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TYPES OF SUBCONTRACTING

A Review of Experience in Some Western European Countries ^{1/}

^{1/} This paper is based on information obtained by the secretariat through discussions with large and small firms and persons engaged in subcontracting and its promotion in Austria, France, the Netherlands and the United Kingdom. This document has been reproduced without formal editing.

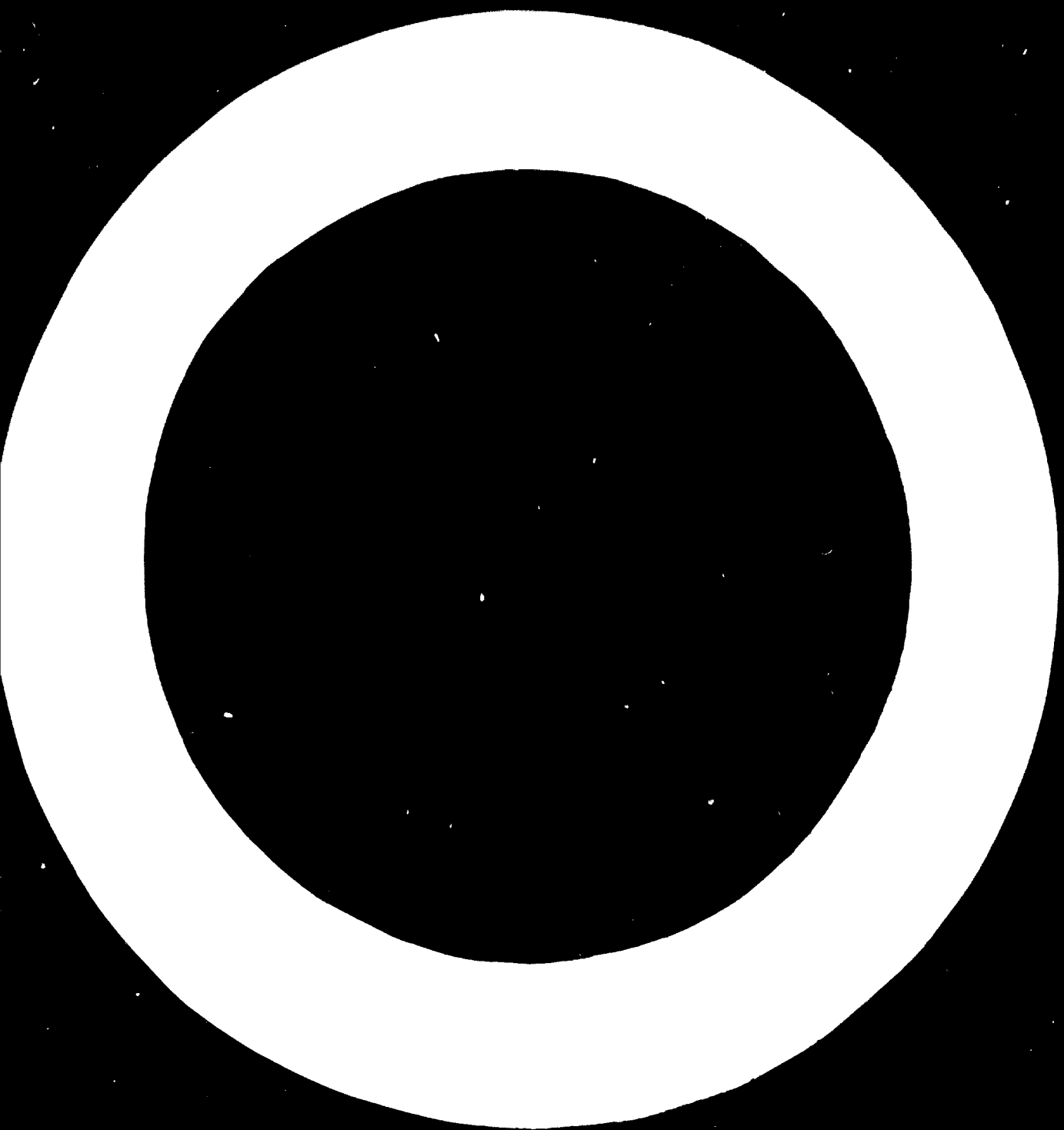


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Introduction

The term "subcontracting" has different meanings to different firms in the industrial countries of Western Europe. Under the broadest definition, there is "subcontracting" whenever a firm or industry or association of composite product enters into contractual relationships with another firm to enable the former to carry out part of its manufacturing program. This very broad definition - which has been widely accepted by several large industrial concerns - views subcontracting as the manufacture of parts or components of a product or a firm other than the manufacturer of the finished item as well as the carrying out of its own contract for certain specific processes or parts of a product or program. Under this view, there would be subcontracting whenever a product being marketed and its parts that have not been manufactured by the firm selling the product, or its required operations in its manufacture that have been undertaken by other firms.

This is undoubtedly the broadest definition of subcontracting and today in some Western European countries, large firms which enter into such contractual relationships on a very large scale would not accept such a wide definition of the term. In fact, several large manufacturers make a sharp distinction between purchasing and "subcontracting". According to them, parts and components that are bought either through the catalogue or through the specification drawn up by the supplier, fall into the normal procurement or purchasing function. As subcontracting, they understand only those contractual relationships with other firms whereby the latter carry out certain operations or manufacture parts and components according to the specifications and under the technical responsibility of the main contracting firm.

To some this difference in approach in defining the term "subcontracting" appears to be no more than a question of semantics. In reality it is more than that. It affects directly the organization within the large enterprise concerned with developing such relationships. It even affects the policies developed by the managements of large enterprises related to the whole question of what the firm should manufacture itself and what it should arrange to have supplied to it or carried out by other firms on its behalf.

Firms that accept the broader definition of subcontracting tend to be those that recognize that, for a variety of reasons, an integration between a large enterprise marketing a complex product and a host of satellite suppliers of items and parts which are assembled into the finished product, is desirable to achieve the most economic and efficient form of manufacture. Firms defining subcontracting within the second and more restricted definition are those that see these contractual relationships mainly as a process whereby firms shed off a certain amount of work which they are either unable to do themselves for lack of suitable facilities, know-how or skills, or because the time factor makes it necessary for them to use the capacity of other firms.

Types of Subcontracting

Subcontracting may take three distinct forms: economic subcontracting, specialized subcontracting and capacity subcontracting.

(a) Economic Subcontracting: This term could cover all those forms of subcontracting where it is considered more economic or a means of reducing costs, to have a number of parts enter into a finished product or operations needed for its manufacture, done outside the firm. The most obvious case is where manufacture outside the firm is cheaper because the quantities required do not justify the investments needed to produce the item in the most efficient manner. This covers both situations where additional equipment may be needed or where, although the equipment and labour needed are available in the firm, tooling or set-up costs are prohibitive cost-wise in view of the small batch size.

Some of these cases are clear-cut and subcontracting is obviously the more economic choice since the cost difference is considerable. However, according to some large firms, there are many cases where the decision on which choice is more economic is not so straight-forward, being influenced by such elements as costing systems, interest policy, depreciation schedules and even by such complex factors as capital availability and the existence of alternative investment possibilities. Some managers of larger contracting firms have gone as far as to state that, given certain policies, some economic studies show that either of the solutions - subcontracting or production within one's own factories - can, under different circumstances, be the more economic. It is because of the difficulties of making a purely economic

decision based only on costing information in a few cases confronting management that it is preferable for firms - particularly the larger ones - to take a long-term point of view and to base their decision on clearly defined policies. This is preferable to a merely operative approach where ~~ad hoc~~ decisions are made on the basis of figures of alternative costs which are often not taken into ~~account~~ **accounted**.

Nevertheless, there are in reality cases where the subcontractor can offer attractive economic conditions. The price structure of the subcontracting firm - especially the smaller one - may actually be based on lower costs. It is well known that smaller firms have the same advantage of lower overhead and often lower administrative costs which can be a decisive factor in small batch production. It is claimed sometimes that the attractive prices offered by small subcontractors are due to lower labour costs. Many firms in Western European countries deny that small firms pay lower wage rates and claim that advantages from this factor are limited to labour in less developed regions. The tight labour market and the power of unions are cited as reasons forcing the smaller industrialist to pay wage rates competitive with the large firm if they are to attract and retain the skilled labour they need. In fact, some small industrialists maintain that they are often forced to pay higher wages than the large firm to compensate for less security and inferior working conditions. The representative of at least one large industry in the United Kingdom corroborated this by stating that his company had developed a policy to subcontract work only to firms more than 50 miles (82 kilometres) from the plant because they had encountered the unpleasant experience that skilled men had been lured away from the firm by more attractive offers from smaller factories who had been given substantial subcontracting orders in the past by the large firm.

However, labour costs can be lower even when firms pay comparable wages. This is the case where the smaller subcontractor provides far less amenities or fringe benefits for his workers than the large firm. In Europe today in some countries these fringe benefits may reach a high proportion of the wages actually paid to the worker and impose a heavy burden on the large

employer. Small firms usually manage to keep fringe benefits to a much lower figure - often no more than the statutory obligations of social insurance payments and vacation - and so labour costs (per hour) become appreciably lower than in the large firm, thus providing an economic advantage for the subcontractor, always assuming that the productivity in the small firm is not so low as to cancel out the advantages of the lower hourly labour cost.

Probably the most important factor creating situations wherein the price quoted by a subcontractor appears appreciably lower than that at which the item could be produced or the operation be carried out within the larger plant, is the preparedness of the small contractor to accept a lower profit margin. In some cases this may be more imaginary than real due to faulty estimating and a poor costing system. Also quite often in small owner-managed family firms, overheads, managerial salaries and profits become intermingled so that it is difficult to distinguish between these items, especially with inadequate costing systems sometimes deliberately left vague to allow manipulations for tax purposes. Whatever the reasoning or explanation, it is a fact that the considerably smaller margin allowed for between prime factory cost (labour plus material costs) and price in the case of smaller firms in relation to large firms is a principal reason for the economic advantages of subcontracting.

Although all managers of large industries will state categorically that they subcontract work only "if it pays to do so", further examination often reveals that purely economic motives - or rather the narrow objectives of saving money in a particular situation - are often of secondary consideration in the decision to subcontract. Most subcontracting today in industrialized countries seems to be of the specialized or capacity types.

In the case of subcontracting for economic reasons, technical assistance from the larger contractor to the smaller subcontractor is less prevalent than in the other types of subcontracting. Inevitably, when the decision to subcontract has been based principally on a desire to save money, technical assistance figures as a cost item for the larger firm, which can virtually eliminate all the savings. However, there are cases where technical

assistance is given and it is still considered economic to subcontract, but clearly this is mostly where the cost differences are considerable.

Before leaving the subject of subcontracting for economic activities, it is worth dwelling on a special firm which this type of subcontracting has increasingly in the policy of very large concerns. In very large firms of the giant conglomerate type have small or even smaller firms carrying out practically all the manufacturing operations which are producing every item in their product line, at least up to a certain extent. Yet the management is reluctant to direct its own manufacturing efforts to rely exclusively on the production facilities available within the firm. In fact the trend is increasingly to give freedom of decision to the managers of individual plants or product divisions on whether to order within the firm or to subcontract out. It is believed that in this way each separate plant or production unit - even though part of a larger concern - is able to procure its materials, parts or supplies and to have its operations carried out at the lowest costs even when this means by-passing available facilities within the firm and subcontracting to smaller firms outside the conglomerate. This policy is usually followed not merely to give a secondary cost advantage but rather to ensure that all facilities within the firm are used at competitive production costs. In that case, subcontracting of an economic type is used with the long-term view of forcing all production units to be constantly efficient and competitive.

(b) Specialized Subcontracting: In this case the large enterprise gives out work to an outside firm because it feels that it does not have adequate technical know-how to solve the manufacturing problems itself. It may not be able, alone, to draw up the full specifications for the item concerned or, if it is able to do so, it may lack the skill or equipment to meet the specifications. Of course there are many cases where specialized subcontracting has also economic overtones, namely it is also more economic to give the work out. However, the primary reason for subcontracting is, in this case, the fact that the subcontractor is more specialized to carry out the work than the main contractor who in many cases is engaged in a different field of activity. Sometimes, the subcontractor may hold patents which give him exclusive rights to the production of certain items.

As industry develops, this becomes more and more the main type of long-term subcontracting. It is one of the inherent advantages of smaller firms that, when properly managed, a small plant can develop a higher level of skills within a narrow field of specialization, especially in situations where the dependence on special skills is great. Thus, within the engineering industry, there are a variety of activities such as foundry work, forging, various heat-treatment processes, plating and metal-finishing, specific machine operation, production of tools or intricate metal parts, all of which can fall into this category. Certainly, in some cases, it is possible to mechanize, or even automate some of these processes, but the overwhelming majority of activities mentioned above are still carried out on the basis of technical "know-how" and the skills of worker and technicians. In all these fields, production units covering the operation within large industrial organizations have a special advantage vis-à-vis the independent small specialist firm which enjoys such greater flexibility in its production programs. For example, a foundry, forge or plating shop operating as a department or division of a large concern is free to seek subcontracting work outside the firm to utilize its full capacity. Even then, most of such specialized facilities are not equipped to undertake all the different types of work in their field that may be required. In such circumstances it is not surprising that many large firms find it financially advantageous not to use fully facilities of their own and subcontract some of the jobs involved.

In specialized subcontracting, the problem of quality and technical responsibility is paramount. In some cases the price factor, although ever present, is a secondary consideration. Some large firms which are technically equipped for this purpose prefer to have all work done to their own specifications, claiming that since the final product is sold under their trade name or since they received the order from the customer, as the case may be, they and they alone can be held responsible for any complaints from the customer in respect of defective workmanship or failure to function as laid down in the specification.

There are representatives of large firms who are largely unaware of prime technical responsibility to justify a policy of subcontracting only when there is no alternative. They are content with the concept of the concept that the product is the responsibility of the contractor, and that the technical responsibility of the firm is to design and manufacture all the manufacturing within its own plant. The technical staff of the firm is not sufficient for the design and manufacture of the product, but they are convinced that they will do a better job of it themselves, if they are itself, subordinated firm to the contractor. The contractor firm, as regards specification, workmanship, production, delivery and quality control.

Although this situation is not exceptional, it is common in contractors who are content to act at least to some extent as a partner of the large contractor, this is not to be confused with the situation where we feel that they are in a position to contribute to the design and manufacture for the operation they undertake, and that they will be able to control their work. There is no doubt that the best technical relationships are those where there is a technical partnership, in which the large contractor has specialized expertise to give - the large contractor is usually the greater technical resources which make him the design and control the work product, and the smaller subcontractor, within the narrow field of the operations he is undertaking, has acquired experience and depth and specialized skills.

Large firms that have developed their relationship with a contractor out of a positive policy of subcontracting are more likely to realize that it is in their interest to foster such a partnership, with their subcontractors. Thus, when subcontracting work to specialized firms, a large contractor firm is prepared both to put all their own technical staff at the disposal of the smaller subcontractor to help solve any problems that may arise, and also to listen to any proposals of the subcontractor for improvements in design, specification, tooling or work methods which may even have an effect on the whole final product. In the

case of a few large contracting firms, co-operation even reaches the level where they consult technically possible subcontractors and solicit their opinions in drawing up bids for large engineering orders. One such large contracting firm admits that its subcontractors had helped considerably in showing ways of reducing estimates for the construction of types of engineering equipment, thus giving the large firm a better chance of obtaining certain important orders.

In some cases the large contractors extend certain forms of technical assistance to the smaller subcontractors. The assumption of full technical responsibility by the contractor or the granting of technical consultations are a form of technical assistance by the large firm to the smaller one. But this does not mean that the large contractor will do what an inexperienced subcontractor now has to carry out himself. Many firms in Western Europe, at least, are not disposed to carry technical assistance to this point.

They maintain that they are ready to adopt a helpful and understanding attitude if the subcontractor is faced with technical problems and turns to them for assistance, but at the same time make it clear that their aim is to find subcontractors who are specialized in the work and where such technical problems are the exception rather than the rule. Also, the opinion of many industrialists is that technical assistance by the large firm to the smaller one is expensive and would be justified only if there were no specialized subcontractors available (as is the case in certain developing countries) or where the economic advantage of subcontracting is very considerable for the large firm. The latter situation is probably true in Japan, but less so in Europe.

Notwithstanding the difficulties that may arise in the relationship between a large industry and its specialized subcontractors, this type of subcontracting is probably the most lasting form of association of the smaller plant to the production program of the large industry. It seems to be less affected by changing economic and market conditions than the other types of subcontracting, even though in the long run every firm that lives to a substantial extent on orders provided by large contractors knows that its fortunes are ultimately linked to those of the large contracting firms.

(c) Capacity Subcontracting: Capacity subcontracting takes place when a firm finds it impossible - or prohibitively expensive - to do certain operations within its own factories within the time required, even though the firm would be able to do the work itself if more time were available.

This type of subcontracting often occurs when an emergency situation arises. This may be due to unforeseen factors such as labour disputes, excessive absenteeism, machine breakdown, faulty materials or even just plain bad planning resulting in far too optimistic production estimates. However, not all capacity subcontracting occurs in an unplanned fashion. Sometimes firms deliberately take on far more orders than they are able to handle with their own capacity or quote early delivery dates to obtain a particular order, relying on subcontracting to carry out the orders.

In the highly competitive field of obtaining large international orders for supplying such items as industrial power-generating and transport equipment, the ability to quote short delivery dates is becoming even more crucial than price or even technical competence. (Another equally important factor mentioned by many large firms is that of terms of payment.) As a result, several large firms have fundamentally changed their policy on production and marketing and seek to foster a group of smaller firms closely linked to the large firm as subcontractors. The large firm endeavours to ensure on a one or two-year basis a certain amount of available capacity so as to enable it to schedule this capacity well in advance in preparing for large orders.

One large manufacturer of transport equipment in Western Europe indicated that top management was even considering giving guarantees to these smaller firms that the large contractor will take an option, so to speak, on a certain percentage of the available capacity so that the large firm will have greater flexibility in quoting delivery dates.

This latter type of relationship is still the exception. Most capacity subcontracting is normally on a very short-term basis. One large ship-building firm in the United Kingdom showed statistically that out of over

200 orders given out within a month, 30 per cent had been of an urgent nature requiring the work to be completed within a week. This is not a unique situation. Although such techniques as PERT or critical path analysis are being used more and more by managements of large firms in carrying out large orders, emergency situations are still widespread and the amount of short notice subcontracting increases substantially as firms fall behind in their schedule and face loss of goodwill and even penalties for late deliveries.

As already indicated, capacity subcontracting takes place not only when there is no available capacity for doing the work in the large firm, but also when carrying out the work within the firm would involve increased costs through overtime payments or expensive set-up operations, even though this may also be considered a form of subcontracting for economic reasons. In some countries, Austria for example, overtime on weekdays runs as high as 50 per cent above normal wage rates and, on week-ends, reaches a 100 per cent increment. Situations such as these make subcontracting much cheaper than overtime work. The same argument applies in some cases when the need to work night shifts arises.

In general, apart from the more advanced planning co-operation mentioned above, which is still comparatively rare, capacity subcontracting is the most intermittent of all forms of subcontracting and the one offering small firms the least security. The slightest fall-off in orders or even the failure to secure a single large order can result in cutting off this type of subcontracting. At the same time, there is a possibility that when capacity subcontracting for particular types of work becomes substantial, some managers may advocate, on economic grounds, an increase in the capacity of the large firm itself. From the small firm's viewpoint, the readiness to take on capacity subcontracting at short notice calls for a feat of juggling with scheduling of orders and machine loading which most small industries, despite their flexibility, are not able to perform. The small firm is often afraid to declare that it cannot undertake an order when asked to do so at short notice for fear of losing its place on the list of potential subcontractors of the large firm. The result is that sometimes the small

industry takes on the work and is forced to fall behind on its other orders or deliver the work later than the agreed date, or, as an alternative, to subcontract itself.

In capacity subcontracting time is the vital factor and failure to deliver the work on time is a cardinal sin not to be forgiven by the large firm. Price is often a secondary consideration for the large firm and the work may be lucrative for the small firm, so that capacity subcontracting may be quite remunerative. In most cases where work is wanted in a hurry the large firm is prepared to be generous. The most successful and harmonious subcontracting relationships obtain when the large firm is agreeable to the small firm being adequately compensated not only to cover its costs but also for being available to carry out the work in difficult circumstances. A relatively large subcontractor will usually be able to assess the time involved and to know what is a reasonable price for the work and what is exorbitant. At the same time, many subcontractors realize it would be shortsighted to exploit the situation too much since this might rebound to their disadvantage when work is less plentiful.

This type of subcontracting is very much a local or, at the most, a regional affair. Large firms do not want to go far for their capacity subcontracting fearing loss of contact and control or making this unduly expensive, especially where heavy transport costs might be involved.

It is clear that, although there are distinct differences between these main types of subcontracting, they cannot be completely separated from each other. Some subcontracting relationships may have elements of two or more types; for instance work may be given out to a subcontractor both for lack of available capacity in the large plant and because of the specialization of the subcontractor.

The Subcontracting Relationship

It has been assumed until now in this paper, for simplicity, that subcontracting is always a relationship between a large contracting firm and a small subcontractor. This is of course not always the case. Subcontracting goes on also between large firms and between small firms and there are even

cases where the contractor is a small firm and the large firm is the subcontractor. This, for instance, happens when small firms send products for finishing to the plating division of a large enterprise or order castings from the foundry of a big firm. The industrial structure is so complex today in developed countries that any firms, large and small, seek as a policy to be both contractors and subcontractors. Reference has already been made to the case of the large firm with its own foundry, forge, machine and plating shops that are forced to seek outside work to justify economically the continued operation of the facility in question. Similarly, a small firm may find it economically to its advantage to take on orders which, either in volume or in the type of processes or equipment needed, are beyond its own facilities.

Thus in the reality of the industrial situation in Western Europe, the pattern is widespread whereby one medium or small firm takes on a subcontracting order only to subcontract part of it to other small factories. The attitude of the large contracting firms to this practice differs. Some take the view that this is none of their concern, as long as the main subcontractor to whom they gave the work assumes all the responsibility for quality and for delivery on time. Others do not take so broad a view and introduce a clause in the subcontracting agreement to the effect that further subcontracting is not permitted without prior agreement of the contractor. The reason given for the more restrictive approach is the fear of losing control of the work and diluting responsibility, which can only result in quality and delivery problems.

Yet another reason advanced to limiting further subcontracting is that of industrial secrecy. The subcontracting relationship is necessarily one of mutual trust. Much information on a large firm's order book, its customers and its problems can be elicited through its subcontractors. Competitors have been known to utilize this source of information and some large firms feel that they must know all firms which are going to do work for them and authorize them to do so, even if this is arranged through the intermediary of another subcontractor.

An interesting sidelight on this aspect of industrial secrecy was afforded by the statement of one firm that it was reluctant to subcontract work to a small firm if the latter also took on orders from other large competitors in the same line of business. A strong preference was shown also by other large contractors to have as subcontractors small firms that do not depend for more than 50 per cent of their orders on any single large firm and which also obtain orders from firms manufacturing non-competing products. Apart from the secrecy aspect, an additional advantage claimed for such a policy was that any sharp decline in orders or a recession in the sales of a particular product would not have such far-reaching effects on the economic future of any single small subcontractor. Thus a small firm depending totally on subcontracting from the automobile industry would suffer much worse from a recession in the vehicle market but a firm obtaining at least half of its orders from another branch of the engineering industry would be in much better position to weather these market fluctuations.

A further argument against allowing multiple subcontracting is the reluctance of large firms to allow a subcontractor to judge the technical competence and reliability of the secondary subcontractors. A mistake in the choice of a subcontractor can be very costly, if not ruinous in some cases, and the main contracting firm that bears the prime responsibility for the completion of the order feels that it must approve this choice itself.

The question of mutual confidence is a major issue. Most large firms which subcontract a great deal maintain strongly that the "bad old days" are long past - at least in North America and Western Europe - when large industrial corporations kept their suppliers or subcontractors in a state of continuous "servitude", squeezing them on prices and threatening to drop them from the list with the prospect of financial ruin for a comparatively small failure to keep to an agreement.

Whether the situation was ever as bad as sometimes painted is difficult to say, but it seems that a more harmonious relationship now exists in most industries between the large companies and their suppliers and subcontractors and the former have learned that only by creating an atmosphere of confidence will they get the best results. They are therefore more prepared, within

certain limits, to offer help, guidance and understanding of the problems of the small suppliers or subcontractors. The limits are imposed by the fact that the big companies work under great pressure of competition, are not charitable organizations and must insist on high standards of performance on the part of those who work for them.

An example of what is considered fair treatment in this relationship is provided by the attitude to penalties. Many important orders are now given to large firms with a strong penalty clause governing payment of indemnities (sometimes of substantial nature) for late deliveries. Some large firms in such situations introduce penalty clauses in their subcontracting arrangements claiming that they have to protect themselves in this way. However, of even greater significance as an indicator of the attitude to the subcontracting relationship, is that some of these firms, when faced with a penalty clause for late delivery, insist on balancing this with a "bonus clause" offering a special premium for early delivery, especially when this is of advantage to the large contractor. Similarly, some firms state that they are always ready to grant their subcontractors at least the same payment facilities (advance payments, credit arrangements etc.) they are given by their own customers, and even try to improve on these terms. Payments are often cited as a problem in subcontracting relationships. Some small firms complain bitterly that they have to wait an inordinately long time for the settling of debts incurred by the large firms for subcontracting. However, most larger firms deny this and state that they settle their accounts promptly - often by the month - and even make advances when justified for materials purchased, preparation of tools or dies or for large orders taking longer periods to complete. The complaints on long delays seem to be directed against a few larger firms, including certain enterprises run by government or public authorities, but even here a change for the better is noticeable in some places.

Confidence does not mean only that the contractor believes that the subcontractor will do everything in his power to uphold the letter and the spirit of the agreement between them. It also means that all the details of orders, specifications, designs, information and such practical items

as tools and dies provided by the large firm will not be abused in any way or pass into the hands of third parties, whether they be potential competitors or other small industries which may be able to use this material in some way. Large contracting firms rightly lay great stress on the integrity of the subcontractor, this is as much a factor as technical competence in the selection of the subcontractor. Several large firms state categorically, that they do not have an understanding view of a one-time default on a delivery date or quality standards, even if there is a case of extenuating circumstances frankly explained, but never when there has been an abuse of confidence.

The attempt to take transitory advantage of some information passed on to it as a subcontractor may afford a small industrialist some temporary benefit. In the long run it will destroy confidence in him on the part of all large contractors who quietly develop a "rapevine" between themselves to "blacklist" those who indulge in such practices. Many large firms maintain contact even with their greatest competitors to ensure that subcontractors do not benefit from their malpractices. There have been cases where specifications, technical data, drawings or even tools given out for subcontracting purposes have been used by the subcontractor to produce a copy of the item in an effort to by-pass the large firm in some way. In a few cases the small firms have prospered in this way, but for each one that has, several others have lost their subcontracting role without achieving any alternative compensation from the action.

Selection of Subcontractors

There are several factors that influence the selection of subcontractors. At the least important is the organization within the large contracting firm itself, which may reflect the distinctions between the different types of subcontracting.

Some large firms have a well-organized centralized purchasing division staffed by technically qualified experienced buyers, purchasing agents or procurement officers, as they are variously called. Sometimes each deals with a wide range of items but, in other cases, they are specialized in technical groups such as electrical, mechanical engineering etc. In such

a purchasing organization the responsibility for subcontracting may be allocated according to the specialized responsibilities of the group. Thus the subcontracting of a mechanical part would naturally be handled by the purchasing officer or buyer responsible for mechanical items. Such an arrangement has the advantage that a closer relationship and a common technical language develop between the large firm and a group of subcontractors. Although there is recourse from time to time to the engineering, technical or design division, as the case may be, technically specialized purchasing personnel are much better able to assess the capabilities of a potential subcontractor and to ensure that there are fewer misunderstandings on orders and requirements.

In such circumstances a well-run purchasing organization maintains accurate up-to-date data on firms in the region and even sometimes cards or files indicating what they are able to manufacture, what operations they can undertake and generally some comments on the firm in general, its management and its reputation. Some large firms, dependent to a great degree on suppliers and subcontractors, keep very complete records on firms which act, or potentially might act, in this capacity. There are critical surveys of any firm wishing to be considered as a subcontractor, giving details based on on-the-spot visit and discussion, on equipment, work undertaken in the past, management systems, level of skills of workers, impressions and information on safety, housekeeping, labour relations, financial integrity, planning systems and so on. Records are kept of all subcontracting experience with the firm, relating to performance, delivery dates, quality as well as prices quoted in comparison with other firms.

All these data assist the purchasing unit to choose a reliable subcontractor. On the basis of the information in the records, subcontractors may be rated so that firms with top rating are first choices. Firms with top rating can be given work without tendering or recourse to special authoritative firm committees or other departments. Firms with lower ratings are only given work intermittently when top-ranking firms are not available. Orders to lower rating firms are subject to committee approval.

Not all large firms are as well organized and some are content to leave decisions to the discretion of the purchasing group based on personal contacts. However, practically all firms have safeguards in respect of competitive quotations for work above a certain fixed value and special procedures for approval of new subcontractors.

In some engineering firms capacity subcontracting is taken away from the purchasing or procurement departments. The responsibility for this is given to a special subcontracting group within the production planning and control department. In this way subcontracting officers with practical experience of the work to be given out schedule the work to outside subcontractors as though the facilities being utilized were an extension of the capacity of the large firm itself. These subcontracting officers maintain liaison with the subcontractors, iron out difficulties and ensure effective follow-up as regards delivery and quality.

Most large contractors maintain a roster of approved firms and claim to have an understanding attitude towards those firms within the approved list which fall below acceptable standards of performance. Contractors maintain that if a small firm, which has performed satisfactorily in the past, slips up on delivery or quality standards on a particular order, they would attempt to find out the reasons and if the situation warranted, might try to "give the firm a rest" for a limited period but would definitely not "black-list" the firm, unless the failure was repeated more than once. After two or three such experiences, a firm might be dropped to second or third rating. Of course the operation of such a system depends on the availability of qualified subcontractors. Many large firms complain that when work is plentiful or urgent they have to be satisfied with subcontractors who do not reach the highest standards.

A special difficulty arises when new small firms try to obtain work from a large firm that already has its regular subcontractors and is satisfied with them. Certain large firms admit that they often do not pay enough attention to the claims of newcomers who satisfy minimum conditions and who seek to break into what amounts to a sort of "closed shop" of subcontractors. One large engineering firm in the United Kingdom states that in order to

widen its circles of subcontractors it keeps some simple orders for new subcontractors with a view to trying them out. These first orders are critical. If performed satisfactorily, the newcomer can hope ultimately to receive larger orders and finally become a regular subcontractor. Except when capacity is in very short supply in a district, unsatisfactory performance on a first trial order can postpone indefinitely the hopes of regular subcontracting work.

Subcontracting Exchanges

One of the methods which is arousing interest as a means of expanding the volume of subcontracting is the subcontracting exchange. The first "subcontracting exchange" (bourse de sous-traitance) was set up in Bordeaux, France, in 1960. Later a network of such exchanges was established in France and, with French assistance, five exchanges were set up in Spain. Similar institutions are also to be found in Belgium, Denmark, Holland, Sweden and the United Kingdom and consideration is being given to setting up exchanges in Greece, Israel, India and Turkey, as well as in some South American countries.

Stated briefly, the function of an exchange is to bring into contact enterprises which want to subcontract out work and those that have the capacity and the ability to carry out such work.

Despite the elaborate records that some large firms maintain, they may be at a loss to know who can carry out for them a particular operation or manufacture some component. An exchange offers help both to the contractor and to the small industrialist looking for work to utilize his capacity. Because exchanges work predominantly on increasing capacity subcontracting, in the United Kingdom they are usually referred to as "capacity exchanges".^{1/}

Often all that is needed is an information system whereby those who have work to give out can locate those who have the capacity and equipment to do it. This is covered to some extent by the issuing of regular bulletins

^{1/} A full description of the operation of a "subcontracting exchange" is given in the special paper on the subject, "The Subcontracting Exchange", by E. Edwards (ID/WG.41/9 - CD/PME(69)II). See also "Subcontracting - its Role in Industrial Development", pages 36 and 37 (ID/WG.41/2 - CD/PME(69)4).

or registers by organizations giving information on firms, on their equipment and on the work they are prepared and able to undertake. The Engineering Industries Association and its various regional groups in the United Kingdom issues a handbook of itemized products and equipment of firms with information on available capacity. Some information is also given as to what firms are able to do on the basis of past experience. However, this information does not usually indicate exactly how much capacity there is available in a given period or any details on costs. This is a matter that still has to be followed up by a firm wishing to contract out work. The Manufacturers' Association in Copenhagen and the Swedish Metal Manufacturers' Association also put out information of this sort, but apparently include more detailed information on the capacity available; thus, the operations of these associations come closer to those of an exchange.

Some thought has been given in different countries, notably in the United Kingdom, to the establishment of a large computerized information centre whereby firms would be able to obtain information quickly of firms throughout the country that could carry out particular subcontracting work. The Ministry of Technology in London, feeling that this matter deserved further study, sought the help of a well-known firm of consultants. The findings of the consultant firm were that there did not exist in the United Kingdom sufficient demand for such centralized information and that the existing channels were adequate to deal with most of the problems. The findings seem to show that subcontracting exchanges are particularly useful for solving capacity subcontracting problems, that is, to meet emergencies with short delivery dates. There is a limited field of work for exchanges having the technical competence for promoting specialized subcontracting, but the surveys show that in the course of time, after an initial contact, the larger firms maintain their relations with the specialized subcontractors without further recourse to the exchange. Special situations do arise from time to time, for instance when a large new complex of industries develops in an area and needs to establish first contacts with potential subcontractors in the district. This is what happened to the first "subcontracting exchange" for the Bordeaux area which, after several years of successful operation, ceased functioning when the contacts it had helped to create developed further

without need of an intermediary. After a time the main assistance that such exchanges can offer is to facilitate short-notice subcontracting.

Subcontracting through exchanges appears to be very much a regional business. As stated earlier, most large contractors indicate that they prefer to deal with firms located close to their factory for reasons of cost, transport, control etc. Thus clearing house functions or subcontracting exchanges would generally work mainly on a regional basis.

This is particularly borne out in the operation of one of the successful subcontracting exchanges, that at Nancy for the Eastern region of France, particularly the province of Lorraine. This subcontracting exchange has not only survived but continues to play a successful role because it has become rooted in the regional organization of the engineering industry of the province. The director and his small staff have become accepted as a place to turn to for quick and accurate information and advice on where and how subcontracting can be given out. More important still, from the point of view of the small subcontractor, the exchange advises not only where to find work, but also how to make and present estimates and generally provides helpful advice and guidance on inter-industry relations.

The amount of work available for subcontracting and the readiness to put confidence in an intermediary may vary from country to country and from district to district. However, in almost every district with a reasonable base of industrial development - and this applies also to many developing countries - there is a need for more information on which firms exist and what they are able to do, on their reputations for performing to specifications and on time, and on the capacity they have available for work of different types.

This need was even more emphasized in discussions with large international corporations engaged in setting up manufacturing facilities in developing countries. Large automobile manufacturers have surveyed certain developing countries to find out what amount of work could be undertaken through local manufacture of components and the carrying out of certain processes before

embarking on an investment in an assembly plant for vehicles in that country. Large radio and television manufacturers faced the same problem and also firms undertaking important development projects such as the construction of power plants, chemical factories or other large industrial undertakings. In all these situations the firms concerned have been pressed by governments to manufacture as much as possible in the country and to utilize all the facilities available. Some of these large companies maintain that in many cases those who handle the negotiations on the part of the developing countries do not fully grasp the difficulties inherent in the production of a piece of electronic equipment, an automobile or part of some complex chemical plant. There is therefore a tendency for these government officials to point to the abilities of various of their local entrepreneurs and to claim that a greater part of the operations can be performed locally without having any definite information on what the real capabilities of local manufacturers are. There is no doubt that a more reliable information system, giving detailed data on the existing firms and on their capacity and ability, will help foreign firms that usually have to grope through costly trial and error to find manufacturers able to collaborate in their production programmes. This is, of course, in addition to the domestic need of these countries to provide clearing houses between local manufacturers of different sizes in order to achieve a better utilization of existing industrial facilities through a greater volume of subcontracting.

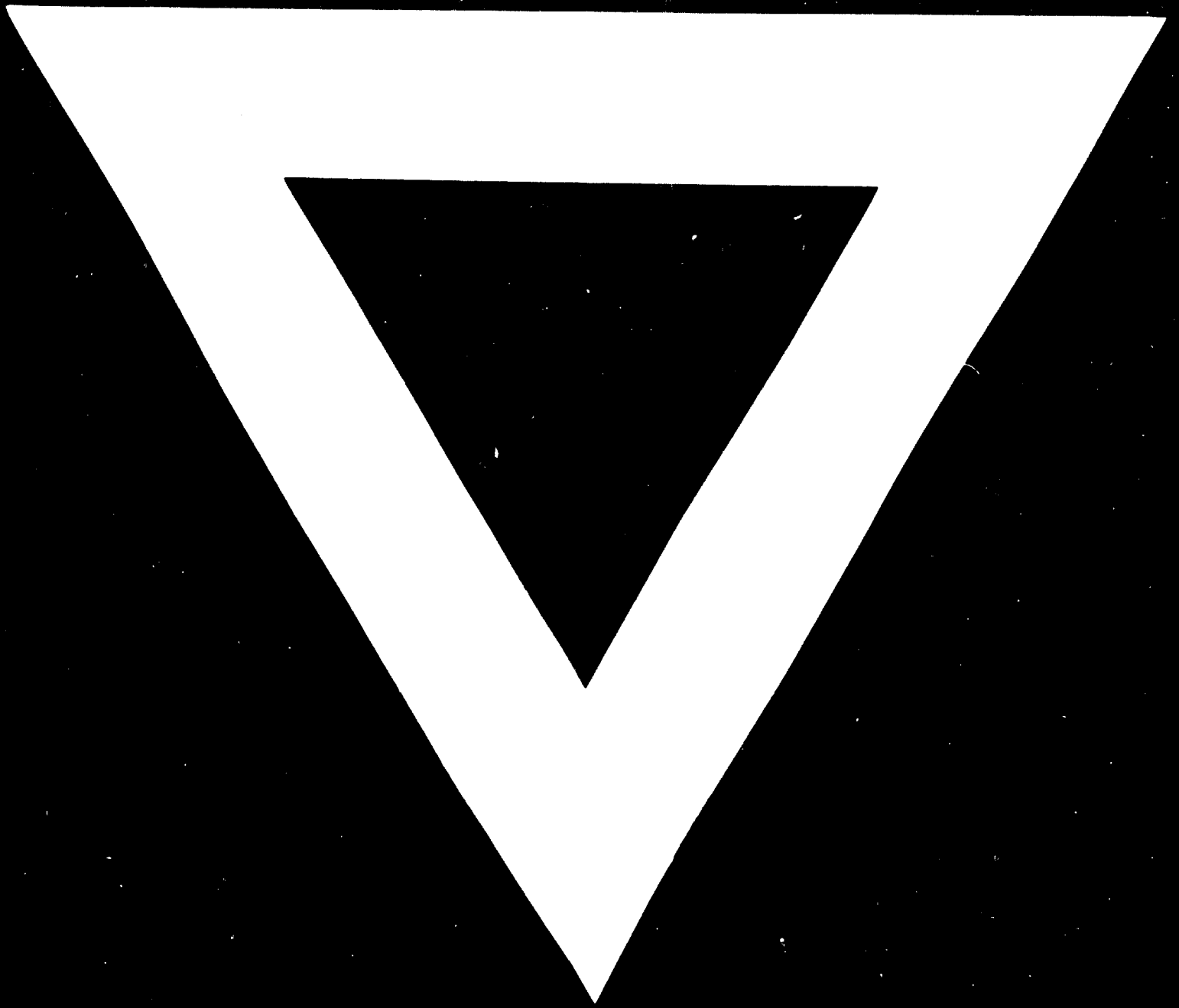
Concluding Remarks

There is no doubt that the less industrial tradition in a country, the less evident the atmosphere of mutual confidence which is essential for establishing healthy subcontracting relationships. The lack of mutual confidence is further influenced by the absence of accepted standards in respect of such vital factors as quality, delivery dates, financial transactions etc. For these reasons it is unlikely that any subcontracting exchange or clearing house that puts two firms in contact and leaves them to negotiate contracts between themselves would play a significant role in developing countries unless the large firm or some public institutions are ready to take the long-term view and are prepared to offer guidance, technical assistance, and to evidence a patient helpful attitude.

It is probably true that in the final analysis such a development depends more on the large firm than on the small ones. Some large international firms are prepared to accept subcontracting as the price of entering into the market of a developing country and to achieve the good-will of the government and industry of that country. Many large national entrepreneurs in the developing country are still struggling to achieve higher standards of management and technical competence, and are not ready to adopt such a long-term point of view.

A feeling of insecurity, a lack of trust in the small firm, and a desire to be "master of his own house" often lead large manufacturers in the developing countries, and sometimes also in the advanced countries, to rely on their own facilities as much as they can and to subcontract out work only when they have no other alternative. In such situations government pressure - and even compulsion - may play a role in changing this attitude at least to overcome a difficult phase in the development of such relationships. In the long run, it is only if small firms improve their standards and win over the confidence of the large manufacturers, that subcontracting will play fully the role in industrial development that it deserves.





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