be the best policy to support traditional small industry only indirectly, through improvements of roads and other infrastructural facilities, and through broadly based agricultural development.

One of the most powerful factors for RI development is income growth, not only in the villages, but especially also in the larger provincial towns and cities. Cross-section analysis shows that both employment and income in rural industry grow significantly with provincial income [Heinen and Weijland 1988a]. This points to the role of urban markets for rural industry. Most categories of RI are at least partly dependent on urban markets. Modern large industry and subcontracted cottage industry are typically town-oriented. Traditional large industry has more rural customers, and modern and traditional small industry usually sell the greater part of their products to local markets. However, this ranking is not universal and the proportions are not fixed. The better the transport and trade system, the larger the part of production traded to the cities and abroad [Weijland 1990]. It is good policy for any industry to spread risks and find a diversified clientele. Particularly in rural areas where agricultural income has a marked seasonal pattern or is sensitive to climatic vagaries, access to wider markets is an essential factor in the successful development of rural industry [Weijland et al. 1986:7-10].

As incomes cannot be raised at will, it is difficult to derive direct policy implications from these findings. They point at the importance of rural-urban linkages, brought about by consistent macro-economic and sectoral policies, trade liberalization, and overall improvement of rural-urban communication. Students of the rural economy have come to agree that the general economic environment is at least as important in promoting rural industry as are all the various sector-specific programmes and projects currently run in Indonesia [Groot and Keddie 1987].

#### 9. Summary

Since rural industrialization has become an important issue in economic planning, the question of an economically meaningful classification of rural enterprises has been raised. Identification of target groups for technical assistance appears to meet with many difficulties, as the development agencies have little information on the structure and dynamics of rural industry, and consequently do not know which industries to support with what kind of assistance. In Indonesia there are numerous forms of rural industry, and it is indeed difficult to make out, first, whether some industry has development potential, second, whether it is in real need of assistance, and third, what type of assistance can be offered in the most effective and efficient way.

For economic policy purposes, three main categories of industry are distinguished according to level of technology: Modern, Traditional and Household Industry. Within the categories there is a large size range, and market orientation may vary from local to world market. The categories are defined in a way that the enterprises can follow a development path within given technological boundaries that have been observed empirically. Such distinctly circumscribed development processes can be viewed as targets of the category-specific development institutions. Thus the purpose of the proposed classification is to separate target groups with distinctly different production processes, production requirements and growth potentials, so that they can be allotted specific types of assistance and be served most efficiently by special development agencies.

As it is alien to its traditional rural environment, modern small and large industry face many problems in rural areas. Usually lack of trained workers, good connections, communication facilities and modern inputs poses formidable obstacles to the development of rural modern industry, which therefore keeps concentrated in the vicinity of large rural centres and grand trunk roads. Modern rural industry can be supported most effectively through infrastructural improvements and other indirect measures such as trade liberalization. Small modern industry also benefits from the direct support offered in industrial estates, provided the latter are located near provincial centres. Both small and large modern industry depend for their manpower on formally trained technical and managerial personnel, so their development is closely associated with the development of tertiary education and the establishment of research centres. It is also very dependent on credit policy.

Traditional industry is often firmly rooted in the countryside, and particularly in densely populated rural areas. It is less dependent on formal education and formal credit, but very sensitive to transport and trade improvements. Small traditional industry tends to cluster in town quarters or villages, which facilitates formal and informal communication. Improvements in product design and marketing facilities are important elements in the technical assistance for this industrial category. Management training is also needed, but not as much appreciated, unless it is given in combination with direct technical assistance. Encouragement of co-operative organization has also been among the less popular forms of assistance, particularly if it was tried in branches with scale economies and corresponding differentiation among enterprises. Broadly based agricultural growth favours traditional industry through production linkages and income effects, but it seems that overall regional growth is even more effective in raising employment in all kinds of rural industry.

A contrary response has been observed for the more primitive and smallest Household Industry. The part of this category that is associated with extreme poverty and overburdened workers tends to decline when incomes rise. Another part, which consists of somewhat larger units, responds positively and can develop into more regular, specialized production, which is usually traded through middlemen or contractors. This part should be assisted through vocational training and improvement of marketing outlets.

In general, policies for the more primitive section of household industry are difficult to implement. The scattered industries are hard to find and their needs difficult to assess, as they depend on the results of other, simultaneously undertaken economic activities of the workers themselves or other household members. When the primary income sources decline, household industry often turns out to gain in importance, and then one might turn to some government authority for assistance in order to balance the negative social or economic tendencies. In such cases, effective direct government support for the various industries would require such funds that one should wonder whether these would not be spent better on attacking the initial causes of impoverishment; it even may be more effective to give the poor households a straightforward

relief allowance. However, from the viewpoint of development policy, the best approach to eliminate rural poverty in a structural way would be broadly based agricultural development and an equally broad development of the transport and trade system.

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