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**ROLE OF RURAL INDUSTRIALIZATION IN INTEGRATED RURAL DEVELOPMENT
IN PAPUA NEW GUINEA - PROBLEMS AND STRATEGIES***

by

E.M. Wijenaiké**

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** Assistant Director, Technical and Small Industries, Department of Labour, Commerce and Industry, Office of Business Development, Papua New Guinea.

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Papua New Guinea emerged as an independent nation only in September 1975. I would like to say at the outset that I believe that the problems of Papua New Guinea in regard to small scale industry development are somewhat unique and they find no parallel perhaps in any other country. It must be realized that the people of Papua New Guinea bear a somewhat unusual relationship to the rest of the world, mainly for the reason that New Guinea has been cut off for centuries from external influences by an accident of geography. The situation, topography, character, climate of Papua New Guinea to which the migrant ancestors of the present inhabitants came, probably because of pressure in the land of their origin, offered them a refuge that was well secure from contacts with the outside world. It should also be noted that New Guinea is the largest island in the world after Greenland. Roughly half of it comes under the administration of Indonesia and is known as Irian Jaya. The area covered by the new nation state of Papua New Guinea is roughly 130,000 square miles.

It is not my intention to dwell at length on the geographical features of Papua New Guinea however unique and interesting they may be, except to state that the topography of Papua New Guinea has been one of the major constraints to rapid industrial development. Nearly one third of Papua New Guinea is composed of steep mountain peaks rising up to 10,000 ft and also as great an area is covered with swamps where nothing can be cultivated or grown systematically. This has also meant that these mountains and extensive swamp lands have prevented the development of a good system of road or rail communications in a country which is quite large, with the result that most of the main urban centres of population are almost totally dependent on air or sea transport for communications.

Papua New Guinea has a population of only 2.7 million people. There is therefore the added problem that this consumer market which has a very low per capita income is also fragmented very badly into tiny and in some cases inaccessible parts. This is another of the constraints facing small scale industry development in Papua New Guinea. I shall refer to others presently. It is sometimes cheaper to import goods from Australia to some parts of Papua New Guinea rather than manufacture in another part of Papua New Guinea even though local raw materials are used, because of the prohibitive costs of freight.

Fortunately Papua New Guinea is endowed with a vast amount of natural resources, timber, minerals, forest and marine which along with its plantation crops such as coffee, coconut, rubber and cocoa have helped the economy to remain stable in recent years despite export price fluctuations. Even the dramatic fall in the copper prices did not have very serious repercussions within the economy. Sound economic management with the objective of maintaining a hard currency by the new government has also helped the economy to remain stable and kept inflation at very low levels. The country is however presently greatly dependent on Australian Aid.

The manufacturing sector itself is extremely small in Papua New Guinea and very underdeveloped. Secondary industry contributes about 7% of the gross domestic products and employs 10% of the total workforce. The value of total manufactured output in 1974-75 amounted to roughly US\$250 million at current prices and employment in secondary industry manufacturing totalled roughly 16,000. Although the rate of growth of employment in this sector was fairly rapid in the 60's - there has been a noticeable slowing down in recent years. Over the 4 year period 1972-1975 employment in the manufacturing sector showed an overall increase of only 5% with an absolute decline in employment in two of these years. Growth in employment has lagged behind growth and output in recent years. Output increased in real terms by 16% in 1973-74 and 27% between 1974-75. The industry group "Industrial Metals and Machinery" presently account for the largest share in total industrial employment. Slightly more than one third of the total manufacturing work force is employed in this category of secondary industry which includes general engineering, motor vehicle repairs, motor body building and repairs, aircraft construction and repairs, ship and boat building, marine engineering, sheet metal work, plumbing, electrical and other machinery repairs. The two other industry groups "Food, drink and tobacco" and "Other Industries" employed the remainder. Apart from the narrowness of the industrial base what is most important and needs to be stressed is that nearly 98% of these manufacturing industries are owned and managed by expatriates. Also noteworthy is that the informal sector which is found in many other developing countries is totally non-existent in Papua New Guinea due partly to government restrictions such as excessive protection of licenced firms, over regulation of transport, commerce and industry and too much emphasis on the orderly development of towns. This is of course a legacy from the pre independence era. If we ignore the artefact industry which employs large numbers mainly on a part-time basis rural industry as such is also virtually non existent and has no

linkages whatever with urban industry. It is estimated that around 100,000 people are full-time or part-time employed in the artefact industry, which at the present moment is in a state of depression. The Government however has mounted a rescue operation which appears to be yielding good results.

The manufacturing industry in Papua New Guinea is also heavily concentrated in 3 provinces, Morobe, Central and East New Britain and located mainly in the urban centres of Moresby, Lae and Rabaul. There are 19 provinces in Papua New Guinea and the case therefore for dispersal of industrial activity is extremely strong. For instance the Highlands region which is perhaps the least developed in the country has the largest share of total population and also the lowest share of industrial activities.

Also of interest is that minimum wages for rural workers grew by 5% in real terms from 1971-1976. In contrast the urban minimum wage rose by 116% in the same period. As a result the urban labourer earns 3 times as much as the rural plantation worker or $2\frac{1}{2}$ times the rural labourer. With a growing unemployment problem particularly among the educated youth, the inability of the manufacturing sector to provide widening avenues of employment is a matter of great concern to the Government. According to estimates made by the Central Planning Office if present trends continue, it is estimated that by 1984 there will be 310,000 school leavers without wage earning employment which could have very serious political implications. Unemployment apart, the vast disparity in income levels for urban workers and rural workers has accelerated the urban drift which has had a cumulative effect on unemployment, increase in crime, social tension, pollution, and squatter settlements in urban areas. All these have put further pressure on the government to eliminate the disparity in incomes.

As in many other developing countries, over 90% of the population are living in rural areas and most of them are involved in subsistence farming although with the widening of the cash economy there are a large number who are now involved in cash cropping.

The urgent need therefore is to divert a greater proportion of government resources to rural areas is clearly recognised by Government in its National Development Strategy which was published as a white paper recently. The strategy proposes to concentrate on reducing inequalities by creating income earning opportunities in rural areas. The strategy will also be concerned with maintaining subsistence production and improving the range of subsistence goods.

Urban development will be seen to complement rural development and lay the foundation for future industrial based expansion.

Papua New Guinea has had the same experience or even worse than most other developing countries in regard to the provision of rural development services in that these services were very poorly co-ordinated, resulting in poor delivery and consequent loss of confidence of the rural folk in the work of government departments especially prior to independence. Emphasis is therefore now being placed on planning at the grass roots level upwards rather than the converse of the practice. The administrative system of P.N.G. has in fact been characterized as the most centralized amongst the developing countries. It is also still very much dependent on expatriates, most of whom are from the industrially educated countries and have no experience of the problems of developing countries.

Another major step in involving rural people in the planning and decision making projects will be the establishment of provincial governments. Already a number of provincial governments have been established and it is likely that more will be established in the near future. I believe that the establishment of provincial governments will make easier the task of rural industrialisation because up to now due to the overcentralisation of the bureaucracy mentioned above, there has been a lack of communication between rural areas and the decision makers of the central government and also an insensitivity to rural needs at the centre. In this context therefore the Government of Papua New Guinea has great hopes that programmes for rural industrialisation within the framework of integrated rural development will create income earning opportunity for the rural people, particularly the self-employed.

It is however my view that there are so many constraints in regards to the development of rural industrialisation and small industry in Papua New Guinea that this process can only be a very slow, painful and difficult one. It would be unwise to paint romantic pictures of the potential for instance of rural industrialisation in Papua New Guinea particularly over a short period with the difficulties and constraints that presently exist and also for the reason that the resources available to those involved in the promotional effort are most inadequate. The Government is aware of this. It must be noted that Papua New Guinea before the arrival of the Europeans, had no history of usage of metals. The technology was bone, stone and wood and even today there is not one single blacksmith in Papua New Guinea, nor for that matter can you find a single shoemaker. This is also perhaps indicative of the dominating influence of trusteeship by a country that was industrially advanced and blacksmiths are rare

in many industrially advanced countries. The wheel was unknown until European contact 30 years ago and even today animals are not used for agriculture or for haulage. The village economy is basically a horticultural economy based on shifting cultivation of roots and yams and quite different from the rice culture villages of many Asian countries. Apart from the lack of roads, power, water and transport, artisan skills are generally not available in most village areas to support any programme of rural industrialisation although with the growing number of young people turned out by technical colleges this situation might improve in the future if they return to the village. Basically therefore, at the present time the infrastructure of the village economy in Papua New Guinea in most areas cannot support any scheme of rapid rural industrialisation except perhaps cottage industry at the very most. Like many other developing countries, PNG is a dual economy. But here again it is a dual economy with a difference. As one writer has observed...
"...It's economy is a paradox. It is primitive, less developed and modern - all at the same time. While the primitive Subsistence Sector of the economy reminds us of the features of the horticultural society which existed about 10,000 years ago; its modern sector particularly trade, money and banking, urban housing and construction and communication such as Posts and Telegraphs - reminds us of the characteristics of a modern industrial state such as Australia..."

There are also a number of other factors which militate against rapid development of rural industrialisation in Papua New Guinea. There are for instance certain socio-cultural factors which are also particularly unique, such as the existence of what is popularly known as the wantok system. In Papua New Guinean societies the right to livelihood is in effect guaranteed as a normal right of membership of a clan or tribal group. It is a social right to receive support and help from friends, kin and leaders of the clan in times of peace and war alike. In the primitive affluent society of the past, fear of hunger had never acted as an incentive to participate in economic activities. Even the quest for profit or individual self interest cannot be considered to be an adequate explanation for economic activity. The expanded family or tribe that is the wantok system was the basic unit and still is the basic unit of the subsistence sector. Although in Pinyin wantok means a person who speaks the same language, it is really a group of people speaking the same language and sharing similar interests and goals based on the principle of reciprocity and common ancestry. Although Papua New Guinea is changing rapidly and society is becoming modernised, this wantok system continues to assert considerable influence and in fact with the pressures of modern society

and the rapid growth of population involving problems of unemployment the wantok system has not disintegrated but it would appear it has become even stronger. Because the people leave their traditional homes and seek employment in other areas, the wantok system guarantees them some form of security, in fact it is an inbuilt system of social security. This wantok system has come in for very serious criticism as being a system which is detrimental to the development of entrepreneur initiative. The incentive to work for a successful businessman entrepreneur is completely destroyed because he has to share his profits or he may have to share his profits with his less well off wantoks. He himself would only get a fraction of what his efforts should merit. On the other hand, the opposite view has been taken by one or two other students of the system who claim that the wantok system has a considerable amount of merit and it could be in fact a very powerful force for promoting rural industrialisation in that clan leaders in the village have through the wantok system a pool of resources at their disposal. Capital, labour and possibly technical know-how which would not be normally available to an individual would be available through the wantoks as a group. Being linked together by bond of common kinship problems of minimum wages, working hours etc. would not arise and the group effort could be superior as in the paternalistic system that operates in Japan. There is however little evidence to support this in the industrial field so far although some evidence to support it exists in the commercial sector. Our own experience in the field of industry has so far been to the contrary. Two potential entrepreneurs sponsored by us in the field of small industry have failed recently because of the wantok system.

There are also certain other difficulties and problems in promoting small scale industry in Papua New Guinea and these are applicable to rural industry too. These too are legacies from the past. One of them is that although there is a government policy directive for preferential purchase by government purchasing organisations of goods manufactured locally, in actual fact this policy directive is never carried out as it should be. There is always the tendency to reject goods manufactured by small scale industrialists on the grounds of quality in that they do not compare favourably with the imported goods. We have had many struggles on this issue with government purchasing departments and we feel it will be a long time before we will be able to convince them that in the initial stages in the interests of small scale industry development some tolerance must be allowed in regard to the quality of locally manufactured products. Attitudes like this die hard because for years they have become part of bureaucratic thinking.

As regards protection for small scale industry too, Government policy has yet to be clearly defined. Up to now, no definite statement is available as regards the extent of protection government is prepared to offer small scale industry. In its statement of National Development strategy the general statement is made that protection will be given only to locally manufactured goods that are competitive with imported goods. This statement of policy is somewhat vague and I gravely doubt whether in actual fact protection could be granted on the basis of a statement like this unless precise guidelines are given. Presumably these guidelines are under study. By and large the tendency of the government thinking so far has been to resist any requests for protection on the grounds that protection would raise living costs for the masses.

Still another problem which certainly does not exist in most other developing countries is that in Papua New Guinea the distribution outlets are largely monopolised by a few expatriate firms. Even though the goods manufactured by the local small industrialists are competitive in price and quality of the expatriate firms handling distribution through the country choose not to buy from them and prefer to continue their association with their foreign suppliers there can be no hope whatsoever for the small industrialists to operate on an economically viable basis particularly in view of the fact that the markets are fragmented in Papua New Guinea.

The high wage structure both in urban and rural areas is another constraint to the development of small scale industries. This is also a legacy from the colonial era. The wide disparity between the urban and rural wage will also naturally attract the more skilled artisans to move to urban areas. Again despite government's anxiety to encourage rural industrialization it will not support the grant of financial incentives for persons to locate industry in rural areas as it may create an elitist class which is counter to its egalitarian policies.

The manufacturing sector is also dominated by capital intensive and labour saving technologies possibly to offset the high labour costs. This has to a large extent influenced the thinking of Papua New Guineans who have been technically trained. The tendency is always to throw away and replace rather than to repair. This attitude is of course quite different to many other countries where every effort is made to repair rather than replace in order to save foreign exchange and increase employment opportunities.

There are yet many other difficulties, the magnitude of which I believe are not equalled in most developing countries. A major one of course is the problem

of finding entrepreneurs to undertake small scale industry projects. This is of course a problem common to all developing countries. I am aware of the fact that even in India which has a long history of industrialisation that there are programmes for the development of entrepreneurs even today. In other countries too, entrepreneur development programmes are being mounted. In Papua New Guinea however, the number of indigenous entrepreneurs engaged in industry is but a handful at the most. National entrepreneurship in fields other than industry, such as retail, store, transport, buying and selling of cash crops is only of very recent origin - the last 10 or 15 years. Even in the urban areas where there are large numbers of educated Papua New Guineans we have found it virtually impossible to find entrepreneurs to undertake small industry projects as management of such projects involves the complexities of purchasing raw materials, organising of production, marketing etc. With a programme of localisation of business being now implemented by the government it is only natural that those nationals who are interested in entering the field of business would prefer to move into the less complex and less sophisticated areas such as retail trading, transport, plantations, rather than get involved in the complexities of industrial management of which they have no experience, as they have never been exposed to an industrial culture. The situation of course is worse in the rural areas.

So we see that Papua New Guinea despite its great need to develop industries - both large, medium and small to diversify its economy and activate its rural people, is faced with considerable difficulties and handicaps which cannot easily be overcome both in urban areas and rural areas. It should also be noted as a matter of policy, the government expects the private sector to promote industrial development in Papua New Guinea and it is only if the private sector is unable to effectively promote industry that it will step in.

In circumstances such as these our position as promoters of small scale industry was certainly difficult. Should we abandon the whole programme of small scale industry until a later date when perhaps the preconditions for small scale industry development were better and utilise the resources earmarked for small scale industry development in another sector, where the problems are not so complex? Or should we persist in our endeavour to find a solution to these problems? It is one thing to promise people from the platform and government hand-outs that a new era for small industries is about to dawn and it is another thing to be actually able to make that era a reality by translating policies into programmes of action.

In addition those responsible for small industry promotion in Papua New Guinea, with their meagre resources, had the dual task of not only having to convince and stimulate the private entrepreneur of the virtues of industrial development both at the rural or the urban level, but also to convince those who man the commanding heights of the bureaucracy that stated government policies are really workable ones so that the maximum financial support could be obtained. As I have said earlier it takes time for bureaucracy to re-orient its attitudes towards programmes and policies designed to achieve goals different to that of a previous era.

The task of those responsible for small industry promotion was therefore not an enviable one. In short, unless results were to be seen on the ground it was extremely difficult for essential staff and funds to be obtained which were necessary to make a meaningful impact on small scale industry development.

Although the Division of Small Scale Industry of the Department of Business Development was created about 4 years ago there is yet not one single officer in this Division with any specialised knowledge and experience of small scale industry promotion. Until very recently national officers were not sent abroad on courses of training in small scale industry promotion. The division in fact consists of a miscellaneous collection of persons with an equally miscellaneous collection of skills. To their credit however, it must be said that they have responded magnificently to the task of demonstrating the benefits of small industry development to the country. It is therefore most unfortunate that due to budgetary constraints the UNIDO Programme of Small Scale Industry Development in Papua New Guinea has to be implemented in a rather limited way although it is providing the initiatives. Even sadder is the fact that very little has so far materialized from the C.D.C. programme which could have been of immense help.

We are however convinced that despite what I have said about the numerous constraints that exist in Papua New Guinea in promoting rural industrialisation and small scale industry development in general, there is still considerable scope for small scale industry development, particularly in regard to industries which utilize local raw materials and simple technologies and particularly those which will have wide rural applications - provided the fullest support is received from Government. Many of these industries may well have been developed earlier had not Papua New Guinea been in close proximity to Australia and if Papua New Guinea had not been so dependent on imports from Australia which have tended to obscure the possibilities of small-scale industry development. But the task of doing so will be a hard and difficult one.

In the situation therefore in which the Office of Business Development was placed, it was decided that there was no alternative but to adopt the rather bold but risky strategy of directly implementing a number of small scale industry projects as demonstration projects in the best way we could. It was clear that the conventional strategy for developing small scale industry, namely the offering of a package of incentives to the private entrepreneur such as provision of a wide range of industrial advisory services, training scheme for entrepreneurs, credit on reasonable terms, factory accommodation with supporting services and utilities, financial incentives etc., would not produce tangible results for the reasons I have already mentioned above. In addition, it would be virtually impossible to obtain additional funds from Government for the staff and other resources that would be necessary to provide this package of incentives. We were of course perfectly aware of the weaknesses and dangers of adopting such a strategy and in fact we had been warned against attempting to do so by the UNIDO team of experts who visited Papua New Guinea in 1975 who made a number of recommendations regarding the development of small scale industry. It was also very strongly felt that the Division of Small Scale Industry of the Office of Business Development, after years of fruitless endeavour, could only justify its very existence by demonstrating tangible results in the field, and not any more by some submitting memoranda extolling the virtues of small scale industry and offering advice to non-existent entrepreneurs. There was of course the other alternative mentioned earlier of advising government that in the socio-economic context of Papua New Guinea, the time was not ripe to mount a programme for the development of small scale industry, which course of action we did not think was justified by the facts.

Accordingly we are now in the process of implementing, despite the enormous handicaps of working within the government framework, a number of projects, many of which are now in the initial stages of production. Nearly all projects are resource based with wide rural application and linkages both backward and forward e.g. leather and tanning; salt; sericulture; timber products; rubber moulded goods; coir products; shells; boat building; saltfish; weaving; handicraft; baking and confectionery. Some of these industries have export potential. Most important, we appear now to have succeeded in convincing the decision makers who allot resources, as substantial additional resources have become available.

Although we have not mounted as yet an entrepreneur development programme, due to lack of staff, we have adopted a strategy of endeavouring to identify suitable Papua New Guineans who have entrepreneurial potential to be sent abroad for

training in particular fields so that they may return and start their own industry. Quite a number have already been abroad to obtain training and we expect them to set up their chosen industries soon. We have naturally given preference to those potential entrepreneurs who will be setting up industries in semi-urban or rural areas.

The establishment of a para-statal organisation to implement small industry projects has been considered. It is likely that such a proposal should have the support of the Development Bank and the Investment Corporation both of whom are also greatly interested with small industry promotion. The Development Bank has already gone into one or two small scale industry projects in joint venture with Papua New Guineans by taking shares in the equity capital of the undertaking and not merely by the grant of a loan. However in the present context of Papua New Guinea I feel however that the Development Bank would play a much more dynamic role in establishing small scale industry with the objective of later giving it off to some private entrepreneur at a later date. The Development Bank is in a far better position to do this than ourselves as they have much greater flexibility in operations. The primary role of a para-statal organisation such as I have mentioned above will be the implementation of small scale industry projects. The work of promotion of small scale industry should however remain with the Office of Business Development. When the technical feasibility and economic viability of a particular project is established by this parastatal agency it will endeavour to give it off to a suitable entrepreneur. A candidate entrepreneur will be selected initially as a trainee manager of the project and if he proves himself the project will be transferred to him when its viability is established. The Development Bank or a commercial bank will provide finance.

It is also our intention to set up industrial common facility centres in urban and semi-urban areas from where work would be sub-contracted to individual, group and vocational schools in rural areas. In fact we are already doing this in the case of certain projects. These centres we hope will be growth centres of the future.

There is no question therefore in our minds whatever that despite the many obstacles that presently exist in the way of rapid rural industrialisation in the context of Papua New Guinea, rural industrialisation has an important and vital role to play in any scheme of integrated rural development. Most of the projects we are presently implementing as mentioned earlier will be based on local resources and involve the closest co-ordination with other government

departments and also the active participation of rural people with linkages both backwards and forwards.

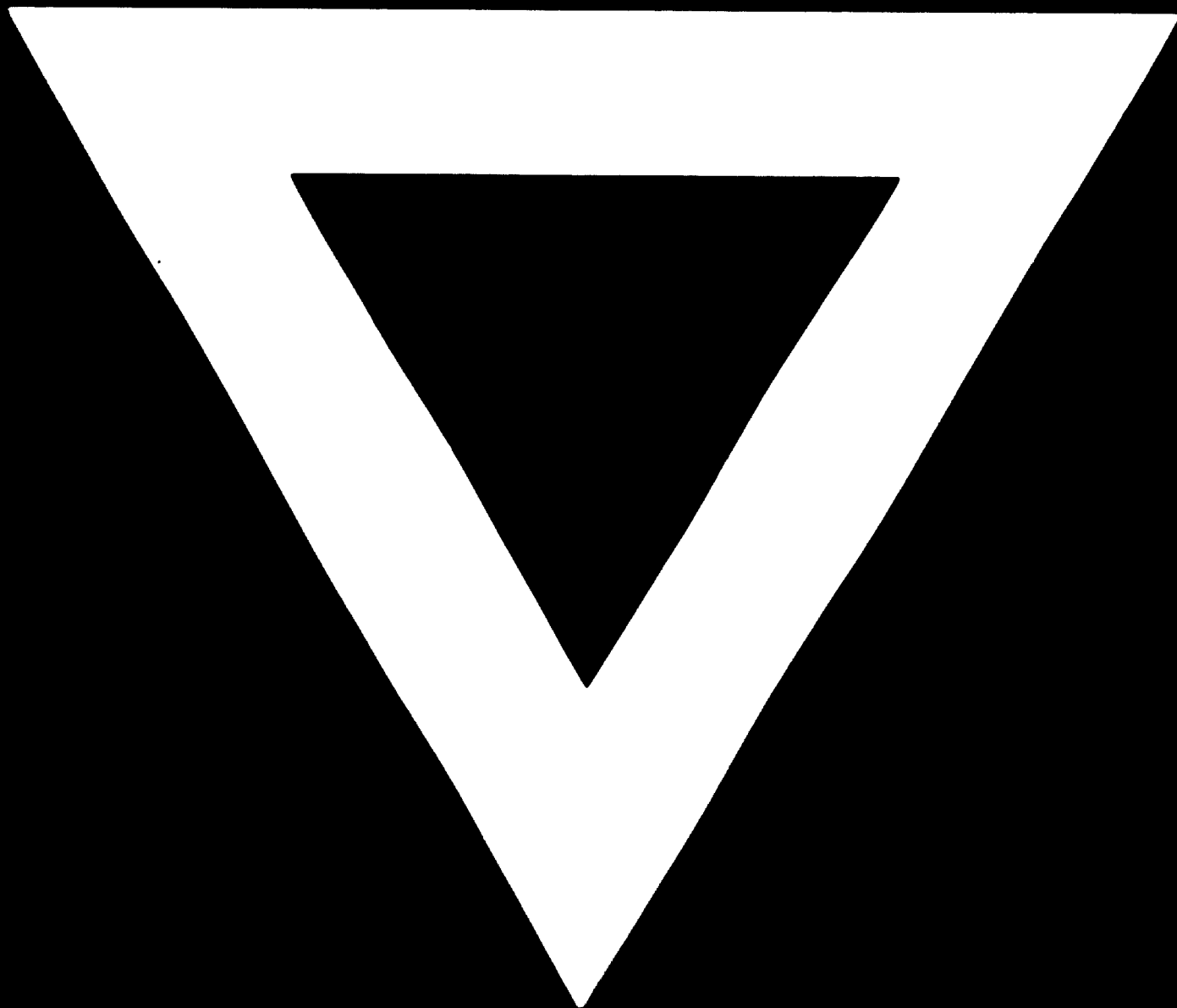
It is also our objective to promote the tertiary sector in village areas. The technical trained youths who are returning to the village could earn a living as servicemen and owners of small workshops etc. which will be necessary to service the growing needs of agriculture, industry and transport in rural areas consequent to the diversion of greater government resources in these areas in terms of its National Development strategy.

However, one of the central tenets of the philosophy of integrated rural development is participation by rural people in identification, evaluation and implementing of projects. In the present socio economic context of PNG for some time more I cannot honestly see any real entrepreneurial initiative emanating from rural folks as far as rural industrialisation is concerned. Even though it is true that in other developing countries where there has been a large and flourishing handicraft industry it has been the breeding ground for indigenous entrepreneurs the same cannot be said of Papua New Guinea despite the large numbers presently involved in the artifact industry. However, with the devolution of powers to provincial government there will no doubt be greater opportunities for mass participation in the process of rural industrialisation. Increasing education opportunities for young people will also widen their horizons and it is also more likely that provincial and village development corporations will take over the function of implementing rural projects including small industry projects in the not too distant future. We are confident that our strategy of attempting to play a catalytical role will ultimately be successful in actively promoting rural industrialisation though we shall have to predict many setbacks.

We are of course conscious of the fact that industrialization must inevitably lead to changes in ways of life in the village and some disruption of the existing socio economic fabric much more than any other. This is inescapable. The people of Papua New Guinea are very sensitive to the need to preserve their own cultural and social values and what they call the Melanesian way of life. Already they are greatly disturbed that modernisation of society is eroding these traditional values. Great care therefore will be necessary when we promote industrialisation to ensure that the damage to existing social and cultural values which are so dear to the people are minimal. This is of course easier said than done. Equally the rural man must learn to understand clearly the disciplines and the work ethic of industry without which, as we all know, any scheme of rural industrialization must fail.



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