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Subcontracting Systems in Bangladesh

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Subcontracting Systems in Bangladesh

I. CURRENT PRACTICES OF SUBCONTRACTING IN BANGLADESH

1. INTRODUCTION

1.1. Background of consultancy. Bangladesh, with its large and rapidly-growing population and sharply limited land area, faces a severe problem of providing productive employment for its people. The USAID Mission to Bangladesh has long been concerned with this problem. Recent analyses suggest that the potential for significant increases in labor absorption in agriculture are limited. This has led many to consider the possibilities for expanding jobs in small enterprises, both in industry and in commerce.

While an approach to job-creation through small enterprise development has gained widespread acceptance in principle, in Bangladesh as in other countries of the world, the devising of policies or projects to support the growth of such enterprises has proven to be a difficult task. A number of approaches have been tried; it may be fair to say that the failures outnumber the successes. In fact some would say that the successes are only relative, and are few in number.

In this situation, subcontracting systems offer interesting possibilities as a means of channeling assistance to small producers, and also as a way of drawing small producers into creative relationships with other firms. This consultancy was designed to explore the extent to which this might be true in Bangladesh. Its terms of reference were in three parts. The first involved field work to determine the nature of subcontracting among small producers in Bangladesh, the characteristics of the participants and of the relationships involved. Section I of this paper reports on the findings of that portion of the work. The second and third questions related respectively to policies which impinge on subcontracting relationships, and projects which might be developed to support their growth. Those two issues are discussed in the second and third sections of this paper.

It is important to note that the government of Bangladesh has expressed considerable interest in subcontracting systems and linkage relationships between large and small producers. The government has appointed a high-level committee to explore ways of developing the use of subcontracting in various areas of the economy. This committee has met only rarely since its formation in 1983, and most of its members have since changed assignment, so it has not yet had any significant impact on the policy of the country. The fact that it was appointed, however, reflects an unusual interest in this area among third world country governments, and a good opportunity to direct its activities in new directions.

1.2. Approach used. On arrival in Bangladesh, the first task was to undertake a preliminary review of the extent of subcontracting in the country, as well as its industry concentration. Discussions with a number

of informed people, both inside the Bangladesh government and outside, suggested that subcontracting activities are particularly important in three industries: metal products and engineering; garments; and leather shoes. Consequently, interviews were concentrated primarily in these three industrial groups. A limited number of interviews were also undertaken with a view to exploring subcontracting systems involving people working in village households.

For each of these categories, then, the approach used was to seek out and interview a diverse assortment of enterprises: manufacturers of different types and sizes, merchants involved in wholesaling and retailing, and other knowledgeable individuals. During the course of six weeks of field work, entrepreneurs in approximately 125 enterprises were interviewed. Most of these were in Dhaka and the immediate surroundings (including Joydebpur and Narayanganj, Tongi and Mirpur), but visits were also made to Comilla and Chittagong, to Mymensing and Tangail.

1.3. Definitions. There has been a lively discussion in Bangladesh concerning appropriate definitions of subcontracting. For the purposes of this consultancy, a broad definition was used, based on two features: production on order, based on a longer-term, repeating relationship. This definition might be contrasted with other, more narrow conceptions of subcontracting. One of these requires that the parent firm supply the working capital, either in the form of raw materials or of money to buy these. While this is a frequent characteristic of many subcontracting systems, it is not always so; there seems to be no good reason to restrict our definition to situations where this is the case. Others choose to limit the concept to situations where the firm giving the order is a manufacturer, rather than a merchant. Some have also required that the supplier produce a part which is incorporated in identifiable form in the finished product (as when a bicycle manufacturer subcontracts the production of spokes or rims). Again, this is a frequent characteristic of subcontracting systems in Bangladesh, but there seems to be no reason to limit the definition to situations of this type.

Two further things may be noted about our definition. The first is the emphasis on production on order. No restrictions are placed on the nature of the enterprise giving the order. Among other things, this means that the prefix, the sub- in the word subcontracting, is really redundant. A more accurate description of what is under study would be contracting rather than subcontracting. We follow the standard terminology here not because it is more accurate, but because it is more commonly used. The second part of the definition--requiring that the relationship be of a longer-term, repetitive nature--is designed to exclude situations involving one-time orders (e.g. to have a replacement part made by a machine shop).

1.4. Acknowledgements. I would like to express my thanks and appreciation to Dr. Jan van der Veen, Senior Economist at the USAID Mission to Bangladesh, for arranging this consultancy, thereby giving me an

opportunity to learn more about a topic which interests me. His interest and enthusiasm added greatly to the enjoyment of the undertaking. Secondly, I would like to thank Mr. Nizam Uddin Ahmed, also of USAID/Dhaka, for sharing his insights concerning all aspects of the Bangladesh society. He was an excellent counterpart, translator, and travelling companion. Thanks also go to Mr. Anwarul Azim Syed of MIDAS, who accompanied us on many of our interviews. Without their help, I could never have begun my work.

2. METALS

In examining subcontracting systems in metals and engineering enterprises, it is helpful to distinguish between public sector firms, on the one hand, and private sector enterprises, on the other. This separation in turn leads to three major categories of subcontracting links:

2.1. Contracts between one public sector firm and another. A moderate amount of subcontracting takes place between large public sector producers. Examples include castings done by the Bangladesh Metal Tools Factory for Bangladesh Diesel and for Chittagong Steel Mills; the making of dies by Metalex and Mehar for Atlas Bangladesh; and several others. Perhaps the primary characteristic of these relationships is that they are treated by the participants as being "in the family." Among other things, this means that price negotiations are rather relaxed. In some cases, production takes place first, with the price negotiations only being finalized at a later date. From the point of view of contracting procedures, this is a very easy type of relationship to establish and use. It also puts private producers at a severe disadvantage, however, since they could not operate on such a basis.

2.2. A second category of transactions arises from contracts between public sector producers and private sector firms. These are relatively rare, for reasons which should become clear from the discussion below. In some cases, private producers place orders with public sector suppliers. An example would be the purchase of battans (used in light fixtures) by Philips, from Atlas. We were told that Atlas is the only firm in the country capable of making these items. Atlas is now more than two years behind their contracted delivery schedule; they make the products when it is convenient for them, which is only occasionally. Philips can tolerate this only because this is a very minor item for them; they sell what they can produce, given that constraint on their input supplies. For a major product line, it would be an impossible situation.

The converse type of transaction takes place where private sector producers enter into contractual arrangements to sell to public sector buyers. This happens to a limited extent, e.g. when public sector jute and textile mills contract for the regular purchase of spare parts from private sector suppliers. In making such purchases, public sector firms are required to use a tendering process; the procedures for this are

cumbersome, complex, and subject to all kinds of manipulations. Even after winning the contract and delivery of the product, the supplier is often faced with problems of delayed payment. It is not impossible for a private firm to overcome (or learn to live with) these problems, but they certainly do cause difficulties; many private firms have chosen to stay away from such activities entirely.

2.3. The third major category involves contracts between two private sector firms. In most cases, the supplier here is a small or medium-sized enterprise; the buyer may be large, or may be another small firm. Examples of small firms doing subcontracting work for large private producers include the making (rolling and welding) of pipes for major tubewell manufacturers; the manufacture of wooden cases and metal stands for Singer Sewing Machines; the making of parts for local manufacturers/assemblers of centrifugal pumps, and for one local assembler of diesel engines (more potential than actual right now, but already under way on a limited scale); and the manufacture of power looms for large private weaving mills. The final combination, based on contracts between two small private producers, is the most diverse and probably the most widespread of all. Some examples uncovered in the course of the interviews include the following.

a) The making in a small (8' x 8') machine shop of dies, to be used in the manufacture of plastic knobs, in turn sold to a radio assembler.

b) The making of drawer handles in a small workshop which receives orders from a wholesaler; places orders for casting with a neighboring foundry; does the machining "in-house," then sends the parts to another neighbor for electroplating, finally buffing them himself before turning them over to the wholesaler.

c) The "dis-aggregated" manufacture of hand pumps for the rural health program (the ultimate source of the orders): one firm does the casting and machining, sending the parts to another firm nearby for boring, contracting with a third firm to supply more finely machined parts.

d) The making of ball presses and lathes by small workshops, who contract with neighbors for heavy casting, planeing, the cutting of gear teeth, and other fine machining.

e) The manufacture of sanitary ware (pipe fittings, faucets, gas valves), with the electroplating done on a subcontract basis.

f) The manufacture of bicycle parts for local assemblers, with a number of different firms producing each of several different parts.

g) The cooperation of two firms (one to do the casting, the other the milling), in making standard replacement parts (gears) for textile machinery.

It is difficult to judge the prevalence of these types of activities. A walk through market areas and discussion at random (in a non-statistical sense!) with assorted producers suggests great diversity of product types, and widespread dispersion, with extensive reliance on subcontracting.

It seems appropriate to hold up the Mirpur Agricultural Workshop and Training School (MAWTS) as a particularly instructive model, illustrating both strengths and problems in the development of subcontracting systems in the metals industry. Based on the well-equipped facilities of its 3-year vocational training school, MAWTS receives inquiries for work it might do on a commercial basis from a wide variety of private as well as public sector buyers. Mr. Ikramulla, the MAWTS director, makes a conscious effort to channel many of these orders on to smaller private workshops, either as a whole or for some parts. In a new project soon to get under way, he will help establish 15 new workshops, owned by some of his earlier graduates who have now had enough experience to start out on their own as entrepreneurs.

This is an interesting experiment which has many of the ingredients of a well-focused activity aimed at the development of subcontracting systems: a channel for orders, linking small specialized workshops with more dynamic markets, with a strong technical assistance component; that technical assistance is carefully targeted to enable the suppliers to complete particular tasks for which there is a demand in the market. If this experiment is to serve as a model for a broader development of subcontracting systems, however, one missing ingredient still needs to be added; this concerns financial and management independence in the supplier firms. Some of the supplier workshops are reportedly currently losing money. They have shown little initiative in seeking out cheaper sources of raw materials, in bargaining for better terms on the products they supply to MAWTS, or in exploring other products which they might profitably produce and sell to others. To a large extent, they seem to view themselves as appendages of MAWTS. Their failure to develop any independent initiative and their "parent's" toleration of their apparent failure to cover their costs suggest that, to date, this is a correct perception; in fact, they are appendages of MAWTS. This is clearly not true for all MAWTS suppliers; some had been in business for many years before they started dealing with MAWTS, are supplying many products to many buyers, and doing quite well. It is most clearly true for those workshops which were specially set up with an eye to supplying orders channeled to them by MAWTS. If these are to be seen as providing a pattern for the establishment of future workshops, it will be important to ensure that they move more quickly towards financial and managerial independence. If this missing ingredient could be added, then this would be an important case where an outside institution--in this case, a PVO, although the task might also be accomplished by a government agency or a private business firm--has been instrumental in making possible the establishment and growth of rural small enterprises, using a system of subcontracting to link dispersed small producers to dynamic markets.

3 GARMENTS

3.1. Introduction. The production of clothing in a nation of 100 million people involves an immense and multifaceted set of activities. Among the major segments of this market are the following.

a) Lungis and sarees: single pieces of cloth worn as garments by the vast majority of adult Bangladeshis, these are mostly woven on hand looms, although there is also some power loom and factory production.

b) "Western" outer garments: blouses, shirts, trousers, sweaters, children's clothing. A significant share, particularly of adults' clothing, is imported as used clothing. Of the rest, while there is a significant amount of tailor-made clothing, a substantial portion comes from local small and medium-sized factories and workshops, mostly in and around Dhaka and Chittagong.

c) "Hosiery:" a broad term which includes underclothes and other knitwear as well as socks. Virtually all is locally made, much of it in a complex set of small enterprises in Narayanganj.

d) Finally, there is the much-noted production of garments for export.

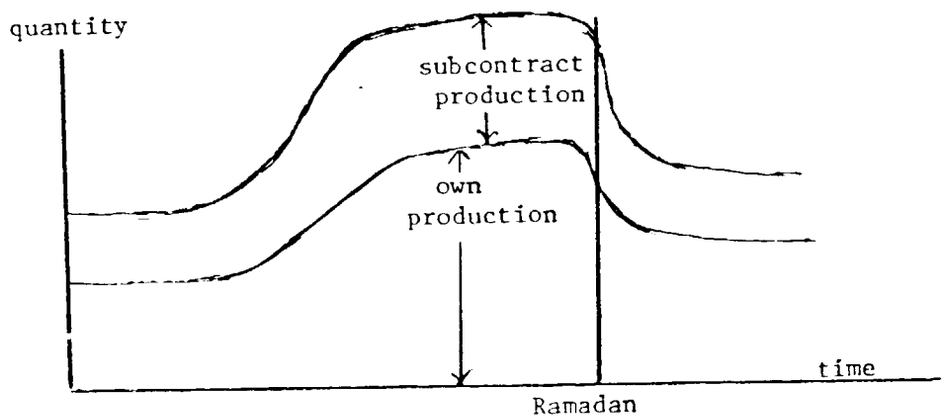
Our discussion of subcontracting is limited to the second, third, and fourth of these categories. While there may be some subcontracting in cloth production (particularly handlooms), we have not explored that area, partly because it has been more extensively studied by others. We discuss the other three categories in turn.

3.2. Western outer garments for the local market. While less widely recognized than export production, this activity has also grown rapidly over the past 5-10 years. A number of people reported that the tailors' hold on this market is declining rather rapidly, at the same time that the share of non-traditional clothing in the market (specially for men and children) is rising. Relative to the tailors, ready-made clothes are reported to be more fashionable (reflecting latest trends), are of better quality, and are sold at lower cost.

Subcontracting is fairly extensive among local garment factories. It arises since much of the production is on order, either from merchants (often retailers) or from other factories. The latter pattern is exemplified by Pearsons Garments, the largest and most widely known supplier of garments to the local market. Pearsons has its own factory, with about 200 workers (all men!); it also buys clothing on an order basis from 10 other producers. With this flow of products, the company supplies some 200 buyers (wholesalers as well as retailers) from all corners of the country. In dealing with suppliers, Pearsons provides models as well as technical supervision in each supplier factory. Quality control is also exercised through Pearsons' provision of all cloth and accessories. The supplier firms generally purchase their own sewing machines and work

places, although Pearsons also sometimes provides the machines, particularly the more complex ones (e.g. overlock machines).

Pearsons started on garment production four years ago, relying at first only on its own factory. Demand quickly grew beyond its own production capacity, which led them to the subcontracting system. The company currently has subcontract work done in two contexts. First, there are some activities which Pearsons does not undertake at all, but rather handles only on a subcontracting basis. An example is embroidery, generally done as hand-work by groups of women working in households or small workshops. Women skilled in this work are readily available in a household setting, but are less easily organized to work in urban factories, so subcontracting systems have developed naturally. Beyond this, subcontract production of whole garments is done to the extent that demand exceeds "inside" production capacity. Demand for ready-made garments is rather highly seasonal, peaking in the months leading up to Ramadan; an indicative graph might look as follows:



Thus, there is some subcontracting of complete garments on a year-around basis, but in the period before Ramadan this is much more extensive. It is hard to know how much credance to give to the off-handed estimates of Pearsons' manager. Taken at face value, his figures would suggest the following (on an index basis, taking total sales in the off-season as = 100):

	off-season	pre-feast season
own production	80	100
subcontract purchases	20	150
total sales	100	250

They are currently exploring the possibility of exporting these garments; if that succeeds, it would be in addition to (not in place of) their local sales; the latter are far too profitable for them to consider giving them up.

While this is the most extensive and well-developed subcontracting system in this category, it is not the only one. A number of ready-made retail shops regularly place orders with small garment factories, who in turn receive orders from a number of different retailers (i.e. there are multiple retailers giving orders to each factory, and multiple factories supplying each retailer). This "multilateralism on each side" reduces the risk of dependence or exploitation in either direction; it also permits some product specialization by the producers, while making possible a variety of choice for consumers. In a few cases, a single entrepreneur owns and operates a retail outlet as well as a factory. In such cases once again the retail outlet buys from several other factories as well, while the factory output is also sold through several other retail outlets. Again, this makes possible specialization in production as well as diversity in sales, while enabling the entrepreneur to make informed decisions about production based on a detailed understanding of both market conditions and the capabilities of his own work force. The producers often are quite style-conscious, searching out catalogs, magazines, even watching movies from around the world to look for new styles. This diversity and dynamic product development was frequently commented on as a major reason why ready-made garments are displacing tailors, with their more conservative and traditional styling.

In addition to the orders placed with producers by retailers, there seems to be a regular network of contract production between manufacturers, similar to that operated by Pearsons. If one factory receives an order beyond its own production capacity, with a time constraint which it cannot meet, it accepts the order, then passes it along on a subcontract basis to another factory which has slack capacity at that time. This system has the clear advantage of keeping "the system" operating closer to full capacity; it also has a clear limitation, since the overall demand increase leading up to Ramadan means that all firms are facing the most serious capacity constraint at the same time; "passing orders around" would be of little help during this period.

The Khalifa Potti area of Chittagong represents another dimension of the local ready-made garment market. Concentrated in one section of the city are perhaps 300 workshops, employing an average of about ten workers each. These firms provide low-cost, low quality clothes, particularly for children. Their sales channels are through hawkers and small market shops; merchants generally come to the producers to buy from accumulated inventories (production is generally not on order). Subcontracting in this area is limited to some particular production steps (e.g. embroidery), sometimes done by neighboring workshops with specialized machines or special skills. In such cases, the enterprise giving the order supplies the partially completed garment, paying on a piece-work basis for the work done. In our tour of the area, it seemed that all workers and entrepreneurs are males.

These producers complained that their marketing system left them at the mercy of the merchants. Following a long Bangladesh tradition, they

petitioned the government (so far, unsuccessfully) to provide them with better and more central work places, to enable them to combine production with their own retailing outlets. A more critical problem may be, however, that--rightly or wrongly--their products are perceived by consumers as being of inferior quality. Although their prices are 30-40% below those of (small) ready-made garment factories, it is in the somewhat higher quality end that demand is expanding most rapidly. This suggests a somewhat different marketing strategy for them, seeking to be more like the small garment factories. This implies more attention to quality, to fashion trends, and to packaging of the product (currently they are sold "in bulk" rather than individually wrapped). In both the small factories and in these small workshops, after all, the work force is approximately the same (8-12 people in the workshops, 10-20 in the small factories); both use many of the same simple machines, and require similar skills. The production-on-order, subcontracting-based linkage between retailers and small garment factories may provide a model for upgrading and transforming at least some of these small workshops.

One may ask why such a development has not taken place through normal market forces, as merchants notice the potential profits to be derived from such a change and move to exploit this opportunity. The question is a general one: if it is suggested that a particular undertaking would be privately profitable, why has no one already done it? The question presupposes a level of responsiveness to potential profit-making opportunities which is more characteristic of economic textbooks than of most countries of the third world. It is true that the general picture which we have drawn of small producers in Bangladesh is one of considerable initiative, flexibility and responsiveness to new business opportunities; that clearly does not mean, however, that the system is working perfectly, that there are no opportunities for further improvement, for example, by bringing situations such as this one to the attention of merchants or businessmen who might respond by establishing new marketing links.

The issue is not only one of limited information, however. The potential benefits from such a change are substantially greater than those which could be captured by a merchant undertaking such a change; they include the improved income-earning opportunities for the supplier enterprises and their work force, including the dynamic dimension of higher potential growth rates. Of course in a perfect market the merchant would be able to share in these gains sufficiently to make it worth his while (else one might ask whether the undertaking is beneficial to the group--producers and merchant taken together). One cannot simply assume, however, that the market will work sufficiently well to ensure this result. In sum, our preliminary look at this group of producers suggests an opportunity to introduce changes in the production/distribution system which will be beneficial to all but particularly to the small enterprises. The issue of how best to effect such changes is discussed at a later point in this paper.

3.3. Hosiery. Hosiery producers have long been concentrated in the thriving city of Narayanganj, 15 km. south of Dhaka. Today their products are found in every city and town of Bangladesh. They make products as simple as undershirts and socks, and as complex as stylish knitted shirts and dresses.

There are several steps in the production process, with the number varying from product to product. Starting from the yarn, which is generally purchased in the market, the first step is usually knitting into cloth; this may be followed by washing, calendering (starching, pressing and folding), and/or dyeing of cloth. The cloth is then cut and stitched or sewn into garments. Some garments are embroidered, others are printed with designs or patterns.

Each of these steps may be done either inside the parent firm or on a subcontracting basis. We have interviewed firms where only the cutting and sewing was done by the "system organizer" (i.e. the parent firm), with five other steps (knitting, washing, calendering, dyeing, printing) each done by a separate group of supplier firms (for each step, 4-5 different suppliers were used). In another "system," only dyeing was done on a subcontracting basis; this entrepreneur had invested in several knitting machines which permitted him, in addition to meeting his own needs, to do knitting for 8-9 other producers as a supplier of subcontracted services. We also spoke to a man whose only work was to run 7 knitting machines, all on a subcontract basis, for 6 producers, who supply him with yarn and specify the quality, size, and style of cloth they want. His knitting machines run 21 hours per day (the government forbids them to operate from 6-9 PM, presumably because of limited electricity production capacity). He claimed that there are as many as 1,000 "contract knitters" like him in Narayanganj, each with anywhere from 2 to 60 knitting machines, producing cloth on order for others who supply the yarn and the product specification. The same is clearly true of dyers, enterprises specializing in calendering, and each of the other steps in this multi-stage production process. These specialized producers supply their services to parent firms who "organize the system," combining a varying number of activities done "in house" with other steps which are done on a subcontracting basis.

3.4. Exported Garments. Much has been written about the explosive growth of garment manufacturers producing for export. While statistics here seem to lag perpetually behind the expanding activities of the sector, one can assert that there are at least 150 firms producing in this area, employing at least 50,000 workers; the rapid expansion has lead to a widespread shortage of trained workers, in spite of training programs in virtually every establishment, with the result that several firms reported shortages of qualified workers as the key constraint holding back their rate of expansion. Working hours are long (10-12 hours per day, with everything over 8 hours being paid double time). Resulting salaries (including overtime) start at about Tk 1,200/month for trained workers, and can fairly quickly reach Tk 2,500-3,000/month (again, including overtime), for more experienced production workers. (Tk 26.5 = U S $ 1.00 at the time

of the study.) The male-female mix varies from factory to factory, but may be 50-50% overall.

Subcontracting is relevant to this sector in two ways. First and foremost, the activity itself is a pure example of international subcontracting. All production takes place on order, based on imported raw materials (cloth and accessories), designs, sizes, packing instructions, etc. While ownership, management, and technical supervision is in most cases now entirely Bangladeshi, a driving force behind the activity is the foreign buyer, who plays a key role in product design and marketing. While there is some continuing flux, most producers settle down with 3-5 buyers, while most buyers obtain products from several suppliers, so neither becomes excessively dependent on any one channel. Under the system of "back-to-back letters of credit," the manufacturer uses his order for final product to obtain credit from banks to buy raw materials. Working capital, then, comes from financial institutions to suppliers, with the loan backed by the credit of the buyer.

Subcontracting appears in a different way here as well. Some of the larger manufacturers receive more orders than they themselves can fill. They then contract with other manufacturers to undertake some of this production on their behalf. This enables the smaller or newer firms to get started in this type of activity before they have developed sufficient buyer contacts to keep their facilities fully occupied, and before they have developed the financial recognition required from the banks; it seems that even with firm orders, small or new producers do not find it easy to obtain the required letters of credit for importing inputs.

3.5. Possible backwards linkages? Considerable thought has been given, both by producers and policy-makers, to the development of possible backward linkages, involving the use of local cloth and/or accessories in garment manufacture. At the present time, all inputs for export garments and virtually all for those sold in the local market are imported. A number of producers--particularly those selling domestically--have said that they are actively exploring local input supplies. They have looked at cloth from local factories as well as from handloom production, cotton as well as silk. They say that the best quality is at least equal to that of imports, and the price is fully competitive. The most frequently heard problems arise with regard to i) the maintenance of consistently high quality, and ii) consumer acceptance. Many producers are optimistic that these problems are close to solution. When this happens, new opportunities will arise for expanded domestic production of cloth. In particular, there may be opportunities for contract production of handloom cloth for use in garment manufacturing. A problem here may be handloom's concentration on 100% cotton products (and to a small extent, silk), while most garment consumers prefer mixed cotton and polyester fibers; for some products, though, handloom products should be suitable and acceptable.

A different range of backward linkages concerns accessories. Some (low quality) buttons are reportedly made locally, and a new project to

produce higher quality products is under consideration by MIDAS. Some cardboard boxes are currently supplied locally, as are some plastic bags. The market is big enough--and growing rapidly enough--that one might hope for further growth of these ancillary industries.

While it is not central to the question of subcontracting, it may be useful to point out that changing tastes in clothing consumption may have important ramifications with regard to patterns of income earnings in the country. If garments are made using imported cloth, then the net expansion of employment in garment making may be substantially smaller than the gross expansion, and may even be negative, since the demand for the products of weavers could be expected to decline. In such a situation, a shift from lungis to ready-made trousers, for example, would mean a shift from handloom weavers (generally rural, mostly male, often owner-operated) to small garment factories (generally urban, mixed male and female, with a heavier preponderance of wage labor). In thinking about an expansion of the domestically-oriented garment industry, whether based on subcontracting or not, one would need to recognize these shifts, perhaps looking for ways of linking the displaced workers to the newly expanding activities. Since this is a general problem of development not tied specifically to subcontracting systems, these issues are not explored further here.

3.6. Garments: General Observations. In the metals industries, a key force leading to subcontracting arrangements concerned the benefits of specialization, and the concentration of both investment and skills which was possible when different firms concentrated on different activities out of the total production process. A corollary of this was the fuller use of productive capacity in particular functions.

In the case of garment production, the same reasoning holds true for the hosiery industry. Individual firms specialize in particular functions, increasing the level of skills in a limited range of activities. A firm supplying a particular service (e.g. knitting cloth) can keep its machines and work force fully occupied by accepting orders from a variety of buyers. For a number of activities handled on a subcontracting basis (e.g. calendering, dyeing), the required level of skills and of fixed investment is minimal, so this argument is not a particularly strong one. The key explanation for the development of subcontracting arrangements in these activities may arise from the entrepreneur's perception that he can earn a higher return by concentrating his limited management time and skills on the difficult task of coordination between functions, directly managing only a few production activities himself, rather than taking on the full management of all steps of the production process. In an economy where work space is at a premium and is not easily marketable, shifting the responsibility for finding work space to supplier firms (who may already have access to this--"excess capacity in work space") may be an important consideration as well.

In the case of other ready-made garments, the origins of subcontracting systems are quite different. For export garments, the

genesis for subcontracting per se is clearly the low labor costs, made fruitful by local production management skills, combined with product development, design, and marketing provided by the foreign agents and companies who "manage the system." The passing on of orders from one local producer to another is based solely on the desire to fill orders beyond the (current but expanding) capacity of the local manufacturing "parent" firm.

In the case of (non-hosiery) garments for the domestic market, Pearsons' pattern of operation clearly does not rest on specialization by function within the production process (they as well as their suppliers do all steps of production); rather it is based on their decision to specialize in the functions that go along with manufacturing: in particular, in product design and development, and marketing. By focusing their entrepreneurial activities in these functions (while "keeping their hand in" by doing some manufacturing themselves), they are also in an important sense specializing, although this involves functions which reach beyond manufacturing. Their success suggests that this type of specialization may be just as important as specialization within the production process, narrowly defined.

There is another important impetus for subcontracting, for domestic garments as well as for exports, which arises when the level of demand exceeds current production capacity. In such cases, firms supply orders from their own production first, only passing on orders to others if these exceed their own capacity. This means that "second hand orders" (those passed on by other domestic manufacturers) are more variable than is the total of orders received from abroad, or the total demand for garments in the domestic market. To avoid that instability, producers generally work hard to try to establish their own contacts with buyers or their agents, only taking orders from other manufacturers to the extent that their productive capacity exceeds the orders they can obtain directly.

Underlying all of these is a continuing question of capital. The varying extent to which different firms face a capital constraint, and the ways in which they choose to allocate the capital they have between fixed and working capital, is a key determinant of the position of different firms in relation to subcontracting alternatives. Firms which do everything themselves--i.e. do not use subcontracting at all--must provide all fixed as well as all working capital. Parent firms which do make use of subcontracting require substantially less fixed capital (their suppliers are generally responsible for the work place and the machinery and equipment). In the garment industries, parent firms which make use of subcontracting generally continue to supply the working capital, since this is an important aspect of quality control for them. The parent firms' savings on fixed capital arising from a reliance on subcontracting are more important for some activities (e.g. knitting) than for others (e.g. washing, dyeing), although even in the latter cases the work space needs are surely not negligible. Supplier firms use their limited capital in the opposite way: they provide the fixed capital themselves, but rely on the

buyers of their services for the raw materials (i.e. for the working capital).

Discussion with many garment firms engaged in subcontracting either as parents or as suppliers might lead one to think that it is primarily the shortage of capital which has "forced" them to adopt this system; that if they had more capital, they would cease to use it, producing everything themselves. Yet this argument is not entirely convincing. Pearsons Garments--the largest supplier of the domestic market, in a very strong capital position--still chooses to rely on outside suppliers for some 30% of its sales over the year, while some of the larger and more dynamic Narayanganj parent producers have chosen to expand their system using existing subcontracting arrangements--i.e. to use any additional funds they find as working capital, rather than undertaking the fixed investments which would be required if they were to produce everything in-house. Conversely, contract knitters in Narayanganj speak of a wish to buy yarn themselves, selling knitted cloth in the open market; yet the continuing expansion of the industry based on a continuing use of subcontracting suggests that, when they do have more money available, they find it more profitable to buy another machine--to invest in additional fixed capital, and continue to rely on parent firms to provide the working capital. All this suggests that the resulting specialization may continue to be the most profitable outcome for both, and that increasing availability of capital may not significantly reduce the extent of subcontract production.

4. LEATHER SHOES

In discussion of subcontracting in the leather shoe industry, one must start by separting Bata and its suppliers from the rest of the domestic shoe industry.

4.1. Bata. Originally a Czech company, with world-wide headquarters currently in Canada, Bata has had a factory in Bangladesh since 1962. Bata officials estimate their share of the domestic market for leather shoes to be about 16% (1983). Their new production facility, to be fully operational by the end of 1986, should make possible a sharp increase in that market share. About half of their sales are through their own retail outlets, with the rest going through associated stores, which sell Bata products as well as those of other producers; these are supplied by Bata through a network of wholesale depots.

Bata currently obtains somewhat over 20% of their total footwear products through subcontract purchases from outside suppliers. They use this channel for more specialized products with limited markets which would not justify the establishment of regular factory production runs. This situation is not likely to change even when their new plant is fully operational; in the future, they expect to continue to buy approximately the same number of shoes from subcontract suppliers (about 500,000 pairs per year, in 1982 and 1983).

They currently buy from 28 suppliers, in and around Dhaka. They operate on the basis of written contracts (the only such we found in all our interviews here); these specify quality, product types, delivery and payment terms. Within that framework, quantities are specified from time to time, for specific shipments. With minor exceptions, the supplier is responsible for all fixed and working capital; he must purchase the leather and other inputs on the open market, using qualities specified by Bata. Bata supplies the sample shoes to be copied, and a minimal amount of technical assistance to ensure that the products supplied are of the required quality. The company claims to use no brokers, dealing directly with the producers. The supplier is responsible for transporting the product to the Bata warehouse. Normal payment is by check, cashable seven days after delivery of the product.

Bata has a clear understanding that their suppliers will not sell the same products to other retailers (although they can produce other products for other buyers). This agreement is not easy to enforce; the approach used is to try to monitor the products being sold in competing retail stores. There is obviously a problem in deciding whether a product which is similar but not exactly the same has violated the agreement, as well as in determining whether it was a Bata supplier or another producer who made a close copy of a Bata product. The manager said he would like to take some of his imitators to court.

The Bata Managing Director says that, in general, he prefers not to undertake any such subcontracting; he sees it as training and encouraging potential competitors. He continues to do it in selected cases because it would be costly in the short-run to do otherwise; but in principle he looks for ways of minimizing this type of subcontracting. (The reasoning is precisely the same as that of the Managing Director of Milnars Pumps, who stopped the full subcontracting of pumps to Ispahani-Marshall when the latter was returned from public to private ownership. He felt no potential threat from a public sector supplier, who would most likely be uninterested in going into business in direct competition with him; but in private hands, the same capacity was viewed as a potential threat, so he adopted a different procedure of subcontracting to deal with it, namely, buying separate parts from a variety of different suppliers). On the other hand, the Bata manager himself raised the possibility of developing a system of subcontracting for particular stages of the production process. Examples he mentioned include the hand-stitching of tops of shoes; tooling of leather patterns on sandal tops; and machine stitching of canvas sneakers. He said he would be quite open to approaches from potential suppliers who might undertake such tasks. He is currently experimenting with similar subcontract production of innersoles. If the system works, it could be extended to other steps where mass production using mechanized assembly lines has no particular advantages.

There is a curious issue of taxes which arises here. The government currently imposes a manufacturers' excise tax of 10% + 2% on all factory shoe production. Shoes costing less than Tk 100 per pair are exempt, as

are all shoes manufactured in small or cottage industries. This means that the production of Bata's own factory is taxed while the shoes it purchases from its suppliers are not, nor are the shoes sold in competing retail stores (which are virtually all made by small producers). This differential tax clearly provides some incentive to rely more on subcontract production, as well as encouraging consumers to buy from other outlets. Since Bata's retail pricing structure aims to keep some balance between similar shoe types no matter what their source, the retail price of subcontracted shoes are pulled upwards by the tax, even though these products are not subject to the tax; this explains a part of the suppliers' frustration about what they see as Bata's unduly high mark-up on their products (see below).

One might argue that this differential tax incentive in favor of subcontract production is appropriate and desirable to offset other types of discrimination which work against such subcontract suppliers (e.g. in terms of input availability, access to foreign exchange, ability to compete for government orders, etc.). That might lead one to suggest that this tax incentive should be generalized to other industries. The primary requirement for this to be feasible would be one or a few firms large and vulnerable enough to be subject to a tax on their own output, from which subcontract suppliers could be exempted. The obvious candidate is ready-made clothing for the domestic market, exemplified by Pearsons Garments. On balance, I would argue that this would be a mistake. Rather than attempting to introduce new distortions to overcome the effects of existing ones, it would be preferable to work to eliminate the existing ones, seeking for parity in that way instead.

Turning from Bata itself to the perspective of their suppliers, these producers seem quite pleased about most aspects of their dealings with their "parent." Producers are particularly pleased to be paid regularly and without delay. Prices are considered fair, in the sense of covering costs and earning a satisfactory return, although they grumble about the substantial mark-up between their selling price to Bata and Bata's retail price for the same product (for example, Tk 240 goes to Tk 400 for one shoe type). The overheads of Bata's extensive retail network are obviously substantial. The producers' major complaint, however, is that there are not enough orders from Bata, and that these are seasonal, unpredictable, and unreliable. Of the three Bata suppliers we interviewed, two were completely idle at the time of our visit, while the third was operating at about half capacity. They could have produced for other buyers in the meantime, but shortage of working capital and credit patterns in that other market channel (see below) made that difficult or impossible for them. In short, from their perspective, it is a good system as far as it goes--but there is too little there to keep them fully occupied.

4.2. The non-Bata system. The channels just described currently supply less than 20% of the Bangladesh market for leather shoes. An additional tiny fragment is met from one- or two-person cobblers, making shoes on order for individual customers. The remainder--over 80% of the total--is

supplied by a vast network of individually owned, small retail stores, each of which buys either directly or through wholesalers from an equally vast network of non-mechanized factories and workshops, most of which are very small (5-10 workers) but a few of which may employ 100 or more workers.

In a few cases, the owner of the retail outlet also operates a small shoe factory; in such cases, as described previously for ready-made garments, he normally obtains only a small portion of his retail supply from his own factory, diversifying his stock by buying on a regular order basis from several other factories as well. Conversely, only a small share of the factory output is normally sold through his own retail outlet, with the rest (often 90% or more) going out through a number of other retail stores which place orders with his factory. This complex network permits specialization in production and diversity in sales, while permitting the manager to target his production activities based on a good knowledge of the skills of his own workers, production costs, and the market in which he sells.

Whether or not they are linked to production facilities, non-Bata retail outlets buy most of their stock from outsiders. In a few cases, this purchasing is done through wholesalers in Dhaka; more frequently, there is a regular contract between a retail store and 6-10 small factories, which produce on order for that and perhaps 8-10 other retail stores. Product design comes from both sides. A number of participants reported that over the last 10 years the market has grown rapidly in size and (particularly) in product quality.

This production and distribution system seems to work quite effectively and well--with one major exception. The standard pattern for sales from producers to retailers is on credit. In some cases, this is rolling credit: the producer is fully paid for order A when he delivers order B; he is fully paid for B when he delivers C; etc. This is a manageable system for the producers, particularly since, while they must pay cash for minor inputs, they can usually buy leather on the same rolling credit basis. In other cases, though, payment is more substantially delayed. Sometimes the producer is not paid until the product is sold to the final consumer. In even worse cases, credit cumulates, and may reach two lakh taka or more. Sometimes this is paid off during the Ramadan feast or at the end of the year; in other cases, it may carry over even beyond that. Several producers compained that the resulting working capital squeeze has forced them to close their doors from time to time, until their capital position improved enough so they could buy more raw materials.

Producers are deeply concerned about this credit situation. They view it as arising from a highly competitive market, both at the retail level and even more so at the production level. Several entrepreneurs argued that with excess capacity among producers, retailers have been able to get away with imposing quite unfavorable credit terms on their suppliers. Competition among retailers in turn has pressed them to take advantage of this opening. Suggested policy prescriptions might include discouraging

new producers from entering this industry, waiting for the domestic demand to grow, and searching for new markets (in particular, exports).

There are several facts which do not fit with this general picture. First, the price of shoes seems to have increased rather sharply over the past year or two. Second, most producers seem to feel that demand is growing rapidly. They say that if they can solve the working capital problem, they can get plenty of orders to keep them busy full time. (A sceptic might say: of course; there are always retailers ready to take shoes on consignment, and even more ready to take them if they never have to pay for them!) Perhaps the most puzzling aspect, though, is the continuing relatively high wages for workers in the industry. Employees in factories and workshops supplying Bata were reported to be earning Tk 3-5,000 per month (when they work). Among non-Bata suppliers, where work seems to be more regular through the year, wages are roughly comparable. One employer said he pays Tk 60-100 per day for skilled workers; in a second location, skilled workers themselves said they earn Tk 100-125 per day; in a third, a group of skilled workers said they receive an average of Tk 3,000 per month. All of these are for "normal" periods, with higher pay for overtime during periods of peak demand. These are among the highest wages we found in any of the industries in which we did interviews. The competitive structure of the shoe industry seems not have reached back to drive these wages down.

Even with all these qualifications, though, the entrepreneurs' perceptions may be valid; the basic situation in the industry is one of excess capacity, which shows in the system as pressure on producers to supply their products on credit. If this is the case, the pressures will clearly increase when Bata's new facilities come on stream.

It is tempting to think that one could help producers deal with this situation by providing them with more working capital. Indeed, such loans could be of considerable help to selected small producers, allowing them to maintain a steadier work pattern. Some care would be needed, though, to ensure that this credit did not simply pour into a bottomless pit of credit demanded of producers by retailers. If such loans were limited to producers who operate with rolling credit, fully paid up once a year, from their retail store buyers, this could be of considerable help to those producers. It is also true, however, that the real constraint on growth in production in this industry as a whole is the level of final demand for the product. Since a credit program of the type described would have little or no effect on that constraint, its only impact would be on who gets to produce for that given market, not the aggregate level of production or employment; as such, it would serve no useful purpose.

One might ask whether this same reasoning applies to all supply-side interventions in support of all small enterprises in Bangladesh. That might lead one to conclude (wrongly, I believe) that the only useful things to do are activities aimed at raising the level of demand for the output of small producers; anything else would affect only the allocation of a given

market among alternative sources of supply. Several counter-arguments may be advanced. (i) Efforts to help small producers become more efficient in their production can have the effect of raising incomes earned in that sector, which is clearly desirable in itself; they can also result in reductions in prices of products made by small suppliers, which in turn should result in increases in the total demand for such products. (ii) A shift in the allocation of a given total demand so more is supplied by small firms can result in factor usage which is more appropriate: greater use of labor, particularly unskilled labor, and lesser reliance on capital. Studies in other countries, which are consistent with the findings of the RISP studies in Bangladesh, make clear that small enterprises use more appropriate factor proportions along these lines. In general, then, supply-side interventions designed to encourage small enterprise growth through subcontracting can be justified where they lead either to more efficient production in small firms or to a shift in the locus of supply to meet a given demand to suppliers using factor proportions more appropriate to the country. Neither of these would appear to hold in supplying credit to selected small shoe suppliers, since in this case the net result would only be to shift the allocation of a given product flow among similar small enterprises.

5. HOUSEHOLD LINKAGES THROUGH SUBCONTRACTING

One of the goals of this consultancy was to explore the extent to which subcontracting systems reach back to households. This pattern has been widely observed in other countries of South and South-east Asia, and was presumed to exist in Bangladesh as well. Unfortunately, without a more comprehensive and systematic survey than we were able to do in the time available, one can only give impressions and examples of types of activities which are currently organized in this way in Bangladesh.

The examples include considerable amounts of hand-loom weaving, with the yarn advanced by merchants, who may also supply designs; a great variety of craft products, made on order from retail stores in Dhaka or elsewhere; production in homes of simple household products such as brooms and mats, where the production is done on order from local merchants; the making in households of sweets, on a regular order basis, for sale in retail outlets; and the making (rolling) in homes of "bidi" cigarettes, done in homes on order from a number of different large-scale companies which package and sell these cigarettes.

In some cases, private voluntary organizations have attempted to develop systems of production involving contract work in the home. An examination of two such attempts may help to clarify both the strengths and limitations of such an approach. One activity arose out of a training program for women; the primary goal was to teach about child care, health and nutrition. An income earning component was added, since it was clear that this program was working with very poor women who have great need for increased levels of income. The participants were placed in one of several

"streams," with different occupational focuses: knitting, sewing, basketry, the making of bags and boxes. The latter activity involved showing women how to take large pieces of cardboard, cut them to shape, spread glue on the relevant tabs, then form them into boxes. The PVO contacted a number of retail stores in town, obtaining substantial and regular orders for these boxes from three saree shops. At the conclusion of the training period, the women continued to make the boxes in their homes, based on these orders and arrangements.

The problems with this arrangement were two. First, the contract negotiated by the PVO officials on behalf of the ladies specified that the women would buy the cardboard themselves, on whatever terms they could get. The price of the box was negotiated by the PVO, and specified in the contract. The agreed price was based on a costing for cardboard and glue, plus an estimate of the time it would take one person to make one box; it implied a return of one taka per box (it was estimated that one person could make 3-5 boxes in three hours of work). Soon after the agreement was reached, however, the price of the cardboard increased. With no provision for review of the terms of the agreement, the pay per box remained where it was; returns dropped from one taka to half a taka per box. The point is that the terms of the agreement left all risk of changing input prices to fall on the shoulders of the women. Beyond this, no effort was made to look for faster or more efficient ways of making boxes. The organizers seemed to feel that speeding up the process would only mean fewer hours of work, or work for fewer women, which was to be avoided. The general attitude seemed to be that any work, no matter how poorly paid, is better than doing nothing; that there is only a limited amount of work to be done (a limited market for boxes, in this case), so no efforts should be devoted to looking for ways of speeding up the process, so returns per hour of work could be increased.

This example could be contrasted with another income-generating activity of another PVO, involving the production of dried, shredded coconut. Working with a group of landless village women, the PVO developed a simple technology for grating, then using solar driers to dry the grated coconut. Again, marketing links were developed with buyers in town: this time, to cookie and biscuit manufacturers. The latter had not used coconut in their products before. On being approached by the PVO, they agreed to do the required market tests, which proved to be quite positive; they offered to buy all that could be supplied. With the simple grinders and solar driers--whose total cost was less than $20, and could be bought with a loan from the PVO--the production process could be speeded up considerably; working about 5 hours a day, a woman could earn between Tk 500 and 1,200 per month, depending on her skills, how industrious she was, and whether she operated one or two solar driers.

Both of these examples involved contract production, linking women working in their own homes to the urban economy. Yet the results are dramatically different in terms of returns per hour of work. While there are a number of aspects to the differences, perhaps the primary factor was

the emphasis on earning satisfactory returns per hour as a key consideration in developing such an activity. This led in turn to a search for some simple and inexpensive technology which could speed up the process, and thereby raise returns dramatically. The second activity provides what all would consider--for rural Bangladesh--to be a good income. The first one could only be characterized as leading people into a low-income dead end. In both cases, production is based on orders from urban enterprises; without at least a minimum of technological upgrading, however, the result could only be regarded as unacceptable.

These two examples of subcontracting linked to household producers have both focused on the activities of PVO's. Clearly there are other such links which have been established on a commercial basis. The craft products made particularly in and around Comilla are examples here, as are common household products (mats, brooms) to be found in smaller cities and towns throughout Bangladesh. In such cases, the links are made by merchants, who see an opportunity to have a product produced in a low-cost way, using village labor and often local raw materials (bamboo, clay, wood). Discussion with officials in government agencies engaged in these types of marketing activities revealed a familiar passive bureaucratic approach. If further exploratory work is to be done in this area (and I think it would be useful area for examination), I would suggest starting with owners and managers of private retail outlets in Dhaka (both fully commercial ones and those with a service orientation), working through their supply channels back to the original producers and then back to alternative outlets. I regret that I did not have time to pursue this line of exploration during my consultancy.

6. SOME GENERALIZATIONS

6.1. Why do firms engage in subcontracting? Answers can be grouped into four major categories.

6.1.1. Shortage of capital? When asked why they engage in subcontracting, most firms will answer that this is primarily due to a shortage of capital. By sharing responsibility for providing fixed and working capital among several producers, subcontracting systems make it possible to mobilize dispersed pockets of capital which it would be difficult to put to productive use, in the absence of effective financial intermediaries to channel such funds from savers to investors. Where much industrial acitivity--small as well as large--takes place in closely-held family firms, there is limited opportunity for equity participation in growing sectors; such growth may be limited to that which can be financed from internally generated funds, money available from family or close friends, and credit from problematic financial insititutions. Subcontracting arrangements permit a number of different producers, each with access to particular sources of funding, to contribute a share of the capital needs of a complex production process by taking full responsibility for one or a limited number of stages out of that complete system.

One must put this argument in perspective, however. As discussed above, a continuing reliance on and even expansion of subcontracting systems suggests that, when producers do get more capital, rather than abandoning subcontracting in favor of fully integrated systems, they find it beneficial to use whatever funds they have available in an expansion of existing arrangements. Capital, after all, is always scarce to some extent, and is allocated among alternative uses on the basis of perceived advantages of each, in terms of profits as well as other considerations. Why, then, at any given level of capital scarcity, is subcontracting chosen over alternative production arrangements?

6.1.2. Specialization. A key advantage claimed for subcontracting systems is that they facilitate specialization. There are three aspects of this.

6.1.2.1. Specialization by function within a complex production process. By specializing in one particular step in the production process--foundry, fine machining, knitting, embroidery--a firm can develop particular skills and invest in specialized machines which permit both higher quality and lower cost production. Using such facilities for a number of different buyers facilitates this type of specialization, enabling such a specialized producer to keep more fully occupied concentrating on a more limited range of activities.

6.1.2.2. Specialization by product type. Closely related, and making possible the same kinds of benefits, is specialization by product type. A shoe-maker or garment manufacturer can reduce costs and improve quality by concentrating on a limited range of similar products. Subcontracting systems can facilitate the marketing of products by small producers while allowing them to engage in this type of product specialization.

6.1.2.3. Specialization as between production and marketing. There is no doubt that product development and marketing is a very important skill, an area where some entrepreneurs are far more capable than others. Those with limited abilities in this area can find themselves trapped in a situation where they are selling a limited range of products in highly competitive and slowly-growing markets (Khalifa Potti producers are a case in point). Establishing subcontracting links with others who are more capable in product development and marketing can enable such producers to take fuller advantage of their production skills while not being so constrained by their marketing limitations (Bata and Pearsons suppliers are cases in point).

6.1.3. Lower input costs. A substantial range of subcontracting activities arise because supplier firms have lower input costs--particularly, lower costs of labor and of work space--than the parent firms. International subcontracting of garments is a clear case in point, based as it is on Bangladesh's low wage rates. The same reasoning applies to a large domestic manufacturer of centrifugal pumps, who says that labor

unions and generous labor policies mean that his own workers are much better paid than are employees of his suppliers. Similar reasoning may apply for work space, particularly if the supplier firm uses a work space to which he has special (family-based, historical) rights which are not easily marketable.

6.1.4. A fourth major source from which subcontracting arises concerns temporary demands which exceed own production capacity. This happens in two contexts. The first is where the market is expanding rapdily, production is also increasing, but with a lag; those who receive orders may agree to fill those orders, then arrange to do this by subcontracting the orders to others: either new firms, or other who have expanded ahead of their own orders. Export garments are an example. In such cases, once the market reaches a more stable situation (if that ever happens!), subcontracting will cease. Another context for temporary subcontracting arises when producers believe that the demand itself is temporary. This could be due either to seasonal patterns (garment and shoe sales rise sharply before the feast) or to expected interventions (e.g. quotas) which might reduce the potential for exporting. As suggested above, this raises the problem that variations in market demand may fall with particular and magnified severity on subcontract suppliers.

This situation is particularly likely to arise in situations where labor laws make it difficult for large firms to lay off permanent workers, while smaller firms either are exempt from such laws or find it easier to circumvent them. This is certainly true in Bangladesh, and helps explain part of the preference of parent firms for subcontracting systems to meet demand surges which are viewed as temporary.

Do these characteristics taken as a whole mean that subcontracting systems are desirable for developing countries in general, and for Bangladesh in particular, from a national welfare point of view? The first three reasons discussed why firms engage in subcontracting (scarcity of--and improved mobilization of--capital; increased specialization; and to take advantage of lower input costs) imply a clear positive answer. Increased specialization, improved rates of utilization of capacity, increased utilization of under-utilized labor, capital, and work space, improved linkages between isolated producers and [illegible]e dynamic markets, can all make a significant contribution to increasing [illegible]me. The implied increased variability of employment in supplier f[illegible]an be a disadvantage, if it is seen as a way of circumvent[illegible] a desirable set of labor laws, and if it is recognized that enforcing those laws may result in the loss of that seasonal employment altogether. Potential problems of exploitation and dependence are discussed further below.

6.2. Problems of subcontracting. The discussion to this point has emphasized the advantages to parent and supplier firms and to nations of subcontracting systems. What are the limitations, weaknesses and problems involved?

6.2.1. For parent firms, there are two key problems. The first is one of timing and reliability of supply. Closely related is the question of product quality. Delayed delivery or inferior quality of a purchased input can mean serious loss, perhaps bankruptcy of a business. Parent firms sometimes find their suppliers to be so unreliable that they cannot risk their own future on the supplier's meeting his contract; to avoid that risk, they feel they must produce something themselves, even if doing so is more expensive, perhaps involving capital costs which they could otherwise avoid.

Successful subcontracting systems must deal with this problem. Two ways have been found, often used together. The first is to develop a close working relationship with the supplier, to help him develop a management system which will ensure timely delivery, maintain quality standards, and overcome bottlenecks as they arise. Often this means assigning one person to work on a regular, perhaps full-time, basis, with each supplier. The second approach is to buy from several different suppliers, so that problems with any one can be compensated by increased purchases from others. The establishment of such a system is clearly not cost-free, and must be set against the cost-savings to the parent firm in determining the potential advantages or disadvantages of subcontracting. As suggested above, some parent firms have decided that the costs of establishing such a system--or the remaining risks of operating while using one--are too great; they have dropped subcontracting altogether, shifting to fully integrated production. Based on their own management skills, their contacts with potential suppliers, their evaluation of risks and profits involved, and a host of other considerations, different entrepreneurs will reach different decisions here.

There are two further issues of quality which may be addressed here. The first concerns the technical ability of suppliers to produce good quality products. The second is closely related; it concerns the pressures in the system either to maintain or not to maintain a particular level of quality. To produce a better quality product almost always costs more. It may require better quality (and more expensive) inputs; it will generally require more labor time. Several participants expressed to us the view that subcontract suppliers are capable of producing much better quality products than they are currently making--if there were an incentive for them to do so. At the present time, for some product lines, the pressures seem to work the other way. On the one hand, buyers are quite tolerant (sometimes based on "side payments") of low quality products; on the other hand, strong competition between suppliers puts pressure on all to produce the lowest quality product which is acceptable to the buyers. In this situation, laments about the low quality of products available from subcontract suppliers, or technical assistance programs aimed at teaching them to do better work, may be quite misplaced. Only when buyers insist on higher quality standards, and recognize that they will have to pay a higher price to obtain it, will this vicious circle be broken.

Again, smoothly operating subcontracting systems must provide an effective way of dealing with this problem. The buyer in such a system should know what quality standard is required for a particular part or a particular process; he should know where it is practical to economize, and where it is important to insist on quality. He is also in a position to insist on that quality standard. Many subcontracting systems we have observed here seem to work that way--with the major exception of those where the buyer is the public sector. What this suggests is a need to establish, maintain, and insist on a high quality standard, particularly for purchases targeted for the public sector.

It is in this context that one may best view a technical assistance program currently being offered to small producers by the Bangladesh Employers' Association. This program, funded by UNDP through ILO, has five technical experts working to raise skill levels, primarily (but not exclusively) in the metals areas. 80% of their work is offered on a fee-for-service basis to large firms which are members of the BEA; the other 20% of their time is to be made available, either free or for a nominal fee, to small workshops. Particularly for the latter component, the experience to date has been a mixed one. Small producers often don't seem particularly interested in drawing benefit from these experts; they do not see the need for technical improvement. The large firms (public, private local, and multinational) that are members of the Association reportedly see little prospect for making use of local suppliers; one of the reasons for this is their belief that the suppliers are not capable of making the products they might wish to buy. In the absence of an effective system of quality control, we are left with a stalemate, where small producers find no incentive to produce better quality products, while potential buyers of their services are convinced that they are incapable of doing satisfactory work. The problem is not primarily with the technical skills, but with the linkage mechanisms.

6.2.2. For subcontract suppliers, whether producers or (for international subcontracting) countries, problems arise under two major headings. The first, already discussed, arises from the variability of orders. In some cases, it is possible to moderate this problem by seeking orders from a diverse set of buyers. Foundries can try to serve a range of parents, from a range of industries; export garment manufacturers can try to get orders from several different markets (Western Europe, Middle East, USA). For firms supplying a rather seasonal domestic market (garments, shoes), this option is not available; the problem seems to be an unavoidable one.

The other problem faced by suppliers is one relating to possible dependence on buyers and resulting risks of exploitation. This is a complex and controversial issue, often with ideological overtones. Parent firms generally do have superior skills, particularly in the marketing and management areas, which often put them in a stronger bargaining position than their suppliers; as a result, they are often able to obtain terms which are more favorable to them. The strongest defense against this--and

it is not always available--is to seek to deal with an array of buyers, from as diverse groupings (geographical, sectoral, firm type) as possible. The opportunities to do this will vary from case to case; but even for suppliers to Bata and Pearson Garments, where the bargaining strength is perhaps most unequal, suppliers can build links to other domestic retail outlets as well, only continuing to deal with their "godfather" if it is preferable to the alternative of withdrawing entirely from that purchasing channel. Once again, "multilateralism on both sides" seems to be the best defense available against risks on either side.

6.3. Capital and Credit. The significance of capital shortage problems among subcontracting firms seems to vary sharply from industry to industry. Shoemakers see it as a serious constraint, particularly because of the credit arrangements imposed by non-Bata retail buyers. Among garment manufacturers, Pearsons' strong capital position was cited as a key factor enabling them to establish themselves as a major force in the market, buying (but paying cash) from several factories, for resale through their extensive distribution network. In the metals industries, problems of capital shortage were much less prominent in our conversations.

There are currently surprisingly few credit links between buyers and suppliers in subcontracting systems, less than in other countries where I have worked. We have heard of only a few cases where the parent firm provided any help with the purchase of capital assets: the "inside subcontractor" working for a pump manufacturer; Singer, which provides capital loans to its suppliers; and Bata, which occasionally does the same. On the working capital side, in international garment subcontracting, the "back-to-back letters of credit system" means that the parent firm's order enables the supplier to borrow from the bank to finance the purchase of inputs. In a few of the metals systems, as well as in the hosiery industry, parent firm provided the raw materials for processing. In all other cases, the supplier had to obtain the inputs himself. In the case of dealings with public sector firms, we were told that when BMTF does contracting work for a private producer, they require 50% cash payment in advance. When private producers do subcontract supplying to public sector firms, on the other hand, delayed payment well after delivery of the product seems to be the rule. In both types of transactions, then, private sector firms find that they must supply working capital to the public sector participants, if they want to do business with them. Some producers selling machinery and parts to public sector textile mills reported that they minimize these problems of delayed payment by working through agents or brokers. The agents pay a substantially lower price than one could get by entering the tendering process directly, to sell to public sector buyers; but by dealing through agents, one avoids all the hassels which tendering involves, as well as the time-consuming task of keeping after the buyers, to press them to "pay up." The agents can also perform a useful function in dividing large orders into smaller lots which can be handled by a number of small suppliers. The agents clearly take their cut for all these services, but several small suppliers seemed to think it was well worth it.

6.4. Risk. An important issue for a businessman is the level of risk he runs, in a particular production situation. It is important to see the ways in which particular contractual arrangements affect the level of risk, for various participants in the system.

The largest risk for a parent firm is that the supplier will not provide the required product, with the required quality, at the required time. As suggested above, this is a real risk, which can be moderated somewhat, but not eliminated.

For suppliers, the key risk of embarking on a subcontracting relationship is that he may invest in required machinery and equipment, only to find that his orders are not renewed. In a sense, this is the subcontracting counterpart of the standard risk all businessmen face: of creating the capacity to produce something, then not being able to sell it. In a subcontracing system, that risk is born in the short run entirely by the parent firm; except in cases of non-fulfillment of contract, the supplier is freed entirely from this risk. The long-run risk remains, though, that the supplier's contract may not be renewed, and he may be left with a useless and unproductive investment. The most likely way to seek to guard against this, once again, is to seek contracts with a diverse set of parent firms, to guard against the danger that all will turn sour. This can help, but clearly the risk still remains; it is a risk, though, which is not inherent in subcontracting as much as in business in general.

Reference was made above to the risk that a product, once made, will not sell, and the allocation of that risk between parent and supplier. If the parent firm is a better judge of taste and is able to use subcontracting arrangements to tailor production to match market demands, that would be important not only in the allocation of risk but also in reducing its overall size.

A different type of risk arises when raw materials are spoiled in the course of the production process. In general, even when raw materials are provided by the parent firm, this type of risk would be born by the supplier; this could be of considerable importance to the parent firm, which escapes in this way a potentially serious risk. Its seriousness will vary from one production process to another. For a foundry, in the case of a bad casting, the material can be remelted, so the only loss is labor and fuel. For wood carving or garment making, a wrong cut can render a piece of raw material unuseable.

A final risk relates to variations in prices of both inputs and outputs. The impact of this risk as between parent and supplier firms depends crucially on the terms of the contract. If raw materials are provided by the parent firm, with the suppliers paid on a piece-work basis for their value added, then this risk is born entirely by the parent firm. If raw material procurement is the responsibility of the supplier and prices of the final product are determined in advance by the terms of the contract, then this risk gets shifted entirely to the supplier (at

least for the period of the contract). Both patterns can be found in Bangladesh; hosiery knitting exemplifies the first arrangement, while garment and shoe contracts generally follow the latter pattern. The difference can be quite significant.

6.5. Public and large private sector participation in subcontracting. The discussion above makes clear that there are numerous problems involved in subcontracting arrangements between public and private sector firms. Public sector firms are under little pressure to minimize costs, or to increase the rate of utilization of their existing capacity. Procurement regulations generally require open tenders, which are cumbersome ways of establishing subcontracting relationships. Many pur hases are required to use international tendering, which makes the process even more difficult for local suppliers. The government's persistent cash shortage means a perennial problem of delayed payments. As suggested above, government's lax enforcement of quality standards results in widespread product devaluation, as suppliers attempt to save money--sometimes are forced to save money, to meet sharp competitive pressures from other potential suppliers. In the absence of change in many if not all these dimensions, it may be overoptimistic to expect a large increase in subcontracting between public and private sector firms.

One might add that, given a choice between importing or purchasing on a subcontract basis with a domestic supplier, some large private sector firms might choose the import option, since it provides them with an opportunity, through overinvoicing, to move money out of the country. Some have argued that this is a significant consideration for a substantial number of large private sector producers.

6.6. Diversity of experience. It is important to recognize the great diversity among different businessmen, even within a particular industry, in the extent to which they choose to make use of subcontracting systems. The organization of centrifugal pump manufacturing is instructive. We interviewed six large private manufacturers of centrifugal pumps. The managers of all six gave every indication of being capable and energetic entrepreneurs. Among those six, two rely 100% on subcontracting, purchasing all parts from other local manufacturers, doing only organizing, marketing and assembly work themselves. Two others started out relying totally on subcontracted production of parts, but have now switched to making everything themselves; they found the control of scheduling and quality of inputs to be too complex to handle on a subcontracting basis. The fifth firm subcontracts all foundry work, making all other parts himself. The sixth makes all parts himself, but does all the foundry work on an "inside subcontracting" basis: he provides the work space, equipment and raw materials, paying someone on a piece-work basis to hire and supervise the staff and be fully responsible for all aspects of the casting. Presumably the diversity among these six producers reflects differing skills, existing facilities which they currently own, access to capital, and perceptions of future demand for pumps on the part of these entrepreneurs. This same diversity was observed among producers of power

looms in Dhaka and Chittagong, and among producers of hosiery products in Narayanganj. An outsider would be foolhardy in the extreme to say even for a narrowly defined product that one pattern clearly and generally dominates all others.

6.7. Is the current level of subcontracting in Bangladesh "too low" or "too high"? In view of the widespread use of subcontracting arrangements in Bangladesh, one may ask whether one could say that its use should either be encouraged or discouraged. One might argue that, except to the extent that one can identify particular impediments which prevent the market from reaching an optimum outcome, the rationality of the market will lead to the result that "whatever exists must be just right." The main arguments for asserting that the expansion of subcontracting should be encouraged, then, are based on the existence of impediments which currently hinder the attainment of that optimum. Some of these have been identified in the previous discussion, and will be explored in more detail in the following section of this paper, particularly those centering around government policies which stand in the way of expanded use of subcontracting. Aside from these policy-induced impediments, the primary reason for asserting that the current usage of subcontracting is "too low" arises from a judgement that the productive capacity among small producers in the country (including household producers) is substantially greater than current output; that for many such producers, the key constraint hindering their expansion concerns product development, and links to more distant but more dynamic markets; and that subcontracting can provide a mechanism for overcoming these constraints. The following sections of this paper discuss the ways in which policy and project interventions might be used to encourage such an expansion of subcontracting systems.

II. POLICY ISSUES

1. PRELIMINARY COMMENTS

The economy of Bangladesh, like its political and social structure, is made up of two major components. In the first of these, the key to success is built around favoritism and special access: dispensing it, or receiving it. At issue is special access to credit, to foreign exchange, to licenses and quotas, to activities which are profitable as a result of special regulations or prohibitions. The activities of most public enterprises and most public regulatory agencies center around opportunities created by these situations of favoritism and special access. The same is equally true of many large private sector producers; many of them got where they are, after all, because they had special access, because they knew how to play that system.

There is a second side of the Bangladesh economy, made up of individuals and enterprises that don't have access to that favoritism-dominated segment. This second tier gives every indication of being

extraordinarily dynamic, responsive, and creative. Many if not most of the producers in this segment are small enterprises; many are engaged in some type of subcontracting activity. It is hard to know how big this segment is in the aggregate; as described in the first section of this paper, it should be clear that it is alive and well.

This raises the question as to whether the best thing to do for small enterprises in general and subcontracting systems in particular is to leave them alone. If they are doing reasonably well under a policy of "benign neglect," there is clearly a risk that more interventionist policies may make things worse rather than better. In particular, there is a great temptation on the part of government officials in Bangladesh to seek to extend the domain of government control and regulation--to extend the upper tier--so it incorporates more and more smaller producers, subcontracting systems and all. We will need to be particularly aware of this risk, in discussing possible policy changes.

Our discussion of policy issues falls into two major categories. The first concerns the future growth of firms in the lower tier, taken by themselves: policies which currently constrain the growth of this group of firms, or which might be modified to be more supportive of development within this group. The second area concerns policies designed to link the lower tier more closely to the upper tier, so that any growth dynamic in the latter will be carried over to the smaller producers of the former.

2. LINKS BETWEEN LOWER AND UPPER TIERS

In principle, there are many opportunities for establishing subcontracting links between small producers in the lower tier and the larger public and private sector firms in the upper tier. These links can (and, to some extent, do) go both ways: small firms buy services and products from larger enterprises, and larger firms buy inputs from smaller suppliers. As explained in the first section of this paper, these types of links have developed only to a limited extent in Bangladesh. There are a number of reasons for this, which provide the background for a set of policies designed to encourage more development along these lines.

2.1. Rules and regulations concerning sanctioned firms. It is an overriding characteristic of the system of industrial sanctions that a firm qualifies for benefits only on the basis of in-house production. Probably the most important changes in policy needed to encourage the growth of subcontracting in Bangladesh center around an extension of these benefits to make them available for activities undertaken on a subcontracting basis. There are several examples here:

2.1.1. Backward links from export industries (e.g. garments): the bonded warehouse system has provided an effective and workable set of procedures to permit the duty-free import of cloth and other inputs used in the production of garments for export. The wording of the regulation in

the Bangladesh Gazette (No. S.R.O 306-L/84/864/Cus, June 27, 1984) implies that, from the point of view of the customs regulations, a firm could "integrate backwards," importing thread duty free, using that to weave cloth, which would then be used by that firm to produce garments for export. That has not happened yet, for a variety of reasons. On narrow legal grounds, industrial licensing is currently specified for a restricted set of production activities; if a firm were to attempt integrated production in this way, that would have to be changed (to license a single firm, for example, to produce both cloth and garments). More basically, though, production of these products for the export market is a highly specialized activity, requiring a high quality standard. Garment manufacturers are not usually skilled to that level in making cloth, and are not likely to become so.

The alternative, then, is to have the cloth and the garments produced in separate enterprises. To some extent, this is already happening; several firms are currently established and licensed to produce cloth for export, based on duty-free imported thread, using the same bonded warehouse procedures being used for garments. Some of these firms are beginning to establish sales linkages with the export garment firms, which means that the backwards linkages from garment exports are indeed being established, albeit in separate, sanctioned firms. For such backward linkages to reach to (non-sanctioned) small producers, the "parent firm" would need to import the raw material and "put it out" for processing before either exporting it directly or incorporating it in a product which is then exported. Such activities would currently be illegal; the regulations specifically say that the importer must have "suitable in-house facilities to manufacture the goods for which the raw materials are imported" (see the regulation specified above). A change in the wording of this regulation would be the most straightforward way of making it possible for such activities to be done on a subcontracting basis.

2.1.2. Forward linkages from export industries (e.g. leather): a limited but growing number of firms are producing good quality finished leather for export. In principle, it should be possible for some of this leather to be processed into shoes--or more likely, into leather uppers for shoes--and exported in that form. The problem is reported to be that the tanners and shoemakers are separate enterprises; tanners currently enjoy special benefits from their exports, which they would lose if they sold their leather to shoemakers for export in that form. The Export Promotion Bureau is exploring alternative ways of "sharing the benefits" of exporting, which would be equitable for all. The same issue has arisen for the bonded-warehouse exporters of cloth; they currently obtain special incentives for their exported products, which they would lose if their cloth were incorporated into garments for subsequent export.

The problem is a general one; having provided special incentives for exporters of all types, one must also pay attention to the distribution of those benefits among different people at different stages in the production process. If all the benefits are captured by the final exporter (the last

person in the chain), then each person will try to have the chain end with him, providing a clear incentive against forward linkages. Of course a good free market economist would say: no need to pay special attention to that; benefits at the end of the system will automatically work their way back through to earlier participants in a production/distribution system. The problems with this reasoning are first that we are not dealing with a free market (the thing that raised the problem in the first place, after all, is a special government-induced intervention program aimed at providing special incentives for exporters); beyond that, we are also not dealing with very flexible markets, so while there surely are pressures for such things to work their way back through the system, they move only slowly, and do inhibit forward linkages in the meantime.

A more basic and direct approach would involve the abolition of special export promotion incentives entirely, moving towards a unified free market exchange rate. Few economists would disagree that this is the best target to be working for in the long run. In the second-best meantime in which we all live, some adjustment in the allocation of benefits of export incentives clearly seems called for. An appropriate approach to work towards here might be the allocation of benefits from exporting based on value added at a particular stage of the production process. This is analytically correct, but not easy to implement.

2.2. International Tenders. A large share (perhaps as much as 85%) of Bangladesh's capital formation is externally funded, on terms which require international competitive bidding. Domestic firms entering that bidding process have the right to use a bonded warehouse system to obtain tax- and tariff-free imports to produce products under such contracts, since production against foreign exchange payment is rightly recognized as being the equivalent of export production. There are problems with these arrangements, however, particularly from the point of view of breaking up these tender orders--many of which are very large--into smaller components, so a number of suppliers can participate. There are no procedures whereby a firm (foreign or domestic) could subcontract some part of the work to other domestic suppliers. As currently specified, only the firm winning the bid has the right to duty-free import of required inputs. With a simple change in regulations, that firm would be able to import the materials duty free and then pass them on to subcontracting suppliers for processing; as suggested above, that procedure is illegal under current regulations.

2.3. Dealings with public sector firms: there are a number of aspects of public sector firm behavior which limit the opportunities for linkages between these and private sector firms.

2.3.1. Public sector firms as sellers of services: public sector firms are not reliable suppliers of services, in the sense of timely fulfillment of contracts; they often fall well behind their promised delivery schedules. Private firms have no recourse, in cases of non-fulfillment of contract. In spite of this poor record, public sector firms

generally require that private sector buyers make a 50% advance payment, in placing orders with public sector suppliers. In general, public sector firms have been quite uninterested in selling services, parts, or products to private sector manufacturers.

2.3.2. Public sector firms as buyers of services: three major problems arise here: a) the government must use a tendering process, with many opportunities for side payments and special deals; it is frequently the case, for both public and private sector tendering, that by the time the tendering process is officially started, behind-the-scenes negotiations have already determined who is to win the contract; b) on delivery, government frequently delays extensively in payment; and c) public sector buyers use lax quality controls for delivered products, resulting in competitive degradation of the product.

2.3.3. Limited pressures on public sector firms: for both buying and selling, a key reason for the lack of development of effective contracting mechanisms is that public sector firms are generally under no pressure to cut costs or to increase profits. When opportunities arise to sell products or services, thereby improving on the distressingly low rate of utilization of their productive capacity, contracting mechanisms with the private sector are so cumbersome and rewards systems so distorted that these opportunities are not pursued.

What all of this suggests is the need for increased attention to improved management techniques among public sector firms. This is easy to suggest, and is consistent with stated policies of the government (see editorial in the Bangladesh Observer, Feb. 27, 1985), but is not easy to implement. Appropriate approaches might include the institution of better accounting and accountability procedures, training in enterprise management, and the like. It should be recognized, however, that if those in charge are not interested in improved procedures for public enterprise management, there is very little that can be accomplished by even the best training or procedures.

3. CONSTRAINTS ON EXPANSION WITHIN THE LOWER TIER

3.1. Imported inputs. There is a second group of policies falling on smaller firms which have not received any special privileges in the current system, i.e. those in the lower tier. One set of issues for these producers concerns their access to imported raw materials used as manufacturing inputs. Problems here center around import licensing procedures and tariff rates. There are currently three types of import licenses: industrial licenses, commercial licenses, and Wage Earners' Scheme (WES) licenses. Only sanctioned firms--those that have been "vetted" by a series of government agencies--can be designated as industrial importers. Other firms--those not sanctioned--have two choices: a) they can buy materials which have been imported by commercial importers; or b) they can import directly themselves, through the WES. Each of these

has its problems. Commercial importers may not know what product is needed (e.g. shoe manufacturers complain that merchant importers don't know the business, so they generally offer only the wrong kinds of glue), and charge mark-ups viewed as excessive. The WES imports require paying a premium for foreign exchange. More important, though, is the fact that for either of these two options the import does not qualify for tariff concessions which are available for industrial imports (i.e. lower tariff rates which apply if the same materials are imported by a sanctioned manufacturer). The difference can be substantial. The manufacture of trolleys for tube wells, for example, requires the use of steel plate, which is all imported. A registered manufacturer who gets a license to import these plates can bring them in with a 15% duty, and with no sales tax. For anyone else--a commercial importer, or a non-authorized manufacturer using the WES scheme--the import would be subject to a 50% duty plus a 20% sales tax.

For sanctioned manufacturing firms, the whole importing procedure is cumbersome and distorting. Import quotas are allocated administratively on the basis of work plans which often only loosely correspond with what actually takes place. With approvals often delayed and with opportunities to benefit from the lower tariff rates for industrial imports, there is an incentive to exaggerate needs. The main thrust of the system seems to be to provide a strong differential benefit to firms which are large enough to justify both going through the sanctioning process and importing directly. Small firms generally find it uneconomic to import their raw materials themselves; the fact that they must pay a higher duty for imported inputs is a serious hindrance to their growth.

The most distorting aspect of this system is the differential tariff imposed on importers with different types of import licenses. If this differential were abolished, it would bring significant benefits to small producers. This does not necessarily imply uniformity across products; that would be desirable in itself, but is a different point. It concerns uniformity for all types of importers, for any given product. The current system of differential tariffs was reportedly adopted to overcome a problem of smuggling of imports through Bangladesh into India. Its elimination would require some confidence on the part of the government that this illicit trade can be kept under control. As currently practiced, the system constrains the growth of small manufacturers by raising the price and lowering the availability of imported inputs.

3.2. Utilities. If small, non-sanctioned enterprises suffer in terms of their constrained or price-distorted access to imported manufacturing inputs, the same is also true with regard to their access to utilities. There are considerable delays in obtaining hook-ups for electricity, water, and telephones. While all producers suffer from these delays, the larger firms can generally bring more influence to bear, so they tend to get served first. Again, failure to solve this problem could exert a severe constraint on the future potential growth of small enterprises in general.

A related issue concerns the reliability of the electricity supply, and the costs imposed by shortages. Again, the shortages fall originally on all; but larger firms can more readily afford stand-by generators, which are unrealistic for small factories. Furthermore, the injunction against production each day from 6-9 PM hits most seriously on firms seeking efficient, multiple-shift patterns of production, such as the contract knitters of Narayanganj. What all this suggests is that easing the shortages on utility supplies could be of considerable help to small producers, particularly those engaged in subcontracting; conversely, a continuing shortage may seriously impede the further growth of this group of firms.

3.3. Tariff anomalies. There continues to be negative effective protection for most producers of locally-manufactured capital goods; for power looms, rice mills, transformers and lathes, tariff rates on imported inputs are higher than those of finished products. This set of tariffs seems to be designed with the interests of the "upper tier" producers in mind; they want cheap capital goods, and are happy to import them from overseas at low tariff rates. In some cases, the damaging effects of this tariff structure are supposedly overcome by a prohibition against certain imports (e.g. smaller lathes), but these prohibitions are frequently circumvented in practice. Since these products are frequently produced in small and medium-sized workshops which make extensive use of subcontracting, the tariff structure is a clear hindrance to the expansion of this group of firms.

4. OTHER SUGGESTED AREAS OF POLICY INTERVENTION

The discussion to this point has focused primarily on characteristics of existing laws and regulations which inhibit the development of subcontracting involving smaller producers. There are other policies which have been suggested by officials of the Bangladesh government which might open up new opportunities for subcontract systems.

4.1. Product standardization. In a number of product lines, particularly for metal products, the establishment of standard sizes, strengths, or capacities might make it easier for many suppliers to participate in more integrated markets. This happens already to the extent that large buyers establish and enforce standards for the products they purchase, as when BADC establishes standards for pumps and engines, or the Power Development Board sets standards for particular electrical products it buys. It has been argued that more widespread product standardization would make it possible for small producers to expand their sales, perhaps working on a subcontracting basis.

There are puzzles about this proposal. Producers with whom we met did not find it important. This may be because the firms interviewed were in product lines where standardization either has already been achieved, or is not important; or it may be that they judged wrongly. As suggested, product standardization is already being enforced where there are one or a

few major buyers; where this is not the case, one wonders how one could enforce the establishment of uniform standards. This proposal would seem to require more thought and more precise specification of products to be covered before it could be seriously considered.

4.2. Designated product lines for subcontracting. Another general policy approach would involve designation of particular product lines as ones where subcontract production is particularly fruitful. Based on such designation, one could make special efforts to promote the use of subcontracting: through the collection of lists of potential buyer and supplier firms; through technical assistance, targeted to help suppliers meet buyers' requirements; through efforts to inform parent firms about potential benefits of subcontracting, and possible ways of organizing the system to minimize the risks involved. Some of these are discussed more in the third section of this paper; they are mentioned here since they involve a policy of designating certain product lines as being ones where subcontracting seems particularly appropriate, and channeling project aid primarily (although not exclusively) to those designated areas. As long as these are specified as areas where subcontracting is particularly appropriate, so efforts to promote it are concentrated primarily there, this approach has much to commend it. Care must be taken, though, to ensure that this does not lead to a requirement that subcontracting be used in those areas, or to limiting any benefits only to producers in those designated product lines.

4.3. Prevent duplication of facilities. Some have argued that the existence of underutilized production facilities in the country requires strong steps to prevent the construction of new plant and equipment which would duplicate that which is already in existence. The idea behind this is that those who need certain products or services for which there already exists domestic production capacity should be forced to make use of that existing capacity rather than using the country's limited foreign exchange to create new facilities. Many of these existing underutilized facilities are in public sector firms. As suggested in the first section of this paper, there are severe problems of contracting mechanisms, in trying to arrange for public sector firms to supply inputs to other buyers. The fact that the physical facilities are there and that other producers need their services are not by themselves sufficient to ensure that these contracting problems will be resolved. Unless concurrent and effective steps are taken to overcome these contracting problems, then policies forbidding the new construction of similar facilities will mean a serious hindrance to the industrial growth of the country.

4.4. Establishment of a system of government control for subcontracting. A number of government officials have expressed the need for more effective and consistent policies towards subcontracting, along with a better institutional framework for implementing these policies. While this view has been repeated in several of our interviews and written at some length in the report of the government committee on linkages and subcontracting, the suggestions all deal with procedural rather than

substantive issues. There is a constant reiteration of the need to develop and implement an effective policy in this area, but little consistency of view as to the content of such a policy.

At a most basic level, the issue which needs to be faced here concerns whether Bangladesh seeks to facilitate the growth of subcontracting, or whether they wish to force firms to use it. Pushing subcontracting by laws and regulations involves requiring its use for certain production processes or in the making of certain parts (following the Indian pattern). Several officials with whom we met expressed an emphatic view that little is happening in terms of subcontracting involving small producers; they attribute this to a lack of a government system of regulation and control. They argue that once the government establishes such a system, then things can begin to move. One is tempted to believe that they are trying to expand the "sphere of influence" of the upper tier to include more small producers, particularly those who are engaged in subcontracting.

There are two major reasons for resisting this approach. The first is that the development and implementation of such a system of control requires a high level of technical competence as well as administrative efficiency. In Bangladesh, the record on impartial and effective administration of regulations and controls is surely cause for concern on this score. Secondly, and of equal importance, our interviews suggest that the desirability of subcontracting, even in particular narrowly-defined product lines, varies from one producer to another, depending (among other things) on the producer's existing facilities and skill levels, both technical and managerial. Requiring a uniform degree of reliance on subcontracting in such situations would clearly result in a misallocation of resources.

This suggests that a more appropriate approach to subcontracting would involve policies designed to facilitate and encourage its use, rather than requiring it. This has been the main thrust of the policy suggestions put forward in this paper.

5. CONCLUDING COMMENT

While many of the policies discussed here could be described as aimed at the encouragement of subcontracting systems per se, others are more general in their focus, designed to provide assistance to small enterprises, more broadly defined. The discussion here has not been limited to only those policies which impinge directly on subcontracting arrangements; since a large number of small producers are engaged in subcontracting, there is a high degree of overlap between the two target groups, so by providing encouragement to small producers--particularly in subsectors such as machine tools where subcontracting is widely practised--one facilitates the expansion of subcontracting arrangements themselves.

One should again recognize the dangers, particularly in the Bangladesh context, of calling attention to an effectively operating but largely

uncontrolled and unregulated segment of the economy; by doing so, one runs the risk of inviting outside intervention, thereby making things worse rather than better. In this regard, more general policies, which fall with a broad brush on a wide range of enterprises, may have advantages over projects, which of necessity focus more explicitly on selected producers and product types. If the policies suggested here are adopted, they could be quite important in opening new opportunities for "lower tier" producers to expand through the use of subcontracting systems.

III. PROJECT IMPLICATIONS

1. BACKGROUND

1.1. 100 million people? In discussion of projects for Bangladesh, one tends to operate under the shadow of the country's overwhelming population problem. That is understandable, and in some ways is correct; yet it is important to keep this question in perspective. A project which is good in terms of cost/benefit relationships would be good whether it were operated in Jamaica, with its 2.1 million people, or in Bangladesh, with its 100 million. The main qualification to this would come from the limited ability of the AID staff to process and monitor projects; yet the pressures to find projects which reach lots of people are there in all countries. It may be unrealistic to think that there are good projects which will reach masses of people; just because there are so many people out there needing help does not necessarily imply that there are more projects with greater spread effect in Bangladesh than in Jamaica. It is easy to have one's priorities distorted, if one pays too much attention to 100 million people looking over one's shoulder all the time. Spread effects are clearly desirable, and should be sought wherever possible; but even in the presence of Bangladesh's large population, it may be that the best projects are ones that use fewer resources and reach a smaller number of people in an effective and targeted way.

1.2. Small Enterprise Projects and their Limitations. Over the past 20 years--and even more so over the past 5--considerable thought has been given around the world to the formulation of projects for the encouragement of small enterprises. While a few of those projects have been quite successful, it is also true that there have been a great many failures. The fact is that this is a difficult area in which to work through individual projects. Some have gone so far as to say that the best that can be done in this area relates not to projects but to policies: removing constraints, and providing an atmosphere conducive to the growth of small enterprises. I personally would not go that far; while I agree that policies are of paramount importance, I also believe that there are useful things to be done at a project level. One should recognize, though, that the project opportunities may be limited in focus and in impact; the project-responsive needs in this area probably are not of a type that they could be expected to reach millions of producers.

1.3.Small Enterprise Development: a General Focus. Project questions aside, a central aspect of development of small enterprises concerns the establishment of linkages between dispersed small producers and dynamic markets. A central fact which appears in strong highlight in Bangladesh as in numerous other developing countries is that there are large numbers of small and dispersed producers--whether small enterprises or individuals--whose production skills are far more advanced than their marketing skills. For this group, a central need concerns the development of effective linkage mechanisms for joining dispersed producers to dynamic markets. There are three central aspects to this linkage. The first concerns simply the establishment of a marketing channel--finding ways of reaching out to new markets. The second concerns product design and development: the adaptation of the product, so there is a match between what is produced and what the buyers wish to purchase. The third concerns production controls, aimed at maintenance of consistent quality and the reduction of costs, to make sure that the product is competitive with alternative (often modern sector) sources of supply.

Where they work, the beauty of subcontracting systems is precisely that they deal with these three aspects. The marketing channel is itself an inherent part of the subcontracting relationship. For the other two aspects--product development, and production control--subcontracting systems provide a mechanism through which small producers come to understand the importance of changes along these lines. They also provide a channel through which the required information can reach the producer. The parent firm has as much of an interest in these aspects as does the supplier, and is often in a position to make up for the limited abilities of the supplier in this area by providing advice, assistance and direction.

1.4. Subcontracting vs. Linkages. This reasoning suggests that a key need for dispersed small producers concerns improved linkages. Subcontracting is one technique which has often worked to provide such linkages; there are other techniques. An interest in subcontracting, then, can best be seen as a part of a larger interest in the establishment of improved linkages, which in turn is part of an even larger goal of encouraging the growth of small enterprises. Of course this is also a means to an end relating to employment creation and improved distribution of income. For the purposes of this paper, we draw the line in our discussion at a point relating to the establishment of improved linkages for small producers. This means it is somewhat larger than subcontracting per se, but smaller than a discussion of small enterprise projects in general.

1.5.Subcontracting Systems as Intervention Points. Before looking into the details of projects for Bangladesh, it may be helpful to summarize briefly the major ways in which subcontracting arrangements might provide opportunities for project and policy interventions. This is a brief summary of a more extended discussion presented elsewhere; for more details, the reader is referred to the other source.[1]

Areas of intervention can be thought of as falling under two major headings. The first concerns activities aimed at facilitating the expanded use of subcontracting, while the second uses subcontracting systems as channels for providing assistance to small producers. The first category would include the establishment of subcontracting exchanges; the restructuring of tax systems to encourage subcontracting; publicity aimed at informing potential participants about the benefits to be derived from subcontracting, and ways they might seek to solve problems associated with such systems; and the training of agents, who sometimes play a crucial role in making the system work. The second category would include finance channeled to participants of subcontracting systems; assistance in product development and design; assistance relating to production controls; technical upgrading of suppliers; and other kinds of training, particularly in the area of management skills. Again, these are discussed in more detail elsewhere, and are presented here as a checklist for asking whether there are other project opportunities besides those discussed in this paper which might be considered.

2. MIDAS: A FOCUSED ACTIVITY AIMED AT BUILDING LINKAGES?

2.1. Some General Principles for MIDAS Work in this Area. Four general principles may be offered as background for thinking about work by MIDAS in this area.

2.1.1. Look for situations which show good prospects of spreading beyond one individual supplier establishing market links with one buyer. A recent proposal for an extension of MIDAS states this in terms of a "reasonable prospect...that the establishment and successful functioning of one business will make possible or trigger the establishment of a series of related businesses." This might happen through a situation where there are linkages which reach many different suppliers (and hopefully, a number of buyers as well). Alternatively (or preferably, in addition), once a certain type of relationship is demonstrated as being profitable, it can spread on its own by force of example without requiring additional assistance. Examples are given below.

2.1.2. Look for ways of helping establish linkages between small producers and dynamic markets. As suggested above, this is the broad framework for the activity; it includes linkages which are specifically established through subcontracting systems, but is not limited to that.

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[1] Donald C. Mead, Subcontracting Systems and Assistance Programs: Opportunities for Intervention, mimeo, September, 1984.

2.1.3. Charge for the assistance that is offered. There are valid analytical as well as procedural reasons for suggesting that assistance offered here should be subsidized (i.e. some part of the costs covered by outside grants); but it is also important to establish from the start that these are activities for which the beneficiaries must pay a part of the cost. This will help focus the assistance to those enterprises that are really interested in receiving it; it will establish high standards for the assistance; it will avoid spoiling small producers with the "special access, free hand-out" syndrome which has so distorted the activities of many large firms.

2.1.4. In activities of this type, credit is likely to play only a supporting role. Many of MIDAS's recent activities could be characterized as essentially credit activities. In the type of endeavors proposed here, credit will sometimes be needed to facilitate the establishment of particular types of linkages, but the credit would be seen as secondary, as instrumental in achieving that end.

2.2. Examples of Areas of Opportunity. In the course of our field work, a number of opportunities were identified for activities of the type discussed above. These are presented here as illustrations of possible areas of work. Closer examination might reveal that some of these have good prospects, others not; they should be treated as examples more than as specific suggestions.

2.2.1. Producers looking for a market: Narayanganj knitters, wishing to explore possibilities of exporting. As discussed in the first section of this paper, this group of producers have established a clear dominance in the domestic market based on efficient production systems making wide use of subcontracting. Some of these producers would like to establish new market links overseas, to enable them to export their products, but do not know how to go about it. If one or a few could begin selling abroad, this would open up important new opportunities for large numbers of producers and workers.

One might add that similar issues of assistance to small producers in establishing new marketing links in export markets arise for several other industries or product groups as well. Small shoe manufacturers raised the same question with us, as did producers of (non-knitted) garments and some specialty metals products. In each case, they were looking for assistance in establishing new market links, with all that this entails including product development and production controls.

2.2.2. Producers looking for a market: Khalifa Potti producers, looking for better domestic marketing channels. As described in the first section, this group of 300 or so producers, employing some 3000 workers, are currently selling through market channels which they find to be stagnant; they themselves wish to find better arrangements which will enable them to change their product designs, if necessary, and search out new markets. As suggested earlier, the contract production patterns

between small garment factories and ready-made garment retailers may be an appropriate model, in helping them develop more effective marketing links.

2.2.3. Producers looking for a market: household producers wishing to produce in their home for sale in outside markets. The experience of PVOs working in this area, discussed previously, suggests that there are useful things to be done in this area (see section 2.3 below), although there are also risks of establishing quite unsatisfactory systems as well.

2.2.4. A product looking for suppliers: Rower pumps are a simple but efficient type of hand pump. The technology was developed by engineers from the Mennonite Central Committee; manufacturing patterns have been perfected by MAWTS. It now looks like the demand for these pumps may jump sharply, with World Bank assistance; the Bank has agreed to finance the procurement of no less than 400,000 pumps, many of which will probably be of the Rower type. There is an effective organization in place to handle an expanded distribution of these products (International Development Enterprises); but a production system for obtaining such large numbers does not yet exist. With some care, perhaps working through MAWTS at least in part, it would be possible to establish a production network based on small producers operating in the consuming areas of the country. If based on subcontracting, several different enterprises might be involved in each area. This would make possible the establishment of engineering workshops throughout the country capable of making pumps and parts as well as doing other metal product manufacturing and repair work.

2.3. Who should do what, to make this happen? Once opportunities of this type have been identified, what happens next? Who should have responsibility of working with these cases, to make sure that potential opportunities are brought to a fruitful conclusion? There are several possible "next steps;" the appropriate response presumably will vary from case to case. Among the possibilities are the following.

2.3.1. Pass it to a government agency. In the case of the exploration of export markets, The Export Promotion Bureau of the Government of Bangladesh has both responsibilities and a program of activities in this area, with funding from the World Bank, for a variety of activities. One response, then, on uncovering an area which seems to have good export prospects if the right links can be established, would be to pass this to the Export Promotion Bureau for further action. In such situations it would be important to follow the case, to be sure that it was not simply allowed to sit on the shelf awaiting action by an overburdened bureaucrat.

2.3.2. Pass it to a PVO. In some cases, the follow-up work can be done by a PVO. There are several of these available who might play significant roles in this type of work. International Development Enterprises was mentioned above as an organization interested in "marketing appropriate technology," to quote from their publicity material. MAWTS has

played a major role in the encouragement of subcontracting in the metals industries, and (with qualifications discussed in the first section) could do this on a broader scale. The Bangladesh Development Services Corporation has acted as intermediary in a few of MIDAS's loans. It should be recognized, on the other hand, that what is at issue here is really a set of entrepreneurial functions that involve the development of new markets and new marketing systems. In general, PVO's have not been very effective in bringing about these kinds of changes. One of the original goals of MIDAS was to help these agencies undertake this task more effectively; to date, they have not had great success at this.

2.3.3. Pass it to a private firm. In a sense, what is involved in this whole area of work is the uncovering of profitable business opportunities. Once these have been identified, one might try to find a private entrepreneur who would be interested in moving into the field, as a business venture. The problem with this approach may arise from the uneven bargaining position of an outside, modern and perhaps large enterprise, dealing with small and less well informed suppliers. At the very least, this suggests the need from continuing monitoring of the relationship, to make sure it is working in ways which are acceptable to all. An alternative would be to try to interest not one but a number of entrepreneurs, i.e.

2.3.4. Pass it to a number of different private firms, to get several involved, so each supplier has a choice of several buyers with whom to deal. This is similar to the preceding approach, but aims at the creation of a network of linkages rather than just bilateral relationships.

2.3.5. Have MIDAS undertake the entrepreneurial function directly, perhaps in cooperation with either private firms or PVOs.

2.4. Implications for MIDAS

2.4.1. Two types of functions. The reasoning above suggests that there are two separately identifiable types of activities in which MIDAS might be engaged, in this area: identifying opportunities for establishing new linkages, and actually undertaking the establishment and development of such market links. It is perhaps easiest to agree that MIDAS should undertake the first of these, i.e. the identification-type activities. Having done that, the next stage will probably vary considerably from case to case. Perhaps the clearest thing to be said is that the second (implementation) stage is just as important as the first (identification) part; MIDAS would need to stay involved with a particular area until it was satisfied either that the implementation phase was satisfactorily under way, or that it had made a mistake and the activity is not really viable. This means that whether the "opportunity" is passed along to a government agency, to a PVO, or to one or several private producers, MIDAS staff would need to monitor the follow-up activities to ensure that it is not simply put on the shelf.

2.4.2. Staffing. This in turn suggests a staff with two types of responsibilities: for locating new opportunities, and for pursuing ones which have previously been identified. One could argue whether it is better for the same people to undertake both functions sequentially, or for different people to work on the two types of activities. Since the skills involved are quite similar, it seems appropriate to have the same people involved in both identification of opportunities and in follow-up work. One possible operating procedure might be as follows. If four people could be allocated to this type of work, they might be divided into two different sectoral groups, with two people working on each. Within each of these groups, two people might then work together in identifying new opportunities, until one such opportunity were identified; then one of the two would shift over to the "follow-up mode," working in that area until he or she felt ready to move on. The second person would continue seeking out new opportunities until one was located, then work with that until it could move on its own. Different cases would require different lengths of time for nurturing; they would also require differing levels of continuing attention over longer periods of time, as longer-term follow-up. Each person would presumably be involved in a back-and-forth of searching for new opportunities, attempting to establish new linkages in areas which are identified, and continuing monitoring of systems he or she previously worked with. This does imply that MIDAS should assign a small group of people (perhaps four) to work primarily or exclusively in this area of linkage identification and development.

2.4.3. Sectors to look at first. The field work on the basis of which this report is written focused primarily on three sectors of the economy: metals and engineering, garments, and leather shoes. Each of these clearly deserves further follow-up work. In addition to those three, several people have indicated that there is substantial subcontracting going on among plastics producers. Beyond this, in other countries, production is often based on subcontracting relationships in the furniture industry. Finally, reference should again be made to subcontracting systems linking back to household producers. With this long a menu, where should one start? The response depends to some extent on the numbers of people who will work on the activity, their backgrounds and interests. If, as suggested above, four people were involved, then it might make sense to group them, with two working on garments and leather shoes, and two others on metals and plastics. There are advantages to be derived from individual sectoral specialization, but also from an exchange of views between people working on the same topic in related fields; this suggested approach represents an attempt to capture both of these two goals. If more people were involved, then work could also be done on the household producers. Furniture might then be kept in reserve, for when one of the other sectors seemed to have reached a point of diminishing returns (i.e. where enough was known about it so further explorations seemed not to be fruitful).

2.4.4. Criteria for spread effects. It was suggested above that assistance in this activity should not be seen as providing linkages only to individual firms, but should look for opportunities with potential

spread effects. In the "exploration" phase, then, it would be helpful to establish criteria for saying, this opportunity has the potential for involving enough enterprises to justify moving into the implementation phase, working with that group to help them establish new marketing links. Such criteria would need to be considered as rules of thumb, to be adjusted over time; yet they would serve to remind analysts of the necessity to limit "implementation" activities to situations with a reasonably large pay-off. This might best be expressed in terms of a minimum number of workers involved in all potential participating supplier enterprises, perhaps using 500 as a usual minimum.

Other targets may be needed with regard to numbers of "opportunities" identified, and number of situations brought to a stage where producers are effectively linked to new markets. The precise timing on these cannot be controlled or predicted. A reasonable target might be for each person involved in this activity to identify six situations worthy of further work, and to follow up four of these either to the stage where the links have been established and a new system is working, or where it is determined that further work in that area is not fruitful.

2.4.5. Credit. It was suggested above that in this type of activity, credit would turn out to have a supporting rather than a central role. Returning to the examples given above of the types of opportunities which might be the focus of work here, it seems clear that in some cases credit may be needed: to enable the Khalifa Potti producers to modernize their equipment, if some upgrading of product is found to be needed, as they sell in different markets; to provide the fixed capital needed to help establish small workshops for the production of Rower pumps; to provide working capital for exporters, who face longer payment delays for shipment overseas. The point is that the credit is intimately connected with a particular set of changes in production and marketing systems which is judged to be potentially beneficial, but which requires more capital if it is to be put into effect. It is in this sense that credit becomes a supporting feature of the activity, not its central characteristic.

2.4.6. The residual question of PVO assistance. At the time it was established, one of the key focuses for MIDAS concerned helping PVOs become more effective in the pursuit of income-generating activities. Most would probably agree that MIDAS has not been successful in meeting that goal. The discussion in the first section of this paper makes it clear, on the other hand, that with the right approach, PVOs can play an important role in helping establish such links between household producers and outside markets. That is not easily done, though; before embarking on any work along these lines, one would want to insist that MIDAS learn to do this itself. The most fruitful approach here, as in so many other things, is to take a close look at the successes. There are PVOs in Bangladesh which are currently doing this work very effectively. A careful look at a few of these, as well as at some which are less successful, could be very effective in helping the MIDAS staff think through the ingredients of success in this difficult area.

2.4.7. MIDAS as investor. Some have argued that MIDAS missed a golden opportunity by not getting in on the ground floor of the garment export boom. Presumably what people have in mind here is that MIDAS should have participated in the equity finance of some early garment exporters, thereby obtaining for itself some of the profits, which could then fund future activities for the rest of the century. If this is part of MIDAS's mission--not only to uncover opportunities and turn them into actuality, but share in the benefits that result--then MIDAS should be looking for opportunities to participate as part owner in at least some of the firms which they help. This may seem like a peculiar argument to make, in a context where most financing institutions are facing substantial defaults in the repayment of principal; yet if MIDAS does its job right, it will be uncovering situations where returns could be expected to be quite high. It seems entirely appropriate for the rules of the game to be structured in such a way that MIDAS shares in those gains.

2.5. Implications for AID. The first implication is that, if AID finds this type of activity to be a worth while undertaking for MIDAS, it would need to help finance the activity. The required budget would include the salary of perhaps four professionals, plus local travel and associated overhead (office space, secretarial support and supplies, telephones etc.). Since some activities might involve calling on qualified outsiders for technical or other specialized assistance, it would be appropriate to include funds for the hiring of (local) consultants. Beyond this, money would be needed for any associated credit facilities.

It was suggested earlier that beneficiaries from this type of activity should pay part of the costs themselves. This might be incorporated in the budget planning as follows. First, presumably the full credit fund would be supplied from outside assistance; it would hopefully constitute a revolving fund, to be used for later relending, out of repayments. Second, it is not realistic to think that activities relating to the identification of opportunities could be paid for on a fee-for-service basis; these would need to be fully funded from AID. Of the other type of work--"implementation"--perhaps half the costs might be recoverable from charges levied on the beneficiaries. If the activity were originally funded for a two-year trial period, then the first six months might be fully devoted to identification of opportunities. For the remaining 18 months, one might postulate that 50% of the time would be used in that type of activity (all AID-funded), with the other half used for follow-up work, half of which would be paid for by the beneficiary; this would imply 100% of the budget would be covered by AID during the first six months, and 75% thereafter.

Presumably AID would want to specify some goals and targets for the activity, to provide a standard against which one could later measure its success. Based on MIDAS's previous record, a first requirement might concern the hiring of staff; a reasonable requirement might be that four professionals be designated and start work on this activity within three months of the signing of the agreement. If MIDAS chooses to undertake this work by using some of their existing staff (which would make sense), then

the requirement would be that within three months these designated people should have been fully freed of previous responsibilities. The quality of the staff recruited is also of crucial importance here. The central point is that those employed for this task would have to have some entrepreneurial know-how. Normally, this would rule out people whose sole prior experience was either in the civil service or in academic studies. It is not easy to identify people with this type of skill (although it is not difficult to identify people who clearly do not have it!). One might also ponder whether it would be possible to recruit such people to work for MIDAS; if they are good at it, they are probably out making lots of money doing it! This is indeed a problem; but if one is aware of the nature of one's needs, it is possible to find people with the right skills.

3. BSCIC, AND THE FINANCIAL LINKAGE PROPOSAL

A proposal has recently been presented to USAID by the Bangladesh Small and Cottage Industries Corporation, designed to encourage the expanded use of subcontracting by establishing a credit facility based on the discounting of orders placed by recognized parent firms. It now appears that this proposal has run into difficulties as a result of disagreements concerning interest rates to be charged. I include my comments on the original proposal, since this may be revived in revised form at some time in the future. The proposal is to be commended on two grounds. i) It seeks to encourage and facilitate the expanded use of subcontracting, rather than requiring it. ii) The credit facility itself is well designed and specified. While some banks are reported to have such a facility already, these are clearly not widely known or widely used, so the proposed activity is a desirable contribution.

The main limitation of the proposal as currently specified is that there is virtually nothing in it which would make an expanded use of subcontracting more interesting for parent firms. They are the ones who will ultimately decide whether to handle a particular activity by increased production inside their own firm or by contracting it out to others. Expanded use of subcontracting will take place if and only if the latter option becomes more profitable and/or more feasible for the parent firms.

The key problem for any subcontracting arrangement is the establishment of a system ensuring a regular flow of products meeting required quality standards. It is the difficulty of establishing such a system which has lead some producers in Bangladesh to stop using subcontracting, and others to refrain from starting. Other firms, on the other hand, have found ways of resolving these difficulties. Perhaps the most important thing which could be done to expand the use of subcontracting would be to help parent firms understand what must be done to solve this set of problems, and perhaps to help fund the establishment of procedures which will solve them. Several things may be suggested:

a) Education: potential parent firms need to understand that they must establish effective procedures for maintaining quality and regularity of product flows. Intense competition between suppliers can mean that, unless the parent firms insist on high standards, quality will deteriorate. This means, among other things, a recognition by parent firms that higher quality will generally cost them more.

b) In every case of successful subcontracting, the parent firm has a person to supervise the technical work and logistical relations with each supplier. This person plays a key role not only in maintaining quality but also in training suppliers in production techniques, introducing new product types, etc. This person must be someone who is trusted by the parent firm, probably someone from the parent firm's own staff. In the establishment of new subcontracting systems, AID might cover the cost of such a person for each new relationship (each new parent, for each new supplier), covering 100% of the person's salary for the first year, 66% in the second year, 33% in the third year, and none thereafter.

c) People learn best, and are the most fully convinced, by looking at successes. There are some good successes in this area in Bangladesh. If those people are willing (and I suspect they would be), I would suggest taking groups of 5-8 potential new parents to talk to those who are running those successful systems, to let them ask questions and see how they have solved the problems and benefitted from the increased specialization which subcontracting systems allow.

d) Lists of potential suppliers and potential parent firms. This is the core of the UNIDO approach to subcontracting, going under the general heading of "subcontracting exchanges." This information can be useful in making it possible for buyers to reach out to more suppliers, and for potential suppliers to identify a variety of different buyers of their services. For this facility to be useful, it would need to include more than just a list of firm names; there would also need to be some specification of interests and abilities, both as specified by the firms themselves and as evaluated by an outside observer. In the UNIDO approach, a key operating procedure of the exchange is for the exchange manager to make regular visits to both supplier and buyer firms, to discuss with each the operations of the system, problems met and potential ways of overcoming them. The establishment of such exchanges could be a very useful activity.

The BSCIC credit proposal is restricted to the metals and engineering industries. This makes good sense, as a starting point. If such an activity were established and turns out to work well, then one might consider extending it to other industries, perhaps starting with those which deal peripherally with the engineering industries, such as plastics and wood products. For example, Singer Sewing Machine currently buys wooden tables and wooden machine covers on a subcontracting basis from local furniture manufacturers. Makers of Rower pumps buy plastic parts on a subcontracting basis from small firms in Dhaka. Through links such as

these, it would be straightforward to extend the area of coverage of the activity beyond engineering products, narrowly defined.

4. OTHER LINKAGE AND SUBCONTRACTING ACTIVITIES

While these two projects are the primary ones which have been brought forward for USAID consideration in the subcontracting area, there are others which might be considered at a later date, or if these run into problems or delays.

4.1. Work with Business Associations. Bangladesh seems to be a country of Associations; everywhere one looks, there are associations of producers of this and that. A number of commentators have remarked on this, and on the potential role which such associations might play in bringing improvements to particular sectors of the economy. For example, in their study of the shoe industry, the TIP team called attention to an association of small shoemakers, as a possible organizing focus for establishing a subcontract supply system. We met with a few of the members of that association, and also with the officers of the hosiery manufacturers association in Narayanganj. The fact of the matter is that these associations, as currently structured, are very weak and amorphous groups. They have no authority and no benefits to offer to their members, so the membership lists are virtually meaningless. On the other hand, the country does have a tradition of forming such associations; in many parts of the economy, the associations themselves are already in place, even if they have had little to offer up to now.

What this may suggest is that, if MIDAS finds a particular intervention opportunity in a certain industry or among a certain group of producers, a logical approach in seeking to respond to that opportunity might be to see if there is an association already existing which might be a channel for work in that area. To start from the other end--looking to see where there are associations, then looking for ways of vitalizing them and using them to effect change--is also a possibility, but it seems more likely to lead only to special pleading for special benefits for members of particular product groups or subsectors of the economy.

4.2. Export Promotion. The discussion above has made several references to opportunities for small producers to move into export sales, if they can establish effective links with foreign buyers. We found this to be already happening in a number of cases; more could be done, with the right kind of assistance. As indicated, the World Bank is already active in this area; there are others (such as UNIDO or the ITO) who might be willing to do more, if more assistance is needed, so this does not seem like an area where AID needs to try to become involved. It does seem important enough, on the other hand, to suggest that this area be kept under review, to make sure that the programs being designed and implemented are meeting the needs of small producers, particularly those which rely on either manufacturing or commercial subcontracting.

4.3. Singer Sewing Machine's Cottage Industry Program. Singer Sewing Machine is an interesting company which, around the world, has developed some forward-looking production and marketing strategies. As indicated in the first section of this paper, their production patterns in Bangladesh include use of subcontracting in the production of stands and covers for their machines. They are considering expansion in a variety of directions in Bangladesh, including television sets and bicycle assembly. Their general manager told us that they use subcontracting because it is cost-effective; they don't want to spend their time making tables or covers for their sewing machines, because "they have bigger things to do!"

Singer has also developed a program which they call their Cottage Industry Program, which has been quite successful in other countries, and which they would like to introduce in Bangladesh. The goal for Singer is clearly to spread the demand for their machines. They do this through sales of machines to people who will use them working in their own home. Along with the sale of the machine, Singer offers a training program, to teach people to use the machines they sell. This is fairly standard, in Bangladesh as in the USA. The thing that makes the Cottage Industry Program special is that Singer also pays considerable attention to the specification of products which village householders can make using their machines, and also helps in the marketing of these products. In some other countries, this has involved embroidery machines, and the making of fancy embroidered dresses for export; in Bangladesh, they judge that the first efforts should be aimed at making simpler products, for sale in the national market. Their package proposal includes market research aimed at specifying products for which there is a market, either domestic or export, followed by the establishmen' of marketing channels which will link household producers with those identified markets.

The Singer General Manager is relatively new on the job. When we met him, he was just beginning to get his feet on the ground. He showed us a proposal along these lines which had been developed for Bangladesh by people who had run similar activities in other countries. It involves fairly substantial AID funding. I did not evaluate that proposal in detail. The weakest link of it appears to me to be the marketing arrangements. These are correctly identified as a key problem; I am not convinced that their proposal has provided a satisfactory way of solving that problem. It does seem to be worthy of careful consideration, though, when it is presented.

5. CONCLUDING COMMENT

Bangladesh is unusual in that the government has identified subcontracting as an area of interest and focus. A high-level committee has been appointed, with responsibility for developing a program of work relating to subcontracting and linkages. Unfortunately, the government seems to have a particular perspective on the ways of moving forward in this area, involving expanding the area of government control and regulations to force producers to rely on subcontracting. A well focused

aid program could be instrumental in directing the positive aspects of this interest into more productive directions, aimed rather at encouraging and facilitating the use of subcontracting systems in cases where entrepreneurs find it profitable to do so. With the selected policy and project interventions discussed in this paper, it should be possible to do some effective and useful work along these lines.