Peace Initiatives through Industry Strategic Alliances and "Global Ancillarisation"

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INTRODUCTION

The world has experienced extraordinary changes that have affected the economic prospects of both developed (centre) and less developed (periphery) countries when the last century ended. Emerging market economics, with weak institutions and political maneuverability, cannot be expected to grow crisis-free in a world of unrestricted capital mobility and floating exchange rates. Even developed countries face problems in implementing successful policies for stable growth. All of these developments raise security concerns and prescriptions for peace, therefore, will have to reduce the anguish emanating from the centre-periphery economic divide and so involve all encompassing initiatives involving the larger-smaller nations' economic relations.

Economic integration is taking place through new formed power for firms, to collaborate and compete globally and the implications for peace. The enabling lever is not energy, but software. Outsourcing and subcontracting are now common. SMEs in symbiosis with large firms are usually regarded as activities with high investment potential. It is apt to suggest that ancillarisation is the answer for an integrated international and regional policy. Moreover, this hypothesis when extended might indeed determine the new economic order; 'smaller nation – larger nation' nexus. Transactional Corporations only indicate that alliances are crucial and will possibly determine tomorrow's economic order.

Entente — striking of an alliance — is a responsible part of every good strategist's repertoire. Inevitably, internationalization compels to address the following strategic issues; is the internationalization of operations necessary? Should firms manage elements independently or as an integrated holding? How can strategic alliances determine future market sharing? In the international arena firms no longer compete among themselves within the confines of their national boundary.

The Analytic Hierarchy Process (AHP) methodology has been applied to the problem of source/vendor selection taking into consideration the associated risks. The supplier selection is possible by using a mean variance framework as in portfolio selection based on estimation of source/vendor rating by AHP.

Automation is here to stay and faster the business becomes automated, faster it will reap the benefits of the great I.T. advantage. Especially in a nation like India where IT sector is at its maturity and is a sunrise industry, like the theory of economic synergy creation across functional boundaries of subsequently located business segments. The small scale industries use the IT in their favour by rapid automation of their business practices and Business Process Engineering (BPR). Integrated ERP systems can improve the regional conglomeration of ancillaries and MNCs compete with one another to gain an edge over other nation's SMEs in international marketing and procurement process.

It is important to formulate a fully autonomous system, for example The Small Scale Systems Integration Model (S3IM). Output of an integrated system is always better than the sum of the outputs generated by the individuals.

The government's role is to provide developmental assistance, improve the business environment and infrastructure, and help establish regional and international linkages. The government should also organize frequent trade mission for SMEs and invite them to trade fairs, so that they have more opportunities to promote their products and services in both established and new markets. To promote global economic peace, global sub-contracting of processes and products is the right option for the mutual benefit of the centre and periphery, and that cross national assembly line supply-chain operations will come to govern the economic security concerns of nations and not belligerent military postures. In this way aggressive market sharing will benefit global citizens with enhanced quality and lower costs for most products and services and create the vested interest for collective growth and prosperity amongst nations as a deterrent to the build up of arms.

SECTION A: FACTORS FOR STRATEGIC ALLIANCES

SMEs are beginning to learn what nations have always known: In complex uncertain world steeped in severe competition, it is best not to go it alone.

Entente — striking of an alliance — is a responsible part of every good strategist's repertoire. Inevitably, internationalisation compels small firms to address the following strategic issues that articulate the firm's preferred relationship with its environment: Is the internationalisation of operations necessary? Should SMEs manage elements independently or as an integrated holding? How can strategic alliances determine future market sharing? In the international arena small firms no longer compete among themselves within the confines of their national boundary. Therefore, prudent strategic alliances and options should at least take into consideration the period beyond the immediate short term. In sum, this will pose the prime variables for the overall decision making in SMEs.

PROLOUGE - The role which SMEs play in the economy varies from nation to nation and reflects the cultural background of the different countries. SMEs are considered to be the cornerstone of a free market economy where free entry into business is a central element. SMEs are seen here as major forces for economic dynamism. Thus socio—political support for (both existing and new) small businesses in India has been — and still is — normal practice.[1] SMEs do not only play a different role in different countries but also in different time periods in different industries in a national economy. In this respect, it is useful to consider Rothwell's [2] (1981) simplified scheme for the patterns of post—war industrial development in which role SMEs in an industry varies as the industry develops from newness to maturity. In this model of industrial evolution three major stages are distinguished:

(a) Dynamic Growth Stage (1945 to about 1964): emergence of new industries such as electronics, synthetic materials, pharmaceuticals petro-chemicals, agro-chemicals based on new technological capabilities that emerged during the pre-war period; production initially in small units; introduction of many new products; rapidly growing new markets, new employment generation (output growth greater than productivity growth).

(b) Consolidation Growth Stage (mid to late 1960s): Increasing industrial concentration; growing static scale economies: increasing emphasis on process and organisational innovations rapid productivity growth; markets still growing rapidly; adequate output growth and productivity growth.

(c) Maturity and market saturation stage (early 1970s to date) highly concentrated industry; very large production units, increasing production process and organizational rationalisation; growing automatisation; stagnating and replacement markets, productivity growth higher than output growth; rapidly growing manufacturing unemployment.

In the early stage of Rothwell's typology, SMEs are seen as seed corn of the new industry. Their role overtime as a major force of industrial development diminishes, partly through the entry of already established larger corporations from other areas, partly through take-over and mergers, but also through successful growth. In the later stages such firms can play another, nevertheless important role as subcontractors to large firms, as suppliers of specialized services and for narrow market niches.

It is worth mentioning that whilst Rothwell's taxonomy may apply to certain sectors, most small firms are not in those sectors. Firstly, most firms are in the primary and service sectors so that the taxonomy does not apply to them. Secondly, even within the manufacturing sector most small firms are in very traditional sectors such as textiles, furniture, mechanical engineering, food. Thirdly, when one talks about the small firm's sector one must be aware that whilst the sector changes moderately over a time the individual firms change rapidly. For instance the high failure rate of small firms is an important distinguishing feature of small firms in comparison with the larger ones.
The important role of SMEs as catalysts of the process of development is often explained in terms of the specific entrepreneurial spirit in this sector characterized among other things by simple organizational structures, faster decision making and specific production organisation. [3]

A very interesting contribution to the discussion on employment generation of small firms can be found in Birch (1979)[4] whose conclusions were summarised in Storey (1982) [5] and the debate led to a research conducted by Brookings Institution results of which suggested that small firms were growing no faster in terms of employment than other sizes of firms in the economy (Armington and Olde, 1982 [6]. In Storey and Johnson (1987) the authors [7] concluded that while Birch overestimated the role of small firms the Brookings procedure led to an underestimate. In their view they suggest that small firms are creating jobs faster than other sizes of firms but at a lower growth rate than suggested by the Birch report. The shift of employment growth to small firms has several explanations. Firstly, large firms have more opportunities to substitute capital for labour. Secondly, small firms are more engaged in markets which are not so strongly affected by international competition. Thirdly, the new international division of labour affects the activities of mature products of larger firms. Fourthly, larger firms tend to be more strongly affected by labour market regulations. [8]

In general, SMEs exhibit relative growth for a variety of reasons. If for example large firms resort to rationalisation of its labour force and shed labour then that means the only option to unemployed is to start a small firm. If large firms also shed functions so that activities which were formally undertaken within the firm are now either undertaken by subcontractors or in small independent firms. Discussing this aspect of Ancillarisation and strategic alliances of SMEs must necessarily become a moot point.

The policy implications of this scenario are also very difficult. What is needed is a small firm's policy that is sensitive to these regional and structural differences.

Liberalisation implies that besides the growth of existing firms, new openings also contribute to employment growth in the small firms sector. Even though detailed empirical research is missing there are businesses generating jobs in producer related and consumer services areas.

It is worth noting that the current mood of globalisation will not only develop high—tech sectors but will place emphasis upon high—quality market goods.

Even when a new firm employs only relatively few workers and thus has only small direct employment effects, the indirect multiplier effects may be substantial.

Many small businesses induce through subcontracting agreements and alliances indirect employment effects. While analyzing Indian economic prospects for the future in general and regional development in particular, such effects have to be taken into account.

What could be proposed for all countries is to establish a Community Information Centre for small firms or a Trading House that can initiate a number of pilot schemes.

Access to such networks also reduces the distance perception especially for SMEs that are located in peripheral areas. Geographical distance is a cost factor having negative impact on both the production efficiency and the sales market. Sufficient venture capital needed for SMEs, not only for expansion but also for enterprise start up. In particular, a regional development fund in backward areas might be useful targeted to the SME sector. The infrastructure provisions and information technology geared to the interest of SMEs are of utmost importance. Training of unskilled labour in SMEs and the establishment of a management labour relations board that can mediate labour problems in the SME sector may be useful. While regional policy should aim at exploiting the 'entrepreneurial spirit' in the SME sector to global policy to internationalize small and medium enterprises must exploit strategic alliances.

Anderson (1982)[9] for example has found that small industries in light-engineering activities can grow very rapidly during the transition from household and small firms to medium sized industries. SMEs in food processing decline significantly as a result of mechanization of processing operations from some agricultural products. Spatially, some urban 'informal' small industries grow while their rural counterparts decline. SMEs serving high income segments grow very rapidly, providing incomes at a

faster rate than that for skilled labour in the formal sector. Similarly SMEs in clothing and footwear manufacturers can grow rapidly through "putting out," undertaken as a secondary income source a subcontracting.

Rapid growth of SMEs over long periods can be best explained by their spatial market dispersion due to lack of adequate infrastructure. This leads to an increase in the amount of sub contraction and local assembly in such activities as forging, founding work, machine-shop processing, and agricultural equipment manufacturing. Subcontracting has been found to improve capacity utilization while it helps larger farms avoid labour problems during economic recessions and payment of uniformly high wages in all or most stages of the production process. Low scale economies in production of differentiated products have contributed to rapid growth of SMEs. The tailoring and garment industries, specialty food products and handicrafts are examples of the industries benefiting from the situation. Product and process development also promote rapid growth of SMEs. Grunwald and Flamm (1985) [10] assign a very important role to labour costs in attracting assembly – type process to less developed nations, when judged by international standards. Yet, industries applying such process are usually small.

In Industries facing significant competition or oligopolised industries facing highly uncertain international markets the most obvious manifestation of this development is the emergence of conglomerates and increasing rates of acquisitions and mergers involving various sectors. Increasing horizontal integration is combined with substantial vertical integration through disintegration and subcontracting to smaller firms, Moreover, differentiated processes can accommodate more than one product's life—cycle and in some cases several parallel product lives and their differentiation.

Another line of thought [11] reasons that the difference between the costs of internallzation (organization, coordination, and control) and the transaction costs of operation via external market determines scope of international activity.

The typology of Miles and Snow [12] can be employed to display the aggressive nature of the firm in its product-market decisions. The four types are 'defenders, prospectors, analyzers and reactors. A defending firm does not search for market opportunities. A prospecting firm does and experiments with potential responses to emerging environment trends, creating change and uncertainties among competitors. An analyzer operates
in both changing and stable environments. In changing circumstances it adopts new and promising ideas. Reacting firms lack the strategy-structure relationship.

In an evolving environment small firms must learn to adopt slowly in the internationalization process.

INTERNATIONALIZAT1ON OF SMEs

The interdependency of firms in many countries cannot be emphasized. Inevitably, internationalization compels the small firm to address the following strategic issues that articulate the firm's preferred relationship with its environment:
1. Is the internationalization of operations necessary? What is the time frame of consideration?
2. What are the constituent elements of a firm's source of advantage which can be brought to bear on the internationalization process?
3. How are they to be identified?
4. Are they adequate for the purpose at hand? How can they be enhanced?
5. How does the firm transform these elements into internationally marketable and acceptable attributes of value?
6. Should the firm manage these elements independently or as an integrated holding?
7. How can internationalization process feed back on the above to sustain the future?

In the international arena, small firms no longer compete among themselves within the confines of their national boundaries. Firms in other countries present rivalry in different tones and content. A key issue is to relate the future position of a firm through its strategy of internationalization to its current performance. In an economic sense, the firm should seek to maximize the net present value of its future stream of returns at a disk-adjusted discount rate. Investment decisions taken now constrain the future flexibility of the firm. Prudent assessment and adoption of strategic options should at least take into consideration the period beyond the immediate short term.

All strategic ideas and plans must be translated into operating programmes in order that desired returns on investment be realized. A control must be designed such that the operating variables will enable the internationalisation venture to run effectively. The main preoccupation of management attention must be to establish credibility with customers and to develop organizational confidence. Once the capability of the functional interfaces is proven in terms of the human and physical elements, international market acceptance of the firm becomes easier, to overcome this barrier and to act prudently. Some examples that are of central concern include : labour skills, language, training, finance, cash flow, hedging for currency risks, transfers and production, and sufficient interchangeability of activities for economic runs, quality, delivery, and materials. In sum, investment choice, managerial control, and operating efficiency pose prime variables for overall decision-making.

THE RATIONALE OF ENTENTE:

In a complex, uncertain world filled with dangerous opponents, it is best not to go it alone. Entente — the striking of an alliance — is a responsible part of every good strategist's repertoire. In today's competitive environment, this is also true for corporate manager. [13,14]

But managers have been slow to experiment with strategic alliance. A real alliance compromises independence and managers don't like that. After all, alliances mean sharing control.

But, in a changeable world of rapidly globalising markets and industries - a world of converging consumer tastes, rapidly spreading technology, escalating fixed costs, and growing protectionism. Globalisation mandates alliances and makes them absolutely essential to strategy.

One must understand that the long-run strategic value of entente is not a cheap and easy way of responding to the uncertainties of globalisation. If expectations are too unreasonable then partners are blamed when tunings don't work as planned and impatience spoils the chance of building a strong competitive position. One must also remember that all the overseas investments and opportunities will be lost if a dissatisfied partner decides to bow out of the alliance or tries to tackle the market on its own.

Alliances are not tools of convenience. They are important, even critical, instruments of serving customers in a global environment. One clear change of mind necessary to make alliance work is a shift from focus on ROI (return on investment) to ROS (return on sales). An ROS orientation means that managers will concern themselves with the ongoing business benefits of the alliance, not just await a healthy return on initial investment. Indeed, equity investments almost always have an overtone of one company trying to control another with money. Most businesses succeed because of motivation, entrepreneurship, customer relationships, creativity, persistence and attention to "softer aspects of organisation, such as values and skills.

An alliance is like a marriage. There may be no formal contract. There is no buying and selling of equity. There are a few, if any, rigidly binding provisions. It is a loose, evolving kind of relationship. Sure, there are guidelines and expectations. There is no expectation of a measured return on initial commitment. Both partners bring to an alliance a faith that they will be stronger together than either would be separately. Both believe that each has unique skills and functional abilities the other lacks. And both have to work diligently overtime to make the union successful. [15]

STRATEGIC RESPONSE

Strategic alliances will be used with increasing frequency in the future because or changes in the skills needed to survive in firms' competitive environments; this is due to the accelerating pace of technological change and the broader range of technological change and the broader range of technological capabilities firms must possess. As more firms are discouraged from undertaking further risky ventures when they cannot recover their seed capital from earlier investments that face shortened product lives, even bitter competitors will be sharing laboratory results to commercialise cutting-edge technologies before they become obsolete. Joint ventures and other forms of inter—firm cooperation will be an inevitable feature of industries where proficiencies in data processing and tele—communications are demanded by customers but possessed by no single vendor.[16] Firms will pool their requirements for products to utilize plants with technologies of very large minimum efficient scale. As deregulation and trade agreements open formerly closed markets to new competitors, firms that fear being left behind will succeed to find allies.

Four procedural responses, based on relating a firm's current position with its future desired state, are proposed. They are:

- the improvement of productivity growth and the strengthening of the managerial system of control;
- the synergy of partnerships and linkages;
- wide sourcing and optimal allocation of resources;
- the need for design and innovation capability.

The first concerns the small firm's current organizational efficiency, the second and third serve to enrich the strategic set, while the fourth is to ensure growth and continuity. They are not serially related. Different firms in different industries and with varying product types may need to consider a weighted and prioritized balance of each response according to the intensity of change in technology and market emphasis.

RESOURCES, SOURCING AND ALLOCATION

Strategy is the degree to which resources used by the firm in its activities are related to each other. Resources in a broad sense refer to the set of assets, knowledge, information, technology, finance, skills, and experience that a firm musters to support its corporate goals. A very important aspect of an internationalization strategy is the choice of resources to be used for the particular target market. To this extent, the performance of a firm is strongly dependent on the nature and the allocation of resources.

It is in the search process for resources that a small firm especially requires broad support from the public and international domain. This is essential because the allocative behaviour of small industry is guided by short—term response to short-term stimuli. With limited resources and multiple constraints, evaluations for allocation decisions tend to centre on a few key aspects of the resource options at hand. A guiding principal is to obtain resources at the lowest possible coat to be deployed for the highest possible return. This is a difficult decision, because to implement a strategy a firm requires re- sources and a strategy is required to enhance resources.

A strong motivating factor and a desirable consequence of establishing international linkages is the expansion of the sphere of opportunities for acquiring resources. Although such linkages are not prerequisite to new directions for resources, they can constitute a crucial step in an expansion process. Significantly, the choice of the mode of sourcing and the end result are conditioned by the goals of the firm. In turn, the cost effectiveness of this choice is shaped by the policies of the nation in which the small firm is based. Expanding to the larger realm, the boundary conditions of national policies are determined by the international mechanisms that connect the availability of resources to the receptivity of the nation.

Categorically, resource allocation is a tool to cope with change and to accrue a long—term advantage there from. Entrepreneur owners of small firms are very close to the process of resource choice and allocation to exploit opportunities as yet unimagined or overlooked by the market. Being directly faced with the extent of risk and uncertainty to which they are prepared to expose the firm, they decide directly on the type and amount of investment to make. If a chance for establishing a niche in an overseas market exists, they deal directly with bankers, suppliers and retailers, other manufacturers and customers. Their judgement heavily influenced by personal preference criteria and perceptions of a viable portfolio of activities for the firms. The effectiveness of good planning and analytical criteria may aid in resource acquisition and allocation; it is, however, the alertness to opportunities and the instinct to commitment that matter.

THE THIRD WORLD DIMENSION

In developed countries companies are facing competition in the global marketplace not only from the NICs' exports but also from Third World Companies though the third world companies are no immediate threat to the dominance of established MNCs on a global scale yet the third world companies do have a distinct competitive advantage in such areas as, for example, construction in the Middle East, Financial Services in some of the Pacific rim countries and in certain areas of manufacturing in the Third World. Large companies find rewarding opportunities in strategic alliances. These exist, for example, in the service sector or where a skilled/semi—skilled but cheap labour force is required, or where governments or multilateral lending agencies require regional experience in awarding contracts under international competitive bidding. [l7, 18, 19].

The potential for rewarding Joint ventures lies in the ability of the First World and the Third World firms to complement one another's specific advantages.

(1) The most distinct advantage of the Third World firm in the International market is the low labour costs, including the cost of management, technical skills as well as unskilled labour. Costs for housing, office space and equipment, administrative and transport are also lower.

(2) The lower cost of supplies and materials from the Third World Countries is also significant. This applies to both the machinery and technology used in manufacturing as well as other inputs that may be required such as, steel or cement.

(3) A third distinct advantage is the appropriateness of the Third World technology. It is labour intensive in a context of high unemployment and under-employment, it requires less maintenance, fewer spare parts and is cheaper. Because of severe competition, the emphasis is on low cost production rather than economies of scale with cheap labour performing many peripheral functions.

(4) A fourth advantage is the Third World firm's first hand familiarity with the working conditions in many developing countries. These conditions include inadequate infrastructure, a large public sector, cumbersome bureaucracies, cultural similarities, work attitudes and the general manner of doing business in such an environment. There are two important aspects of this advantage: (a) Many Third World multinationals operate
ln countries that are ex—colon1es of the same mother country. As such, they have, many legal, accounting, tax, labour and government regulations in common. (b) There is often an established network of family and ethnic connections that give many investors points of access in the host countries.

(5) A final distinctive asset of the Third World firms is that precisely because they do not have a global reach and are from home countries, they are perceived by the host country to pose little threat to political or economic independence. The simplest form of international partnership is the appointment of a foreign agent to market and distribute a firm's product. Of greater importance are other forms where a particular expertise of a firm can be exploited and nurtured for an international presence. Subcontracting appeals to small firms to initiate an inter-nationalization process. By working closely to the specifications of a technologically advanced foreign firm, the local small firm stands to enhance its own

capabilities. Obtaining a license to manufacture and market a product can be considered a more advanced phase in which the small firm is required to possess a certain standard of technological expertise.[20].
Alliances can also be formed for the joint performance of manufacturing, marketing, or research and development activities. Spin—offs from such ventures can result in the small firm licensing to yet other firms. A joint venture is the setting up of a new firm with the partners sharing equity, especially with one firm imparting its technology and know-how for the equity position. If the small firm is sufficiently innovative, this can be a fertile field to amortize returns on investments in innovation. Small firms in such positions may fall prey to large firms in acquisitions, which is certainly not the goal of the founding owner.
The important consideration in entering into a partnership is for the contracting firms to have a clear idea of what the deal is going to achieve and how the relationship fits into each firm's strategic plans. A prudent move is to decompose the large objective into phase wise sub-objectives, each reinforcing the previous one toward the final goal. In this way, firms can adjust and adapt to each other according to conditions that may not prevail as they intended. Should the alliance be dissolved for some reason, the partners can still salvage some tangible results and not lose all the resources, as would have been the case if the firms had gone straight for the sole objective.

SOURCING FROM INDIA:

In the last five years, the number of foreign corporations that want to source from India has grown. Some of the reasons are: (l) Inexpensive skilled labour in India and rising labour costs in other countries (2) Ready supply of raw materials such as cotton, silica, potash, marble and many ferrous and non—ferrous metals.(3) Western companies which operate in polluting industries have no option but to source from countries like India, where pollution norms are less strict.(4) Most importantly, for many foreign companies using India as a manufacturing base provides valuable experience which they can use later to enter the domestic market.

The Indian partner stands to gain in many ways: (1) Export earnings in hard currencies; (2) It provides them with specialised technology which they can later use to sell the BSIG or similar products to other foreign firms. (3) Sometimes they get to use foreign brand names. (4) In serving the demanding customers, the firm acquires valuable experience and skills. (5) New possibilities for global strategic alliances are thrown open.

SECTION B : RATIONALE & EVOLUTION OF SUBCONTRACTING

Globalisation can help to reconcile the right, basic and constitutional, of both the developed and the underdeveloped countries. All the players are initiated into a humanist world—view. A progressive society is nurtured not only by the emergent independent thinking people; there is also need for right thinking people One who knows the values of interdependence, co-operation, sincerity and justice in the context of self-development.

SMEs in symbiosis with large firms are usually regarded as activities with high investment potential. Would it not be apt to suggest that ancillarization is an answer for an integrated national as well as regional policy. Moreover, this hypothesis when extended might indeed determine the new economic order; smaller nation; larger nation nexus. (21)

Major corporations in the United States and Western Europe have been experimenting with "strategic alliances " in the high-tech field It involves acquiring part ownership of a foreign company by buying a small percentage of a MLT (Mezzanine floor levels of technology) or H T foreign company. There is sharing of the equity ownership, management research and development, technology, manufacturing, marketing and indeed the markets themselves. The critical needs of additional working capital and inexpensive manufacturing facilities have demonstrated the potential for establishing strategic alliances between SMEs at the MIT level in the USA and Asia. Transactional Corporations only indicate that alliances are crucial and will possibly determine tomorrow's economic order.

'Small Industry' as an integral part of our national economy has its own place in industrial development. Our planners appreciated that the national resources can best be put to optimum use only through the mechanism of a balanced distribution of capital and resources between small and large scale industrial sectors. Any lopsided growth of the organized sector will only unduly limit the prospect of larger employment generation, for which the scope: is far wider in the small scale sector as the latter enjoys amongst other advantages, a very favourable capital employment ratio. Promotion of sub-contracting ancillary units in the small sector is therefore, required to be given due priority as much in the interest of the small scale sector as in the interest of the national economy.

SUBCONTRACTING

Subcontracting refers to a type of inter firm relationship where large firms procure manufactured components sub-assembles and products from a number of small firms. In some cases subcontracting is associated with 'job-work' where a 'parent' firm provides the necessary raw materials to small firms which return these materials after turning them into the required form (as per the technical specification), at a predetermined rate. These transactions between firms of differing sizes are often collaborative relationships.

In more general terms sub-contracting refers to specific aspect of the organization of industrial production where large and small firms coexist (with a high degree of specialization) with informal cooperation in production and sometimes in investment decisions as well. In the national context such cooperation is usually achieved by concentration of factories in small geographic regions minimizing costs of transport and information flows, for reasons of economy, large industrial enterprises tend to shift the bulk of their work load to feeder industries.

ADVANTAGES

The concept of ancillary development has emerged out of fundamental principle of division of labour and optimal utilization of resources between the large and small units. This is particularly true of the machine building industry where a large number of relatively small units can specialize in a very limited range of manufacture to economize on resources, siding industrialization. Such productivity increase and relative deepening of capital goods could have a multiplier effect on the pace of industrial development. When the scale increases it becomes economical for a number of specialized firms to start operation, which in turn, tends to reduce average costs.

However, in many cases it is not the total volume of production alone that is crucial but the batch quantity of production as well. The extent of farming out would be positively related to batch quantity.

The idea of this mutual inter dependence is vested in the concept of ancillary industries development programme. The large scale unit has a key role to play in the growth of small units by way of offering assistance (technical, financial and commercial). In this context, functioning as an ancillary to a large unit provides the small unit an assured market for its products. Since workers are mostly organized on the basis of factory, firm or industry—wise solidarity, the large units can circumvent this challenge by sub-contracting and enlisting the cooperation of small entrepreneurs and thus containing the trade union power. The economic logic of household enterprise seems to be such that it appears to transcend or even negate working class consciousness. These small enterprises, while faced with considerable difficulty in raising capital, have access to cheaper labour practically unprotected by labour legislations.

STUDIES IN JAPAN

(a) Japan is an outstanding example of a country which has involved a very effective ancillary ` development programme (nearly 50 percent to 90 percent of inputs in Mitsubishi and Nissan are supplied by ancillaries).
(b) Several studies indicate that larger Finns provide raw materials and financial assistance to small firms in return for an assured supply of manufactured products and components. Such assistance was probably an effective method of 'typing' small entrepreneurs to exercise control over them, and (c) Hence, unlike in West European economies and the United States up where larger sized plants predominates the industry wise distribution of factories in Japan is quite even across different employment-size classes (Ishikawa 1968).

INDIAN EXAMPLE

Early studies on industrial development showed that sole—proprietorship large firms produced their requirements with own firms, preferring integrated plants in spite of under utilized capacities and so did small metal units had unutilized metal units. In 1959, the Engineering Association of India, found "the level of sub-contracting is very low and the progress made so far in this direction barring some notable exceptions have been negligible. In another survey it was found that sub-contracting was not developed till around the early sixties.

TRADING DURING THE LAST TWO DECADES

Very significantly the average size of factories has declined in all the major industry groups with the exception of beverage, chemicals and chemical products and electrical machinery. This trend continued in the seventies as well. In factories employing less than fifty workers this has gone up from 75 percent in 1953 to 82 percent in 1972. Correspondingly the percentage of factories employing 50 to 499 workers has gone down from 22 to 15. The decline in factory concentration and in the light of the steady decline in the observed vertically integrated nature of Indian manufacturing plants since the fifties, would strongly suggest an increase in sub-contracting and more general forms of inter-firm linkages as well. This is because from the available evidence on the concentration of output among large firms and large monopoly houses do not show any increasing trend. Therefore, the proposition that the decline in factory concentration could mean growth of multi-plant operation and inter-firm transactions is difficult to sustain. Thus one can infer somewhat more safely the growth of inter—firm transactions and vertical disintegration of factories

ANCILLARY CATEGORIES

Depending on the type of end products, small scale units may be divided into two distinct categories; (I) small units producing finished goods for catering consumer needs and directly marketing such goods through their distribution channels; (ii) small units producing parts and components for catering to the input needs and requirements of other industries. Industries falling under category (iii) mentioned above are called 'ancillary` units since such units rely for marketing of the products on some other industry or group of industries. Ancillary status also depends on the proportion of supply to industrial units. When an industrial establishment manufactures and supplies more than 50 percent of its production to any one or more parent units or units, the former unit is termed as an ancillary provided its investment in plant and machinery does not exceed Rs.45 lakhs and it is not a subsidiary to or is controlled by any large scale units.

CLASSIFICATION OF ANCILLARY INDUSTRIES

Depending on the needs of marketing, small scale ancillary industry may be classified into the three types and these are: (i) Monotype: The production capacity of such types of units is normally tied to the needs of one unit and producing units normally cater to the requirements of the parent unit only. (ii) Poly type: such unit normally caters to the needs of a number of parent units procure their inputs from the ancillaries falling under this type. (iii) Indirect operation: conducting supplies through the organisation, often operating as commission agents or dealers.

FORMS OF SUBCONTRACTING

However, the nature of manufacturing technology mainly determines the form of sub—contracting and as such this can provide yet another form of classification viz. (1) Component sub-contracting : This is the most commonly observed form of sub-contracting in metal working industries which we have discussed in the previous section. (2) Activity sub-contracting: Another type of sub-contracting could develop where the original firm having an integrated plant could get one or more activities done by sub—contractors and then sell the final products under its brand name. (3) Assembly sub-contracting: They are seen in the electronics industry when the economies of scale in production could be very substantial and the rate of technological obsolescence could also be very high. But on the other hand, assembling of these components to produce the final products is highly labour and skill intensive. Therefore this operation can be framed out to small and even household enterprises. (4) Product sub-contracting: There could be yet another form of this relationship where sub—contractors produce the complete product and the parent firm essentially performs the marketing functions. ln some sense the categories outlined above represent the ideal types. One may come across a number of combinations and variants of these basic forms of subcontracting in different industries.

PROS OF ANCILLARISATION

It is considered advisable to implement the programme of complete ancillarisation in a phased way and in a planned manner. The following procedure in this regard deserve consideration:(a) The District/Regional Industries Centers may identify units and entrepreneurs to meet the existing and effective demand of public undertaking; based on techno-economic surveys; (b) The public sector undertakings/MNCs may submit copies of monthly purchase orders to keep the District/Regional lndustries Centers informed of the trend of orders being uploaded by them. (c) On getting such information the District/Regional Industries Centers may check up the capability and genuineness of the supplying units, help them to solve their problems of production, keep account of the quantity of orders and watch the execution process. (d) On basis of the present ordering pattern, District/Regional Industries Centers may invite applications from intending units and take steps for screening of such units through the mechanism of joint inspection to ensure a lasting relationship between the small and the large units after reviewing the capability and demand position on both the partners. There are a number of related policies like supply of scarce raw materials on a priority basis and concessional finance, which in principle, are expected to further reduce the disadvantage of small size. The most important instrument for promoting small firms in India has been probably the fiscal policy, by way of differential excise duties and exemptions, which is meant to increase the competitive strength of the small sector. In a situation where the technology used is not very much different among firms of different sizes, other things remaining the same, a lower indirect tax on small firms provides them with a price advantage. The differential taxation can be said to have positive influence on the growth of sub-contracting with the growth of small firms, large firms can purchase items from them instead of producing them in-house or purchasing from other large firms. They could also encourage new entrepreneurs to function as exclusive sub-contractors. The nationalization of commercial banks in 1969 led to the inclusion of small scale industries in the priority sector of lending. Thus availability of credit for small enterprises improved considerably, but large firms were able to take advantage of this development by increasing trade from their sub—contractors and thereby introducing substantial flexibility in their own financial management. This is particularly helpful during recession when there exists a regime of high interest rates. Unlike in Japan there are no laws, in India, protecting the interest of sub-contractors, Moreover, restricted growth of large companies will paradoxically reduce ancillarisation possibilities.

MONITORING THE ANCILLARISATION PROGRAMME

The monitoring of the programme may be done periodically at four different levels. (i) Plant—wise by the Plant Level Committee — quarterly ; (ii) District/Region-wise by the District/Region Level Ancillary Development Committee may be formed by State Govemment, where a number of Public Sector Enterprises (PSE)/Multi-National Corporation (MNC) are situated in that district once in four months; (iii) Country—wise by the central level ancillary development committee to be formed by the national government half yearly; (iv) Globally by the central level inter-national teams with representatives from the concerned national bodies.

GROWTH AND DEVELOPMENT OF ANCILLARISATION

The growth and the development of the small and ancillary industry depends upon the following parameters: (i) items of production, i.e. what to produce; (ii) technology i.e. how to produce; (iii) land, i.e. location of production activity; (iv) power, i.e. energy; (v) water, i.e. servicing; (vi) transport, i.e. means of movement of material and personnel; (vii) labour, i.e. working force; (viii) machine, i.e. means of production; (ix) cash, i.e. fixed and working capital; (x) management, i.e. organisation to control the activities rationally; (xi) market, i.e. consuming and the production. The Govemment assists the small scale industrial units in achieving the input objectives through different promotional agencies. It provides assistance in marketing the products and as such Ancillary units may (l) establish a direct bridge between the small units and the PSE/MNC, (2) eliminate the middle man, i.e. traders who take away the lion's share of the profit.

Several beneficial inter firm linkages have been observed in relation to the following industries; in auto ancillary industries the wages were found to be considerably lower than those prevailing in larger (parent) units; in engineering units sub-contracting arise owing to lack of required machinery, seasonal excess demand, and in order to avoid labour regulations. Even in Textile industries sub—contracting has been found to be beneficial for reducing labour costs, whereas it is observed that in old established industrial centers small units often manufacture against orders and not the market as such. In West Bengal these industries are well established as is some other industrial centers.

SECTION C: TECHNICAL ASPECTS FOR GLOBAL ANCILLARISATION

Incidentally, it would not be out of context if as an illustrative table and matrix computing the impact of implementation of the progamme, is enclosed as a ready reference.

A- Ancillarised capacity of SSI units by the PSE/MNC in lakhs.
B- % of the requirement of the PSE/MNC satisfied by the SSI units.
C- % of the capacity by the SSI units satisfied by the PSE/MNC.

PSE	1		2		3		4		5		TOTAL	
SSI	A		A		A		A		A		A	
	B	C	B	C	B	C	B	C	B	C	B	C
1	50		40		60		50		50		250	
	6.7	10	6.7	8	6.7	12	7.1	10	6.3	10	6.7	50
2	60		50		75		50		65		300	
	8	10	8.3	8.3	8.3	12.5	7.1	8.3	8.1	10.9	8	50
3	80		60		100		75		85		400	
	10	10	10	7.5	11.1	12.5	10.7	9.4	10.6	10.6	10.7	50
4	90		75		100		80		110		450	
	12	10	12.5	8.3	11.1	11.1	11.1	8.9	13.1	11.7	12	50
5	100		80		120		90		110		500	
	13.3	10	13.3	8	13.3	12	12.9	9	13.7	11	13.5	50
6	120		100		150		110		120		600	
	16	10	16.7	8.3	16.7	12.5	15.7	9.2	15	10	16	50
7	110		90		130		100		120		550	
	14.7	10	15.7	8.2	14.5	11.8	14.3	9	15	11	14.7	50
8	40		30		50		35		45		200	
	5.3	10	5	7.5	5.5	12.5	5	8.8	5	11.2	5.3	50
9	70		50		80		65		85		350	
	9.3	10	8.3	7.1	8.9	11.4	9.3	9.3	10	12.2	9.3	50
10	30		25		35		45		15		150	
	4	10	4.2	8.3	3.9	11.7	6.6	15	2	5	4.5	50
TOTAL	750		600		900		700		800		3750	
	100	10	100	8	100	12	100	8	100	10.7	100	50

The above illustration gives an idea of the effect of implementation of the ancillarisation programme in the -mall sector units as well as in the Public Sector Exit-xprises. Let us assume that (satisfying the condition for ancillary status) 50 percent of the respective assessed annual capacity of l0 small scale units are Rs.250, 300, 400, 450, 500, 600, 550, 200, 350 and l50 thousand i.e. Rs.37.5 lakhs. Let us also assume that the average annual demand of the ancillary items from Public Sector Enterprises is Rs.750, 600, 900, 700 and 800 thousand respectively. The total demand of the Public Sector Enterprises is Rs.37.5 lakhs. Hence, the 5 Public Sector Enterprises can conveniently award ancillary status to IO Small Scale Industries units.

It may be seen that both the Small Scale Industries units and the Public Sector Enterprises are dependent on each other to a limited extent. As a result, if a particular Small Scale Unit is unable to supply, a Public Sector Enterprise would be affected only to the extent of its proportionate share of the purchase from the small unit. In the illustrative case, it would be a maximum of l6.7 percent for second and third Public Sector Enterprise with respect to sixth Small Scale unit and a minimum 2 percent for the fifth Public Sector Enterprise with respect to the tenth Small Scale unit. Similarly, if Public Sector Enterprise is closed, the effect on the Small Scale Unit would be a maximum of l2.5 percent with respect to the

second, third, sixth and eighth Small Scale Units with third Public Sector Enterprise and a minimum of 5 percent for the tenth unit with the filth Public Sector Enterprise.

Analogous to the contention that it is advisable not to put all eggs in one basket both the large and smell units can benefit through progress of ancillarisation, provided the number of parent units served by anicllaries increase (assuming that the number of the Small Scale units remain constant over a period`) and the extent of mutual inter-dependence is enhanced.

SELECTION OF LOCATIONS OF CAPACITIES OF SSES

Given the possible locations and possible capacities of the PSEs / MNCs the selection of the location and capacity of each SSE can be optimally made using Operations Research techniques such as techniques for solving transportation problems and AHP technique for Vendor Empanelment(22), and a hybrid of these techniques, if required. Some of the aspects, in this regard is explained below.

TRANSPORTATION PROBLEM

The structure of transportation problem involves a large number of shipping routes from several supply origins to several demand destinations. The objective is to determine the number of units of an item (commodity or product) that should be shipped from an origin to a destination in order to satisfy the required quantity of goods or services at each destination centre so that the total cost of shipment is minimum. Usually, each origin has a capacity to supply. Accordingly, problem also concerns with selecting the locations of the origins and develop the capacities in each origin. The selection of locations is the classical problem that can be handled by the transportation problem framework. Determination of the capacity at a particular location involves a complex analysis and it can be handled by AHP. The general framework of AHP is presented below.

AHP FRAMEWORK

An attempt can be made to evaluate the different sources / vendors in different countries for manufacturing components/ parts for final assembly in the home country (23). The idea is to encourage many countries to get involved and cooperate with each other for pursuing a common goal, which will probably help to bring about Global Peace and Harmony.
Supplier evaluation and selection problem has been studied extensively and various decision making approaches have been proposed to tackle the problem. In contemporary supply chain management, the performance of potential suppliers is evaluated against multiple criteria rather than considering only cost factor, William Ho et al (2009). It has been found that AHP is probably the one of the best multi-criteria decision making approaches for source evaluation and selection.

Hence, the Analytic Hierarchy Process (AHP) methodology has been applied to the problem of source/vendor selection taking into consideration the associated risks. The supplier selection is possible by using a mean variance framework as in portfolio selection based on estimation of source/vendor rating by AHP.

AHP FOUNDATION

The foundation of the Analytic Hierarchy Process (AHP) is a set of axioms that carefully delimits the scope of the problem environment (Saaty 1986). It is based on the well-defined mathematical structure of consistent matrices and their associated right eigenvector's ability to generate true or approximate weights, Merkin (1979), Saaty (1980, 1994). The AHP methodology compares criteria, or alternatives with respect to a criterion, in a natural, pairwise mode. To do so, the AHP uses a fundamental scale of absolute numbers that has been proven in practice and validated by physical and decision problem experiments. The fundamental scale has been shown to be a scale that captures individual preferences with respect to quantitative and qualitative attributes just as well or better than other scales (Saaty 1980,

1994). It converts individual preferences into ratio scale weights that can be combined into a linear additive weight for each alternative. The resultant additive weight can be used to compare and rank the alternatives and, hence, assist the decision maker in making a choice.
AHP can be considered to be both a descriptive and prescriptive model of decision making, considering that the above three basic steps are reasonable methods of resolving a multicriteria decision problem. AHP is perhaps, the most widely used decision making approach today, validated through numerous actual applications, where AHP results were accepted by the decision makers (DMs), Saaty (1994b).

The real essence of AHP is not generally understood. AHP is more than just a methodology for choice, although it has been successfully applied in thousands of choice decisions. It is not just another analysis tool, although analysis is the first word in its title. The best way we can describe AHP is to describe its three basic functions: (1) structuring complexity, (2) measuring on a ratio scale, and (3) synthesizing.
In our discussion we have used the AHP methodology to find out the importance ratings of critical factors of raw materials and evaluating the supplier for each of the critical factors. We have also found the variances of the importance ratings to be considered by the stakeholders in supplier selection. Subsequently, we have discussed a model that considers the means and variances of the importance ratings of the suppliers to allocate business share to each supplier. We illustrate the working of the model with a numerical example, where we use consider 4 factors (although there are more number of factors in reality) for raw material evaluation: Quality, Cost, Delivery and Flexibility through the process of AHP and then applied the weights to supplier selection with a view to developing a resilient supply chain.

AHP MODEL

The model involves several steps. The Steps 1 through 8 we use AHP to develop both stakeholder weights for the factors in Level 1 and the suppliers' weights in Level 2 along with their variances. We present, in Steps 9 and 10, the supplier selection/business allocation model in the mean-variance framework (Markowitz 1952) as used in portfolio selection. The steps in this stage are described below:

Step 1: Identify the Attributes, which are important in the Source Country selection process. In our study we have identified 4 (four) attributes for ranking the sources – Economic Potential, Skill Availability, Technology Availability and Quality Awareness, which we denote as Factors A, B, C and D.

Step 2: Determine the weightings of attributes using AHP (steps 2.1 to 2.7).

Step 2.1: AHP pairwise comparison
Construct a pair-wise comparison matrix,

$$\mathbf{A} = \begin{bmatrix} \mathbf{a}_{11} & \mathbf{a}_{12} & \cdots & \mathbf{a}_{1n} \\ \mathbf{a}_{21} & \mathbf{a}_{22} & \cdots & \mathbf{a}_{2n} \\ \vdots & \vdots & \ddots & \vdots \\ \mathbf{a}_{n1} & \mathbf{a}_{n2} & \cdots & \mathbf{a}_{nn} \end{bmatrix},$$

where, n denotes the number of elements (in our case we have selected 4 Attributes and 4 Sources), and a_{ij} refers to the comparison of element i to element j with respect to each criterion. The Saaty Rating Scale (9-point scale) is used to decide on which element is more important and by how much.

Intensity of importance	Definition	Explanation
1	Equal importance	Two factors contribute equally to the objective
3	Somewhat more important	Experience and judgement slightly favour one over the other.
5	Much more important	Experience and judgement strongly favour one over the other.
7	Very much more important	Experience & judgement very strongly favour one over the other- importance is demonstrated in practice.
9	Absolutely more important	The evidence favouring one over the other is of the highest possible validity.
2, 4, 6 & 8	Intermediate values	When compromise is needed

Taking one row at a time, the attribute is compared to the attribute in each of the columns and pair-wise comparison is done using the 9 point scale, putting the importance value of the attribute in the row over the attribute in the column. Thus the upper triangular matrix is formed, which denotes the pair-wise comparison. In the lower triangular matrix, we put the reciprocal values of the upper triangular matrix. For the same attributes the pair-wise comparison is 1. (See example below)

Comparison Matrix				
	Factor A	Factor B	Factor C	Factor D
Factor A	1	3	2	4
Factor B	0.33	1	2	2
Factor C	0.5	0.50	1	2
Factor D	0.25	0.50	0.50	1

Step 2.2: AHP Synthesization

Divide each entry (a_{ij}) in each column of matrix A by its column total. The matrix now becomes a normalized pairwise comparison matrix,

$$\mathbf{A}' = \begin{bmatrix} \frac{\mathbf{a}_{11}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}1}} & \frac{\mathbf{a}_{12}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}2}} & \cdots & \frac{\mathbf{a}_{1n}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{in}}} \\ \frac{\mathbf{a}_{21}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}1}} & \frac{\mathbf{a}_{22}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}2}} & \cdots & \frac{\mathbf{a}_{2n}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{in}}} \\ \vdots & \vdots & \ddots & \vdots \\ \frac{\mathbf{a}_{n1}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}1}} & \frac{\mathbf{a}_{n2}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}2}} & \cdots & \frac{\mathbf{a}_{nn}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{in}}} \end{bmatrix},$$

where R denotes the set of attributes, that is, R = {1, 2, …, n}.

Step 2.3: Compute the average of the entries in each row of matrix $\mathbf{A}'$ to yield column vector, or the Priority Vector

$$\mathbf{C} = \begin{bmatrix} \mathbf{c}^1_{1k} \\ \vdots \\ \mathbf{c}^1_{nk} \end{bmatrix} = \begin{bmatrix} \frac{\left(\frac{\mathbf{a}_{11}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}1}} + \frac{\mathbf{a}_{12}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}2}} + \cdots + \frac{\mathbf{a}_{1n}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{in}}}\right)}{\mathbf{n}} \\ \vdots \\ \frac{\left(\frac{\mathbf{a}_{n1}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}1}} + \frac{\mathbf{a}_{n2}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{i}2}} + \cdots + \frac{\mathbf{a}_{nn}}{\sum_{\mathbf{i}\in\mathbf{R}}\mathbf{a}_{\mathbf{in}}}\right)}{\mathbf{n}} \end{bmatrix},$$

where c^1_{ik} denotes the weightings of different attributes for source selection.

Step 2.4: AHP consistency verification

Multiply each entry in column i of matrix A by $\mathbf{c}_{\mathbf{ik}}^{1}$. Then, divide the summation of values in row i by c_{ik}^{1} to yield another column vector,

$$\overline{\mathbf{C}} = \begin{bmatrix} \overline{\mathbf{c}}_{\mathbf{1k}}^{1} \\ \vdots \\ \overline{\mathbf{c}}_{\mathbf{nk}}^{1} \end{bmatrix} = \begin{bmatrix} \dfrac{\mathbf{c}_{\mathbf{1k}}^{1}\mathbf{a}_{11} + \mathbf{c}_{\mathbf{2k}}^{1}\mathbf{a}_{12} + \cdots \mathbf{c}_{\mathbf{nk}}^{1}\mathbf{a}_{\mathbf{1n}}}{\mathbf{c}_{\mathbf{1k}}^{1}} \\ \vdots \\ \dfrac{\mathbf{c}_{\mathbf{1k}}^{1}\mathbf{a}_{\mathbf{n1}} + \mathbf{c}_{\mathbf{2k}}^{1}\mathbf{a}_{\mathbf{n2}} + \cdots \mathbf{c}_{\mathbf{nk}}^{1}\mathbf{a}_{\mathbf{nn}}}{\mathbf{c}_{\mathbf{nk}}^{1}} \end{bmatrix},$$

where $\overline{\mathbf{C}}$ refers to a weighted sum vector.

Step 2.5: Compute the averages of values in vector $\overline{\mathbf{C}}$ to yield the maximum Eigenvalue of matrix A,

$$\boldsymbol{\lambda}_{\max} = \frac{\sum_{\mathbf{i}\in\mathbf{R}} \overline{\mathbf{c}}_{\mathbf{ik}}^{1}}{\mathbf{n}}.$$

Step 2.6: Compute the consistency index,

$$\mathbf{CI} = \frac{\boldsymbol{\lambda}_{\max} - \mathbf{n}}{\mathbf{n} - 1}.$$

Step 2.7: Compute the consistency ratio,

$$\mathbf{CR} = \frac{\mathbf{CI}}{\mathbf{RI(n)}},$$

where RI(n) is a random index of which the value is dependent on the value of n.

For n=4, RI(n)=0.9. Tables below shows the value of the Random Consistency Index (RI) for matrices of order 1 to 10 obtained by approximating random indices using a sample size of 500 (Saaty, 2000).

S. No.	Size of Matrix (n)	Random Consistency Index (RI)
1	1	0
2	2	0
3	3	0.52
4	4	0.89
5	5	1.11
6	6	1.25
7	7	1.35
8	8	1.40
9	9	1.45
10	10	1.49

If CR is less than 0.10, then go to step 3, otherwise, go to step 2.1 and re-work the AHP by re-evaluating responses in the comparison matrix.

Step 3: Compute the importance rating of Source Countries, with regard to Factor A, with the help AHP technique.

Steps 4, 5& 6: Similarly, compute the importance rating of Source Countries with regard to Factor B, Factor C and Factor D, again with the help AHP technique.

Step 7: Compute the overall composite weights (μ) of the alternatives, i.e. of the sources, based on their evaluating factors.

Step 8: Compute the variance (σ^2) of the overall composite weights (μ) of the suppliers with regard to each of the factors and find out the standard deviation SD (σ).

Step 9: Formulation of the Source Selection Model

$$\text{Maximize } Z = \sum_{i=1}^{n} \mu_i x_i - \frac{r}{2} \sum \sigma_i^2 x_i^2$$

$$\text{Subject to, } \sum_{i=1}^{n} x_i = 1 \text{ and } x_i \geq 0; \forall_{i=1,2,3,\ldots,n}$$

where $x_i \geq 0; \forall_{i=1,2,3,\ldots,n}$ are proportions of the business given to Source 1, Source 2, Source 3, ...

Source n, and r (>0) is the risk factor that the stakeholders would like to consider jointly. Larger the value of r higher is the risk averseness of the stakeholders (see Gupta and Cozzolino [1974]). It is assumed that the sources are mutually exclusive and independent of one another.

Step 10: Using mathematical programming optimization techniques we solve the model. In the numerical example we have used Excel Solver to solve this optimization problem.

NUMERICAL EXAMPLE

We have used intuitively realistic data concerning 4 factors - Economic Potential, Skill Availability, Technology Availability and Quality Awareness for Source Country decision / evaluation to explain the model and its workings. For simplicity, these factors are renamed as Factors A, B, C, and D respectively.

Step 1: Identify the critical factors of raw materials for evaluation of Source Country.
To evaluate and select the best Supplier / supplier, the company has identified the four factors through brainstorming - Economic Potential, Skill Availability, Technology Availability and Quality Awareness.

Step 2: Determine the importance rating of the factors by AHP methodology. A factor with a higher importance rating means that it has more impact on the selection process.
The procedure of calculating the relationship weights is to construct a pair-wise comparison matrix, as shown in the following sheets. For synthesization, a normalized comparison matrix is made as shown. Based on normalized comparison matrix, the Priority Vector (Column Vector) showing the importance ratings are calculated. To verify the consistency, a weighted sum vector was constructed. Then, the Maximum Eigen Value of the matrix A, consistency index, and consistency ratio were computed as shown.

Calculating Weights of Critical Factors

Comparison Matrix				
	Factor A	Factor B	Factor C	Factor D
Factor A	1	3	2	4
Factor B	0.33	1	2	2
Factor C	0.5	0.50	1	2
Factor D	0.25	0.50	0.50	1
	2.08	5.00	5.50	9.00

Normalized Matrix				
	Factor A	Factor B	Factor C	Factor D
Factor A	0.48	0.60	0.36	0.44
Factor B	0.16	0.20	0.36	0.22
Factor C	0.24	0.10	0.18	0.22
Factor D	0.12	0.10	0.09	0.11
	1	1	1	1

Priority Vector (Row Averages)	
Factor A	0.472
Factor B	0.236
Factor C	0.186
Factor D	0.106
	1.00

Weighted Sum Vector	
Factor A	1.98
Factor B	0.98
Factor C	0.75
Factor D	0.43

Consistency Vector	
Factor A	4.19
Factor B	4.13
Factor C	4.04
Factor D	4.12

λ max	CI=(λ max-n)/(n-1)	RI	CR=CI/RI
4.12	0.04	0.9	0.04

Step 3: Determine the importance rating of the Suppliers in relation to Factor A.
Step 4, 5 & 6: Similarly determine the importance ratings of the suppliers in relation to the other factors, Factor B, Factor C and Factor D and weights using AHP. The Priority Vectors are shown below.

Factor A	
Priority Vector (Row Averages)	
Source 1	0.161
Source 2	0.243
Source 3	0.496
Source 4	0.100
	1

Factor B	
Priority Vector (Row Averages)	
Source 1	0.264
Source 2	0.087
Source 3	0.143
Source 4	0.506
	1

Factor C	
Priority Vector (Row Averages)	
Source 1	0.075
Source 2	0.516
Source 3	0.260
Source 4	0.149
	1

Factor D	
Priority Vector (Row Averages)	
Source 1	0.460
Source 2	0.157
Source 3	0.089
Source 4	0.294
	1

Because CR < 0.10, in each case, the pair-wise comparisons were found to be consistent.

Step 7: Calculate the overall composite weights of the Sources (alternatives).

Step 8: Calculate the variance and SD of the overall composite weights of the Sources.

Overall Composite Importance Weights (μ) and Variances (σ^2) of Alternative Sources

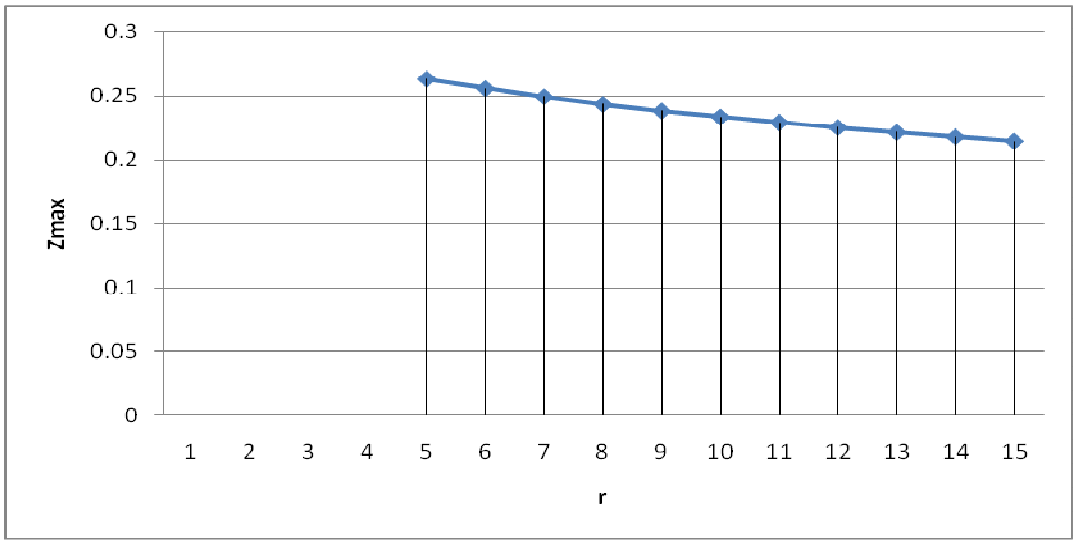
Factors	A	B	C	D	(μ)	(σ^2)	(σ)	CV 100×σ/μ(%)
Weight	0.472	0.236	0.186	0.106				
Source 1	0.161	0.264	0.075	0.460	0.201	0.012	0.104	53.984
Source 2	0.243	0.087	0.516	0.157	0.248	0.020	0.143	57.616
Source 3	0.496	0.143	0.260	0.089	0.326	0.028	0.168	51.649
Source 4	0.100	0.506	0.149	0.294	0.226	0.028	0.166	73.592
	1.000	1.000	1.000	1.000	1.000			

Step 9: Find out the maximum value of Z (Z_{max}).

Optimal Solution for Different Values of r

R	x_1	x_2	x_3	x_4	Z_{max}
5	0	0.128596	0.689745	0.181660	0.263359927
6	0	0.181744	0.622322	0.195935	0.255871813
7	0.05581	0.194732	0.558245	0.191213	0.249338450
8	0.10333	0.201939	0.508572	0.186157	0.243429301
9	0.14030	0.207544	0.469938	0.182224	0.238214751
10	0.16986	0.212028	0.439030	0.179078	0.233557203
11	0.19406	0.215696	0.413742	0.176504	0.229304747
12	0.21422	0.218754	0.392669	0.174360	0.225356109
13	0.23128	0.221341	0.374837	0.172545	0.221641179
14	0.24590	0.223558	0.359553	0.170989	0.218109875
15	0.25857	0.225480	0.346307	0.169641	0.214725473

Step 10: Plot the values of Z_{max} for different values of r, as shown above.



ANALYSIS OF RESULTS

We focus on comparing different Factors for evaluation of sources and then comparing several sources based on each of the Factors. Then we calculated the overall composite importance weights of the Suppliers and determined the variance and standard deviation.

The overall composite importance weight of Source 3 is highest and for Source 1 is the lowest, which says that Source 3 could demand highest share of allocation. Again while analyzing variance of the overall composite weight of the 4 sources, we observe that the variance of source 3 is high, which indicates that there is a possibility of share of allocation of source 3 going down.

We computed the risk adjusted maximum value of return (Zmax) for different values of r(>o), and we find that with higher values of r, the allocation share of Source 3 goes down, whereas allocation share of Source1 goes up. This happens because variance of Source 3 is very high and there is a likely hood that the value would go down. Thus distributed loading on sources shall lead to a situation of risk aversion. From the deductions we analyzed the proportion of business that can be allotted to each Supplier based on overall composite importance weights. We find that as the business is shared by more Suppliers greater is the risk aversion.

SECTION D: GLOBAL ANCILLARIZATION FOR GLOBAL PEACE

Notwithstanding, the economic merits of ancillarisation a lot of factors often impede its growth. For want of u durable relationship between the ancillaries and the mother units the former often suffer irregular and unsteady demand problems, later. Moreover, small scale ancillary units are exploited and often paid un-remunerative process for their products.

A) Technological Gap

B) Financial Constraints

C) Delayed Payment

D) Raw Material Problem

In the current phase of industrial restructuring small and medium enterprises (SMEs) play an important role in the recovery restructuring and improvement of the economy. SMEs in symbiosis with larger firms are usually regarded us activities with high investment potential. Would it not be apt to suggest that ancillarization is the answer for an integrated national as well as regional policy. Moreover, this hypothesis when extended, might indeed determine the new economic order and the link between smaller and larger nations. If the new economic policy has to succeed in ensuring that economic growth becomes broader based and more diversified then SMEs must play a more positive role not only directly as sub-contractors, suppliers and ancillaries of the large sector in the domestic market but in the external market as well. This would, inter-alia, create a large market and an environment for more market sharing peacefully. Units should strive for greater alliance (not necessarily on the initiative of their large counter parts with foreign agencies and foreign organizations). This would help in establishing a global network of finance, industry marketing and management. The existing long standing joint venture system is not without flaws. Major corporations in the United States and Western Europe have been experimenting with "strategic alliance" in the high-tech field. It involves acquiring part ownership of a foreign company by buying a small percentage of a MLT (Mezzanine floor levels of technology) or at HT foreign company. There is sharing of the equity ownership management research and development technology, manufacturing, marketing and indeed the markets themselves. The critical needs for additional working capital and inexpensive manufacturing facilities have demonstrated that there is a potential for establishing strategic alliances between SMEs at the MLT level. The thrust of the industrial policy should be therefore to determine a greater role for SMEs in a programme of global ancillarization. Instead of a rupee earned a ($) dollar would mean the unit has earned thirty names as much a pound indicates a near fifty times greater turnover. The units must strive to seek strategic alliance with foreign countries agencies and corporations. This would on the one hand provide a bigger impetus for growth by creating greater involvement from the larger industrial sector. On the other hand such participation would ensure greater welfare through more employment and distributive justice.

If we are to learn from experiences of Japan and Korea then we ought to turn towards their trading corporations. Tsurumi’s “Soza-sosha" or Dong-song cho’s "The General Trading Corporation" highlight the role of these trading corporations in the development effort of a developing economy. What we need is more information data base contracts and comparative rates for the SMEs to sources their material to foreign interests. This the trading corporations can effectively provide if they are created. The scope for their development can hardly be overstated. Although the role of SMEs is remarkably well established in all ‘sunrise’ and ‘star’ as well as ‘smokestack’ industries, it is clearly discernible in the services sector as well. There is also considerable scope for them in extension services in agricultural inputs marketing of produce, and rural ancillarization. The basic advantage with SMEs is that they are more widely spread having more control over labour and requiring low gross investment and generally having lower ‘gestation lags'. Coupled with this a programme of global ancillarization could promptly increase foreign exchange earnings, as this would not require qualitative development of a finished product in as much as it would call up on these SMEs to provide components, processes or spares that could meet international standards and specifications. The advantage is obvious. Firstly, marketing and advertising could be left to major foreign counterparts. Secondly, technological up gradation could also be left to

them which to a large extent will at the international patent rights' problem. The factors that govern SMEs growth relate to the regional development potential as well. Regional performance indicators are invariably related to employment share of the SME sector. They can be distinguished in terms of final market orientation, export orientation, innovation and high tech firms. An extremely relevant question is which regional conditions are favourable for the emergence and expansion of SMEs'. Clearly various regional conditions are fixed at least in the short run climatic conditions, the location of the region, the socio-demographic structure, the employment situation. Therefore, it would not be justified to suggest that regional growth as well as sectoral location is determined by development and productivity of stock regional resources rather than by external flow of the sources. Within the small sector there is need to pay more attention to start upon the service sector for several reasons. Firstly, market consumer services have shown the greatest increase in job opportunities in nearly all advanced economics. Secondly, barriers to the new business are generally lower in service than in the manufacturing sector. Thirdly, new forms of small business have been developed in the services sector. Fourthly, there has been rapid development in information processing technologies in the services sector. What is needed therefore is a comparative evaluation of the operation of the policy measures recently introduced in the countries in the context of the SMEs.

THE GLOBAL LOGIC OF STRATEGIC ALLIANCES

Companies are just beginning to make common cause with others whose interests ran parallel with their own Entete—the striking of an alliance - is a responsible part of every good strategist's repertoire. Alliance mean sharing control. In a changeable world of rapidly globalizing markets and industries - a world of converging consumer testes, rapidly spreading technology, escalating fixed costs, and growing protectionism; globalization mandates alliances, makes them absolutely essential to strategy. Alliances are not tools of convenience. They are important, even critical instruments 0f serving customers in a global environment.

THE IMPORTANCE OF FIXED COSTS

Customer's need has changed the logic by which managers have to steer. In the past, for example, companies tried to build sustainable competitive advantage by establishing dominance in all business system’s critical areas. The mane of the game that most industries use is simply beating the competition. The forces of globalization turn this logic on its need. Having a superior technology is important, of course, but it is not sufficient to guarantee success in the market. To compete in the global arena, enterprises have to incur and somehow find a way to defray — immense fixed costs. A automation has given the labour content out of production, manufacturing has increasingly become a fixed—cost activity. Because the cost of developing break through ideas and turning them into marketable products has sky rocketed, R & D has become a fixed cost too. Enterprises need partners, but they need their own people and their own labs too. That is fixed cost. All these fixed costs become variable through adjustments in investment (capital expenditure) levels. And the need is to move in a single, clear direction : towards forging of alliances to share fixed costs.

THE LOGIC OF ENTENTE

One clear change of mind necessary to make alliances work is a shift from a focus on ROI to a focus on ROS (return on sales). An ROS orientation means that manger will concern themselves with the on going business benefits of the alliance, not just sit around and wait for a healthy return on their initial investments. An alliance is a lot like marriage. There maybe no formal contract. There is no buying and selling of equity. It is a loose, evolving kind of relationship, with guidelines and expectations. Both partners bring to an alliance a faith that they will be stronger together than either would be separately. Both believe that each has unique skills and functional abilities the other lacks. It takes real dedication to tract down the domestic benefits of a global alliance.

FOR SUCCESSFUL COLLA BORATION

The following points are to be considered : Mutual respect and trust are essential - Mutual benefit is vital. A tight legal contract is essential. — lt must be recognized that during the course of collaboration, circumstances and markets change. There is need to recognize a partner's problems and flexible. —· There is need to recognize a partners' interests and independence. - Joint development agreements must include joint marketing arrangements. There is need for the largest possible market to recover development costs and to get volume / margin benefits.

WHAT DOES GOING INTERNATIONAL MEAN?

There are three types of firms that enter the international firms. MNCs treat each country as separate and develop fairly independent clones of the parent in each place to seek local business. Global firms, on the other hand, operate on a world scale, but are heavily centralized and use strategies closely directed by and controlled from the head office.
International firms, in comparison, decentralize more tasks than do global ones, but still tend to exploit abilities developed in the home country. This makes international firms less efficient than the global type, and less responsive to local conditions than the multinationals.
Regardless of three categories companies are in, they should be transnational in their approach in order to exploit international business opportunities effectively; the transnational company seeks to develop a common world—wide vision and identify within the organization. This can be developed if the senior executives travel and get to know their overseas colleagues; it is better developed if top management includes people of different nationalities and is best developed if, from time to time, the boss moves to other countries where the company has operations. Furthermore, the transnational company makes decisions at whatever level and in whatever geographical context that is most appropriate to achieve its goals. Depending on the circumstances, some issues are best addressed locally which others should be addressed on a global scale.

HOW DOES SMALL BUSINESS INTERNATIONALIZE?

The concept of internationalization of culture underlines the development of worldwide small business. The newly developing Asian nations are employing methods drawn from more mature economies. The combination of ideas, technology, and systematic business practices "prove" in thoroughly modem cultures is a late 1980s — 1990s phenomenon linking markets in expanding Asian countries with those of more developed countries. The factors that built prosperity in the West-industrialization, organization, innovation, efficient management practices, customization — are spreading to the point that "progressive homogenization" apply describes an entirely new among nations. Progressiveness homogenization refers to the natural convergence of attitudes and behaviours of urbanized members of industrial society of all ages, largely due to common media and business and living conditions. This essay explores the internationalization of business in the context of progressive homogenization, with core questions posed and answered.
A geometric effect is postulated, one in which the sheer volume of transactions give rise to large number of opportunities as a consequence of a multiplier effect among business transactions. Progressive homogenization is facilitated in location where financial barriers are low and innovation in high and in countries where rapid high. Very rapid innovation in international business is connected to geometric rise in transactions as well as to the internationalization in manufacturing, lead the way, with speed and flexibility associated with smaller enterprises.
As people more prosperous, they demand services because there is a premium on efficiency. Manufacturing necessitates research and development (R & D) dependency. R & D dependency in turn requires the use of English as the international language of commerce. Having a single language of commerce increases efficiency, enhances the spread of Anglo—Saxon culture, and provides a medium for discussion of technology development and dissemination amount specialized subcultures. For example, computer software development at a very high level was possible only because creative small business people spun off from large enterprises that served as training grounds. Mass markets attract large scale enterprise, limiting innovation largely to technological areas of manufacturing production.

Smaller service businesses can more easily server niche markets. Computer software, to meet customer needs effectively, must be tailored for smaller niches and a narrower range of customers. Only the presence of worldwide outlets for such extraordinary products could support a software industry. There are now enough technical and business people worldwide with English language skills demanding and willing to pay for computer software to facilitate expansion of its exotic products. With the software industry as an exemplar of the development worldwide small business linking countries and cultures, let us return to the core questions explored in this essay

REASONS FOR INTERNATIONALIZATION

Reasons why small business should or would decide to internationalize include: 1) Diversification, 2) Opportunity and leverage for growth, 3) Network expansion, 4) Prosperity and an Optimistic attitude towards the future, 5) Family security in an era of economic and political risk, and 6) Compressed time frames (Hong Kong is the best example) .

ROLE OF SMALL INDUSTRY IN GLOBALIZATION

Globalization is a complex process of transaction across national boundaries with geographical, culture, social, political, economic, technological, and competitive dimensions. Small firms, especially new enterprises bring fresh idea and inject vitality into markets with new products, additional supply of goods, and techniques. Of particular significance is the generation of new technology through innovation. Small firms must be competent in innovations in order to penetrate markets and to sustain growth and continuity.
To some extent, they serve as competitive ballast to the power of large firms. They must be the niche property developed which serves to propel the firm into wider markets. From the initial experience gained, such firms can upgrade their products, broaden their market, focus, extend their distribution channels and locations of production, and penetrate successive segments of markets. The role of a market niche as espoused by Kotler include the specialist in the end — use, customer specificity, product or product line, job shop, sewing 21 particular class or size of customers, and offering products and services at a designated quality over certain price ranges to various segments of a market. On this score, two points arc noteworthy; first, many manufactured products today are elements of a higher integrated product. Others are components of assembled final products. Yet others constitute subassemblies of more sophisticated or complex systems. Second, borrowing from Mennes et al, notion of regional and international goods, the distinction between regional and international goods is becoming blurred mainly due to the convergence of technology in production, marketing, and distribution.

WHAT MAKES GLOBALIZATION POSSIBLE?

The globalization of businesses has gathered momentum because of several developments in the international economic environment. These are: 1) open trading and financial systems, 2) intense competition and growing business independence and 3) information technology (IT) application.

SMEs GOING INTERNATIONAL

"Going intemational" used to be the domain of large companies. This is no longer so today, SMEs — the firms that make up the small industry sector — are also beginning to penetrate the international market. Although the Definition of SMEs varies from one country to another, these firms have the following characteristics: 1) They are more often than not managed by family members. Their decision-making system is highly flexible and informal. 2) They are usually restricted to a narrow range of activities (product and services) because of very limited resources and specialized know—how. 3) They have a simple and relatively unsophisticated management structure and apply a very limited range of administrative procedures. Their product knowledge is often embodied in managers and technicians rather than being “formalized in blueprints, manual and designs. 4) They have a low tolerance for risk and are particularly sensitive to changes in the socioeconomic environment as well as to the impact of barriers and incentives from economic and institutional systems 5) They are not the general market

leaders, although they may enjoy a dominant position in a very specialized segment of a particular market, especially in the subcontracting market. The significance of such firms is visible in their number. In almost every industrialized country these firms account more than 90% of the total number of establishments. In terms of employment their contributions range from 30% to more than 60% of the total number employed. In Singapore, SMEs account for 81% of the total number of establishments, 40% of employment 20% of output and 50% of direct exports. These firms play an equally important role in other Asian newly industrializing economies (NIEs) (Table 1).

Table 2 Importance of SMEs in Asian NIEs

Country	% of total No. of firms	% of total Workforce	%of total Value added	% of total Direct Exports
Taiwan	97	70	55	66
Hong Kong	98	62	57	17
S. Korea	98	66	38	32
Singapore	81	40	22	15

Source: Dr. Philip Reignier, Small and Medium Enterprises in the four Asian NIEs, Modern Asian Research Centre Oct 1988 Geneva

Note: Definitions of SMEs:
Taiwan : Capital less than NT $ 40 million and assets less than NT $ 120 million
Hong Kong : 1 to 200 employees
South Korea : 1 to 1000 employees for manufacturing, 1 to 20 employees for services
Singapore : At least 30% local equity and not less than $ 8 million in net fixed investment if in Manufacturing, or employing not more than 50 employees, it in commerce services.

PROBLEMS FACED BY SMEs IN GOING INTERNTIONAL

The problems faced by SMEs in going international are tremendous. Once these firms have anticipated the problems ahead, they need to asses whether they have the resources and capabilities to venture into foreign markets. Some of the common problems are: 1) different languages and cultures 2) disparate business environments 3) entry barriers 4) limited financial resources 5) lack of marketing information and skills 6) lack of supportive government policies for small industry, 7) lack of good distribution network and 8) mental blocks.

SMALL SCALE SYSTEMS INTEGRATION (S3I)

With the increased use of information systems in the field of business and other relevant professional fields the need for complete automation has become highly relevant and important for the survival and flourish of SMEs. In general ERP packages are manufactured by software firms, keeping in mind the structure and needs of a MNC or a large scale business house. The reason being that the cost of production of such large ERP software which is only within the reach of larger firms. On the other hand SMEs opt out of the automation process. More over such ERP packages are manufactured keeping in mind the structural needs of a large scale establishment and the needs and structure of the SMEs are different. And thus the ERP package should be highly customised according to the structural needs of the SMEs

Small Scale Systems integration model allows the SMEs to integrate cross-functionally, and thus by sharing the network architecture and the software package amongst themselves they are able to collectively for an ERP package which is more efficient and effective than the general MNC based ERP systems. The cost per SME is very low and along with the sharing of technical infrastructure and cost of automation the SMEs is also improving their state of knowledge and market information.

If we see in general the growth of the numeric count of the conclave of the SME is kept directly proportional to the growth in the functionality and complexity of the integrated system software. With more SMEs being added to the conclave of the ancillaries the needs summation of the system is increased till the final stage of the ancillary growth life cycle which deals with the completion of a feature rich ERP package with the following 3 basic systems of information running at the web-portal and server end:

1. Integrated Procurement Information System
2. Integrated Marketing Information System
3. Internal Management Information System

An integrated procurement system allows the SME to purchase raw material and fixed and semi-fixed assets like equipments, machinery and tools for the international market. By posting a purchase request notice at the S3I web-portal, and accepting quotations from both international and national businesses. Thus SMEs have a wider supplier base and lower- low cost provider supplier.

Integrated marketing information system allows the most important feature of the systems integration model. It allows for having a united regional presence in the international market. Thus through the integrated web-portal the SMEs can acquire larger international buyers and spread their market across multiple borders. The unique auction module of the system allows the SMEs to get rid of their dead weight stock and equipment at a rapid rate in the international market. And also allows them to get a better price for their production by-products in the international market.

Internal Management system allows for the use of private accounting systems in individual sub-systems along with advanced data partitioning constraints implementation in order to secure the use of data over the network. The functions like CRM and contacts management, HRM, Billing and Order management, financial accounting systems, Cost accounting system, Tax calculation systems, are incorporated within the internal management system feature of the integrated systems database server end. The system is also linked with distinct governmental agencies web-portals, in order to provide SMEs with updated and complete information regarding the latest releases and changes in the business environments. Thus, improving the business responsiveness and multiple profit ventures of the SMEs.

Finally to run a system of integration is a token of pride for the country like India which is heavily clouded by the profits derived by the I.T. Swing in the economy. The integrated system is superior to any single company wide extended ERP package, both in terms of modular complexity of codes and geography spread of the individual structural units. Having a Small Scale Integrated System in place would mean the extended existence of the SMEs sector of the economy which again is a high source of employment and national income for the Indian Economy. In the face of rampant automation and I.T. Based conversion of corporate process of the MNSs in the international arena along with subsequent entry of MNCs with information systems based dealings in the domestic market. The time horizon is closing rampantly and the only way to sustain growth and development of the SMEs in the international area along with the domestic market is the use of Small Scale Systems Integration Model in its functional process.

ROLE OF GOVERNMENT

The government's role is to provide developmental assistance, improve the business environment and infrastructure, and help establish regional and international linkages. The government should also organize frequent trade mission for SMEs and invite them to trade fairs, so that they have more opportunities to promote their products and services in both established and new markets. Assistance in the form of cash grants or tax concessions can also be provided by government to encourage SMEs to undertake export promotional activities such as participation in trade mission, setting up overseas trade offices and advertising.

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