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A THEORY OF SYNERGY

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A THEORY OF SYNERGY

I - INTRODUCTION

Several scholars have recently stressed the importance of the concept of synergy (Aaker, 1984; Singh and Montgomery, 1987; Lubatkin, 1987; Hill and Hoskisson, 1987). Two reasons have been advanced. First, increasing levels of economic, technologic and competitive complexity impose the need to achieve higher strategic benefits on organizations (Ansoff, 1984; Thomas, 1986). Second, it is becoming increasingly accepted that corporate strategy must go beyond the cash management of BCG and similar models in order to create a competitive advantage for the organization as a whole (Scherer, 1986; Pitts, 1985; Hammermesh, 1986).

Synergy remains, however, an elusive concept. According to Porter (1985), "ill defined notions of what constitutes synergy underlay many companies' acquisitions problems" (PP,318). Besides this conceptual problem, ChatterJee (1986) has also indicated that, "A more rigorous framework should be developed which links the potential for creating economic value not only to the decision to diversify, but also to the type of acquisition (related or unrelated) and the mode (de novo or acquisition) of diversification" (PP,138).

Consequently, in order for the concept of synergy to be useful one must possess a theory of synergy which states in detailed terms its causes and the circumstances under which those causes are predicted to be especially strong (Singh and Montgomery, 1987). Such a detailed theory of synergy will lead to conclusions about which acquisition strategies greatest potential for creating economic value (Salter and Weinhold, 1979; Porter, 1987).

Presenting such a theory of synergy is the aim of this paper. This paper will:

1st - develop a detailed list of the causes of synergy.

2nd - aggregate the different causes, according to their nature into broader categories.

3rd - predict when synergy will or will not be created.

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II - THE CONCEPT OF SYNERGY

A concept should be defined by its roots and by its common usage. Synergy comes from the greek "Synergia" (joint work) which is derived from "synergein", meaning, to work together. Accepted sources such as the Webster dictionary define , synergy as the combined or cooperative action of different forces, such as drugs in the human body, or the action of several organs to perform complex movements.

From the roots and common usage of the word synergy two basic points emerge:

1st - Synergy requires diversity, involving two or more agents, organs, drugs, divisions, etc. That is, one may speak of synergy only if there is diversity (Pitts, 1985; Hill and Hoskisson, 1987).

2nd - There is nothing in the concept of synergy which requires that the overall effect be greater than the sum of the parts.

The concept of synergy requires working together, it does not specify the end result. Indeed, in medicine two drugs can be used simultaneously, so that the effect of one of the drugs partially offsets some undesirable effect of the other drug. In the organizations field, Ansoff, 1965 and 1984; Newman and Logan, 1985; Scott 1980, and Scherer 1979, have all pointed out that synergy can be negative (2+2=3) as well as positive (2+2=5).

Consequently, synergy should be defined as the cooperative work of different parts towards a common end (1). This definition is in accordance with that of authors such as Day, 1977, Haugen, 1975; Ansoff, 1965; and Hill and Hoskisson, 1987.

This definition enhances:

A - Cooperation which is related to resource sharing and consequently the parts cannot be totally autonomous.

B - Parts of, not the greater whole, to which the parts belong

C - Different, not equal, and consequently the concept of synergy demarks itself from experience and size effects.

D - Common end and so synergy is distinct from situations of parasitism such as one SBU receiving funds from another SBU. One cannot speak of synergy unless the benefit of the first SBU is greater than the loss of the second SBU, so that the overall net effect is positive.

More specially, synergy exists if over a certain period of time the performance of a diversified corporation is different from what the average performance of its divisions would be if they were independent businesses.

(1) - implying a net result which can be greater or smaller than the sum of the parts.

Schematically, in the case of a corporation with two equally sized divisions, one may speak of synergy if

$$LX_{(A,B)} = \frac{LA + LB}{2}$$

where

LX – Performance of a diversified corporation x with divisions A and B (A,B).

LA – Performance of the division A if it was an independent business.

LB – Performance of the division B if it was an independent business

III – THE CAUSES OF SYNERGY

How can we demonstrate that the performance of a diversified organization is be different from what the performance of its divisions would be if they were independent businesses?

Let's hypothesize that an organization is specialized in market A at moment one, and at moment two, diversifies into market B (through internal development or aquisition). The difference between the organization at moment one and two can be seen in:

1 – Volume – the organization at moment two has a greater sales volume

2 – Diversity – the organization has now built diversity into its operations.

If synergy exists it must therefore be explained in terms of the consequences of the changes in volume and diversity experienced by the organization. Concerning the impact on volume, can distinguish size effects (which are a consequence of sales per year) from experience effects (which depend on the cumulative volume of sales).

Size and experience effects will be observed as long as the organization diversifies into related markets, making possible the sharing of resources (warehouses, distribution systems, machinery, sales force etc.). These types of effects could also

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SIZE

ADVANTAGES

1 reliance on strengths ...... greater productivity / lower training costs

2 input effects.. price — quantity discounts / greater bargaining power..., monopsony/oligopsony / knowledge/expertise / shopping around

access

3 public goods.. property rights — copy rights / patents / leases / trademarks

goodwill and visibility

4 economies of scale - - - - - geometric law / machinery ... . discontinvities / price / more operations are mecanized

fixed costs.........(discontinvities in acessory resources)

5 low of great numbers........impact on inventory costs

6 market power.. political market / larger sales

DISADVANTAGES

1 X inefficiency — lower threat of bankruptcy / politics - coalition formation

2 Higher transportation costs

3 More complex information processing

4 Lower motivation

5 Antitrust threat/Consumer groups surveillance

6 Decision making problems in terms of: quality / rapidity

occur in the organization if it chose to remain specialized and grow in a single market.

Diversity effects, on the other hand, can never be achieved within a single market. They require diversity within the organization in order to occur. Examples are transfers of know-how among divisions, reciprocal buying (where a division induces a supplier to buy from another division of the same company), interdivisional cash management, and the transport of image from one market to another.

Since it is the joint effect of size, experience and diversity which explains synergy, we shall next analyze these three effects in detail.

III . 1 - SIZE EFFECTS

Table one presents a typology of size effects. When a firm diversifies, if increases its size, and consequently certain advantages and disadvantages occur. We call both of these size effects.

FIGURE ONE ABOUT HERE

There are six main types of size advantages: (1) reliance on strentghs, (2) input effects,(3) public goods,(4) economies of scale, (5) the law of great numbers and, (6) market power.
(1)Adam Smith, in his work the "Wealth of Nations", observed that the amount of specialization is limited by the size of a market. The same happens inside organizations. Contrary to smaller organizations where workers tend to perform a larger number of tasks, larger organizations allow for greater worker specialization. Since specialization will be based upon the workers' strentghs, productivity will increase. Also, due to specialization, the time and therefore the cost required for training are now lower (Robinson, 1978)

(2) Size can also have a positive impact in terms of inputs. Larger firms pay lower prices due to quantity discounts from suppliers, greater bargaining power due to monopsony, oligopsony, or the use of specialists in procuring various

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types of raw materials and merchandise . Shopping around is more feasible when buying large rather than small quantities due to transaction costs. As a consequence, larger firms have greater access to suppliers.(Pfeffer and Salancik, 1978; Archer and Faerber, 1966).

(3)   Economists define public goods (as opposed to private goods) as the type of goods which can be used by one entity (person, division), without affecting the usage that another entity may make of the same goods.
    Examples of public goods within organizations are property rights (copyrights, patents, trademarks, leaseholds) and the visibility or goodwill of the organization. Since the marginal cost of using these types of goods is zero, size will represent a benefit here too.(Abell and Hammond, 1979)

(4)   As size increases, economies of scale occur. There are several reasons for this.

(A)   First, there is the geometric law which states that as the area (of a building, warehouse, etc) doubles, its volume increases threefold. Since cost is related to the area and the output to volume, a net benefit occurs as size increases (Haldi and Whitcomb, 1967).
(B)   The second cause of economies of scale regards certain disontinuities between cost and machinery (Shepherd, 1979); the price of machinery increases less than proportionally to its capacity (Scherer, 1979); and in larger organizations it is economically compensatory to mechanize some operations which are perfomed manually in smaller organizations (Pitts, 1986).
(C).   Fixed costs are a third cause of economies of scale. With higher volume, the cost per unit of production of ancilatory activities (such as security, medical department, food services, secretarial department, etc,) decreases.
    These fixed costs are called accountants as indirect expenses.

(5) Another size advantage comes from the statistical law of great numbers. As the number of buyers increases their variances in terms of idyosincracies and special characteristics diminish. Lower variance among buyers means lower variance of sales. The probability of stockout is consequently lower, meaning that costs of inventory will increase less than proportionally to sales;(Whitin and Peston, 1954).

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(6)   Market power is a final advantage of size. Larger firms influence their environments to a great extent. They can influence both their political environment (through lower probality of bankruptcy—Dooley, 1969) and their economic environment (by pushing their products more strongly into the market and by charging higher prices for them).,There is evidence that with all else equal, large firms benefit from a superior image when compared to smaller firms a benefit which can be translated into premium prices.(Cooper, 1979).

   Besides advantages, an increase in size can also bring some disadvantages to organizations.

(1)· Larger organizations experience a lower sense of the need to survive. The internal environment of the organization becomes increasingly political as well (Blair, 1972, Towsend, 1970). Consequently x -inefficiency arises (Leibenstein, 1966). ·).

(2)   Transportation costs tend to be higher for larger firms since they must go farther to obtain raw materials, components, energy and labor (Scherer et. al. 1975).

(3) Size also means that information processing is increasingly complex, requiring more elaborate information, control and structural arrangements.(Katz and Kahn, 1978).

(4)   Motivation can be more difficult in larger · organizations because workers tend to identify and prefer to work in smaller work units (Porter and Lowler, 1965; Quinn qnd Mangione, 1973).

(5) · The greater visibility experienced by larger organizations may put them under special surveillance of consumer groups and under a higher threat of antitrust. It can therefore be said that a certain type of ' risk increases with size. (Drucker, 1973; Porter, 1980).

(6) Finally, as firms grow, th hierarchy between decision makers and the market becomes more complex. Both the speed and the quality of decision making can, in accordance, suffer. (Starr, 1975; Williamson, 1967)
   The influence of both size advantages and disadvantages is a concave profitability (return on assets) curve where profitability first increases to a certain level and then starts decreasing. Profitability increases as long as the advantages of size outweigh its disadvantages. After a certain level of size, however, the disadvantages start increasing and the advantages become exhausted.

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EXPERIENCE ....

ADVANTAGES ......

1 Learning curve....... Labor efficiency

Labor organization

2 Better use
of equipment

3 Process innovation

4 Product redesign

5 Image/Goodwill

DISADVANTAGES : Lower adaptability... Attachment to routines

emphasis on hierarchy

lower flexibility

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The specific shape of the concave profitability curve (the behaviour of its first and second derivates), varies considerably from market to market depending upon the extent of the presence of the size advantages and disadvantages in those markets.

III. 2 – EXPERIENCE EFFECTS

When diversifying into a new market, there is an increase in sales per year, as well as an increase in the cumulative sales volume of the organization (experience effect). Experience has several advantages:(1) the learning curve;(2) better use of equipment,(3) process innovation,(4) product modifications (better knowledge of how to adapt the product to customer needs), and (5) better image (Heddley, 1976; Henderson, 1980, Thompson, 1981).

Indeed , ceteris paribus, older firms benefit from a better image than younger ones, since customers tend to associate firms the age of a firm with survival of the fittest.

FIGURE TWO ABOUT HERE

It has been pointed out that experience may also bring some disadvantages. Indeed, as experience increases, the adaptability of the firm as a whole may decrease. As experience grows, organizations tend to develop stricter routines, be more attached to hiearchical relations and to become less flexible (Blair, 1972; Albernathy and Wayne, 1974).

DIVERSITY EFFECTS

Besides size and experience effects, there is a third type of effect which occurs when a firm diversifies. We shall call this type diversity effects. Diversity effects are those which cannot be achieved by an increase in sales in the some product market cannot achieve. This distinguishes diversity effects from size and experience effects which may occur both with an increase in size in a single product market or with diversification (as long as the markets which the firm diversifies into are related, and therefore allow for resource sharing, transfer of knowledge, and other benefits).

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                          1   Risk decrease                Lower personnel costs

                              (in terms of both            Lower capital costs
                              critical
                              contingencies and            Higher R&D benefits
                              variance)
                                                           Higher motivation


                                                                        Cross subsidization

                              Monetary · · · · · ·         Vertical integration related
                                                                        Reciprocal buying
ADVANTAGES  · · ·         2   Externalities · · · · · ·
                              Technological · · · · · (Transfer of knowledge/Knowhow)

                              Consumption · · · ·          Transfer of Image
DIVERSITY                                                  Costumers perception


                          3   Greater organi-              High risk R&D projects
                              zational possi- · · · ·      High risk business ventures
                              bilities                     Access to retailers



                          1   Specific to vertical integration (increase in risk)

DISADVANTAGES · · · ·
                          2   General - increase in information processing needs
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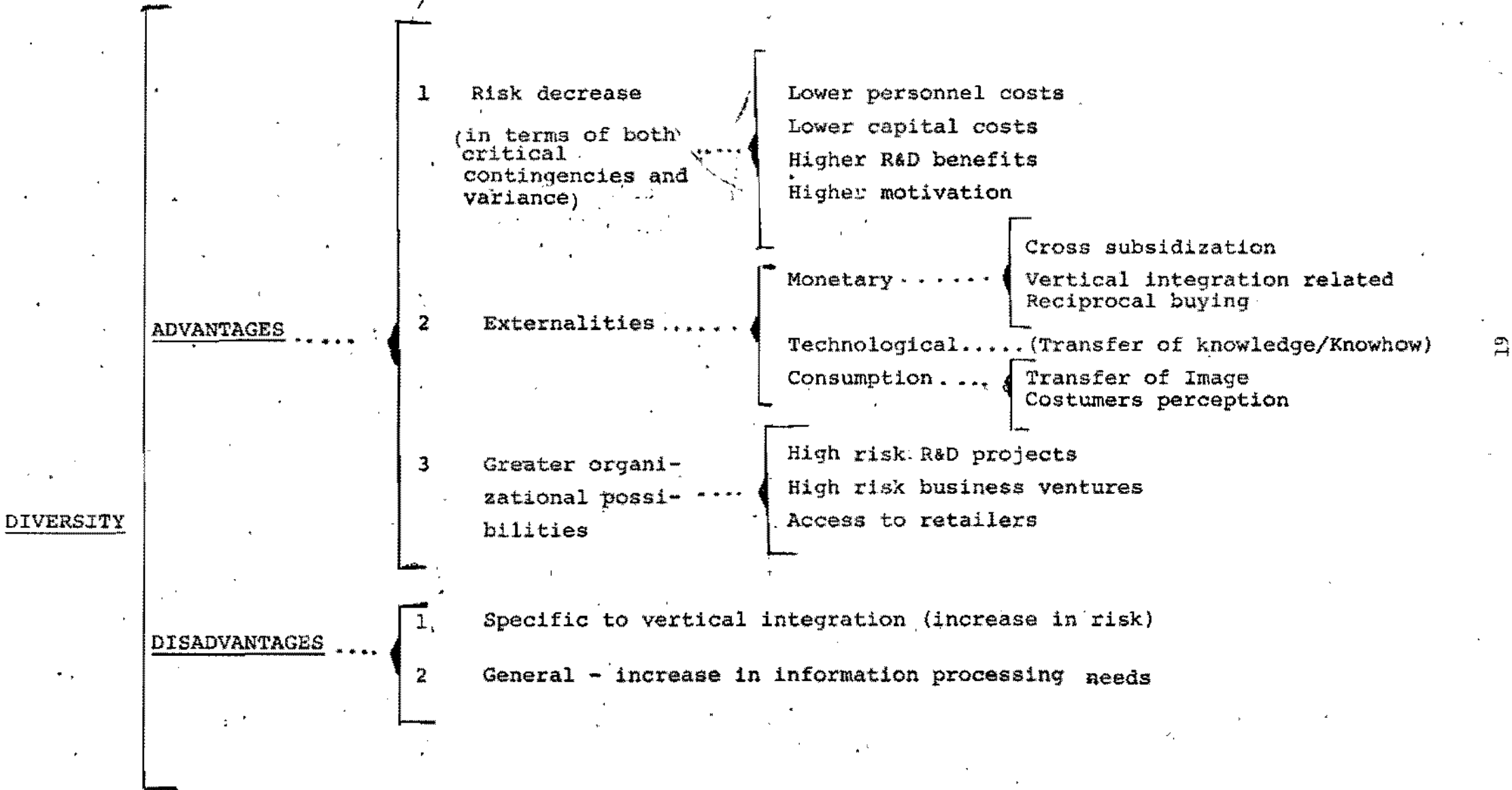
Figure three presents the advantages and the disadvantages of diversity. The advantages can be divided into four main cathegories: ·
(1) - Risk decrease
(2) - Externalities
(3) - Greater organizational possibilities.

FIGURE THREE ABOUT HERE

(1) Diversity brings a decrease in risk in terms of both critical contingencies and variance (Amihud and Lev,1981). Lower risk will, in its turn, implies:

A - lower personnel costs (workers can be transferred from one SBU, to another, instead of being hired and fired as each divisions sales go up and down.)-Mechlin, 1980.

B - lower capital costs (being risk averse, investors demand lower interest from less risky firms)-

C - higher R & D benefits (Terry, 1981; Pitts, 1985) due to: higher probability that

C1 - a given R&D project will be useful to one of the divisions
C2 - within the organization there is all the required knowledge to complete the R&D project
C3 - the failure and success of projects will offset each other (law of large numbers)and therefore the organization can undertake projects of higher risk.

D - It has also been pointed out that to the extent that employees are transferred among SBUs rather than hired and fired, their motivation level will increase.(Mechlin, 1980).

(2) The second type of diversity advantages are externalities. Economists define externalities as the benefit of a second party due to the work of a first party. Inside an organization three types of externalities may occur: monetary, technological and consumption.

(A) Monetary externalities result from cross subsidization among SBUs (implying tax advantages and greater freedom to finance market share building as compared to a situation where funds were supplied by external sources) and vertical integration (lower transaction costs, savings in energy, transportation and

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distribution , etc) - Kitching, 1974; Winn and Mchagen, 1981; Harrigan, 1985.

(B) Technological externalities regard the transfer of know-how among SBUs. That know-how can respect to how to set up a distribution channel, how to train the sales force, how to advertise a given product, how to solve a machine breakdown, which type of supplier is more reliable in terms of quality and delivery, etc.(Berg,1979; Yavitz, Newman 1982).Technological externalities may also involve a specific skill of the R&D, engineering, manufacturing or any other department which the organization possesses, and which will be useful in the new market (Wells, 1984).

(C) Consumption externalities are related to the market place. They are neither monetary in their essence nor based in know-how. Two main types of consumption externalities exist: transfer of image among SBUs (where one SBU benefits from the image another SBU enjoys in the market) and externalities related to consumers' perceptions.(Lorange, et.al. 1986; Wells, 1984)

Sometimes the customer perceives the product purchased as being larger than what is supplied by an organization. This leads firms to add new items to their product line so that the total offering is as broad as the customers' perception of the product. That is the reason behind the broadenning of the offer of computer organizations, from hardware into service, software and communications networks. Similarly, auditing firms have diversified into services such as taxation, accounting, management consulting and management recruiting.
(Miles and Snow, 1980).

(3) Finally a diversified organization can do things that no specialized organization can without threatenning its very existance. Examples are the engagement in high risk R&D projects or business ventures. Another example is easier access to retailers when they prefer to deal with suppliers which offer a broad line of products such as in the automobile and the grocery products industry (Porter, 1980 e 1985). Still diversified organizations can also impose reciprocal buying where one SBU buys from a given supplier if and only if the supplier buys from another SBU of the same organization. (Allen, 1975; Steiner, 1975).

Besides advantages, diversity can also bring two main types of disadvantages. Some disadvantages are specific to vertical
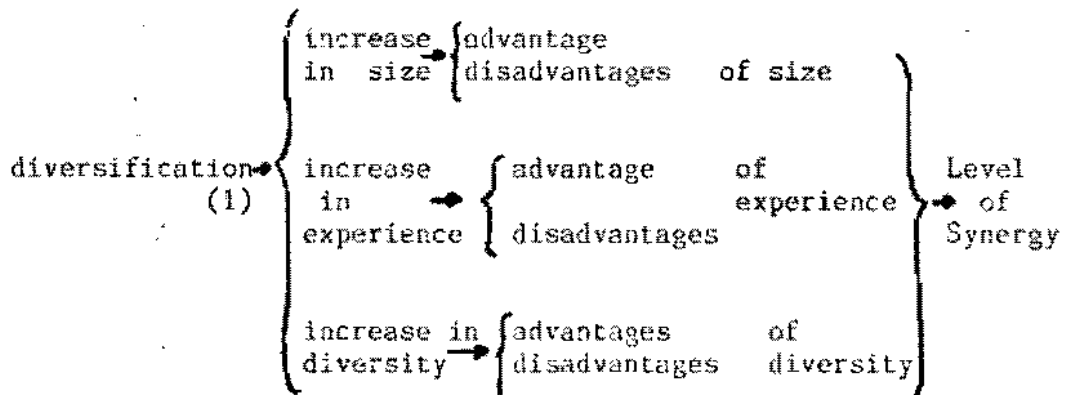
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integration (higher risk due to concentration of resources). Other disadvantages pertain to diversity in general. Since diversity implies an increase in information processing needs, it requires more complex structure, information, control and coordination systems (Galbraith and Nathason, 1979; Hambrick 1983); Hill and Hoskisson, 1987).

III.4. SUMMARY

It is the joint effect of size, experience and diversity which explains how the overall performance of an organization can be different from the average performance of its division if they were independent businesses (that is how synergy can occur).

Positive synergy will exist only if a certain diversification move implies size, experience and diversity advantages which outweigh their disadvantages. Negative synergy will exist when the advantages associated with size, experience and diversity are less important than their disadvantages

In Scheme

$$
\text{diversification} \rightarrow_{(1)} \left\{ \begin{array}{l} \text{increase} \rightarrow \left\{ \begin{array}{l} \text{advantage} \\ \text{disadvantages} \end{array} \right. \text{of size} \\[2em] \text{increase} \\ \text{in} \rightarrow \left\{ \begin{array}{l} \text{advantage of} \\ \text{experience} \\ \text{disadvantages} \end{array} \right. \\[2em] \text{increase in} \rightarrow \left\{ \begin{array}{l} \text{advantages of} \\ \text{disadvantages diversity} \end{array} \right. \end{array} \right\} \rightarrow \begin{array}{l} \text{Level} \\ \text{of} \\ \text{Synergy} \end{array}
$$

As a consequence, the synergistic potential of any diversification move must be evaluated on a case by case basis by assessing the extent of the size, experience and diversity advantages and disadvantages implied by that diversification move (Allen et al, 1981; Salter and Weinhold, 1981)

(1) means:implies.

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·FIGURE FOUR
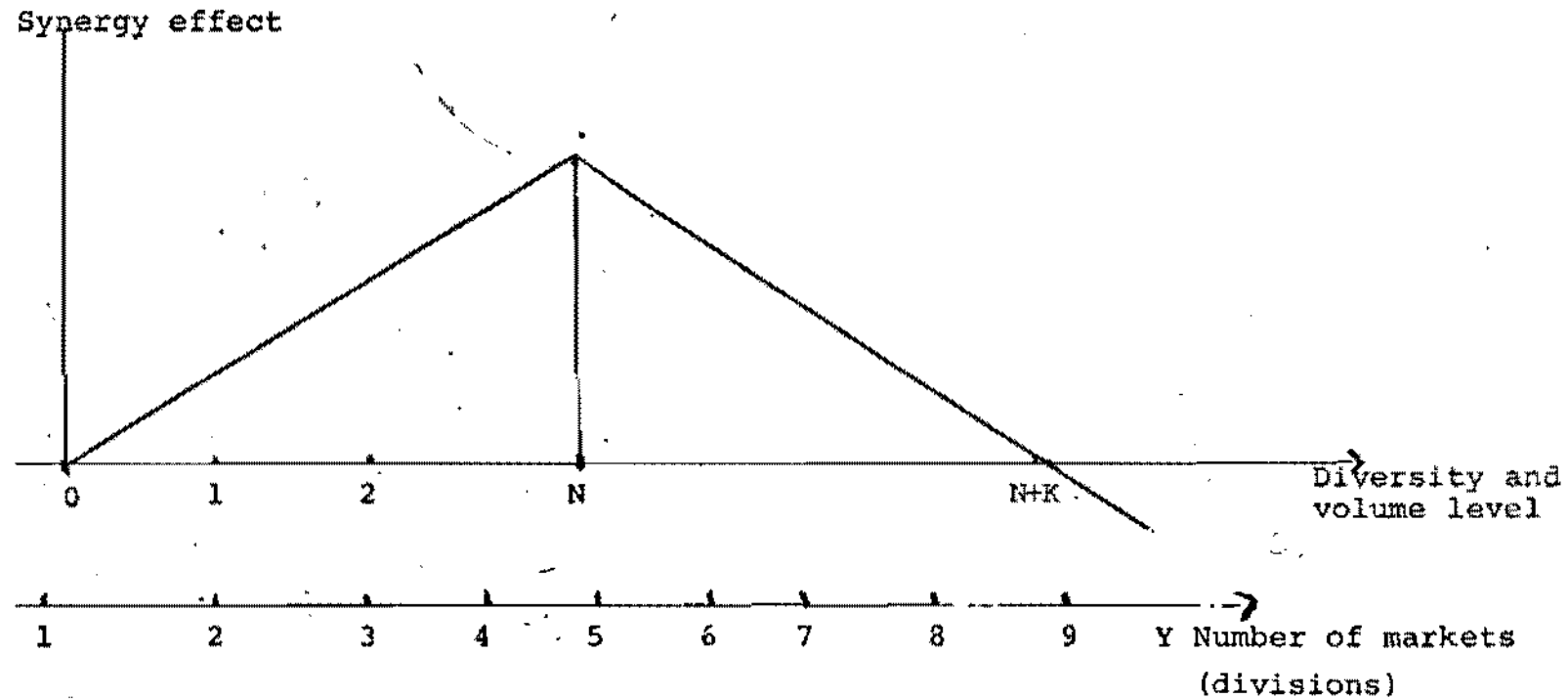
NOTE: One assumes that: 1 - each diversification step (through internal development or acquisition) leads to a new division specialized in a given market; 2 - each diversification move brings the same augment in volume and diversity to the firm.

It is possible, however, to develop certain general rules regarding synergy. The next section will present a model which in general terms indicates when synergy is expected to be positive and large, positive and low, and negative.

IV SYNERGY AND DIVERSIFICATION

Let's suppose that an organization specialized in a single market starts a process of diversification which over time, will lead the organization to add new markets (through internal development or acquisition) to its operations.

We shall assume that each division handles a single market and that consequently, as the number of markets the organization operates in increases, so does its number of divisions. For simplification purposes it will also be assumed that each new market (division) brings a similar amount of increase in diversity and volume (sales) to the organization. Finally, it is hypothesized that the organization does not function as a simple holding, buying and selling firms which remain totally autonomous from each other , but as an integrated entity where the head office performs some functions for the divisions and there is an exchange of resources among them.

The question is : As the organization keeps on adding new markets (and divisions) to its operations, how should we expect the overall organization to perform compared to the average performance of its divisions if they were independent businesses?

Based on the model of synergy developed above and on the existant empirical evidence, one should expect the following relationship should be expected between synergy and diversification, should be expected.

(see figure four)

INSERT FIGURE FOUR ABOUT HERE

The vertical axis of figure four represents the level of synergy, that is, the quotient between the EDA of the diversified organization and the average of its divisions. The horizontal axis represents the diversification process, where each step in the process represents the introduction of a new market and ~

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division to the realm of the organization. For simplification reasons, one assumes that the increase in volume and diversity implied by each new market division is similar.

As can be seen, the diagram has three main zones. In the first zone, the synergy level is positive and increasing, in the second zone, synergy is decreasing, and in the third zone, synergy is negative. We will next explain why one should expect a curve of such a shape in the diagram of synergy.

FIRST ZONE (Synergy positive and increasing)

Two reasons lead to expect that in the early stages of a diversification move (low level of size and diversity) synergy will be positive and increasing.
First, by increasing its total volume of sales and diversity, the corporation is able to exploit the size, experience and diversity advantages which were discussed above.(Abell...) Since diversity is low, there is little difficulty in exploiting experience and size benefits. Low diversity (high relatedness) means that experience and know-how is transferable from one division to another. Quantity discounts occur because divisions purchase the same type of inputs. Fixed costs are shared among divisions. Warehouses harbour products from various divisions, and so on.(Aaker, 1984; Lorange et al 1976).

Second, the disadvantages of size and diversity are expected to be relatively small at this stage since as has been pointed out, they tend to occur at high levels of size and diversity. (Scherer, 1979; Shepherd, 1979).

For these reasons it should be expected that as firms add volume and diversity to their operations, synergy will increase.
After a certain level of diversity and volume however, synergy will start decreasing.

SECOND ZONE :Synergy positive and decreasing

Several reasons contribute to this. First as has been pointed out (Pfeffer and Salancik, 1977) after a certain level,

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marginal increases in volume and diversity will bring diminishing returns (law of diminishing returns); Savings in machinery halt; fixed costs become variable; the learning curve fratteurs; augments in specialization bring no further significant benefits; discontinuities in resources are exploited to their full extent. (Bain, 1954 and 1956) High levels of diversity also mean that the image, the knowhow and expertise and the influence upon the various stakeholders is now more difficult to transport from one division to another. The consumer perceives the divisional products as unrelated and therefore he is less induced to buy one when he buys another of the same organization; and so on. (Tarr, 1977; Brock, 1975).

High levels of diversity have a negative effect on the possibility of exploiting size and experience benefits. High diversity (Low relatedness) among the market which the organization is in, means that the divisional inputs are different. Therefore, there is less room for quantity discounts, the activities of fewer departments can be shared among the divisions, machinery differs from division to division, each division has its own learning curve, and so on . (Wells, 1984; Porter, 1987).

Finally, at high levels of volume and diversity, their disadvantages become significant. The complexity of the information processing requires elaborate structures, information, control and coordination systems (Hannan and Freeman, 1977). Decision making becomes slower and its quality suffers from the number of hierarchical layers between decision makers and the market;(Williamson, 1976). The organization develops attachment to routines and hierarchy losing flexibility (Albernathy and Wayne, 1974). Motivation is more difficult (Quinn and Mangione, 1973), the organization environment becomes highly political and prone to the formation of coalitions (Towsend, 1970).

THIRD ZONE: negative synergy

Three reasons contribute to the existance of negative synergy.
At high levels of volume and diversity t e advantage of size, experience and diversity are exhausted or minimal due to the law of diminishing returns (Robinson, 1954; Bain, 1956).

Furthermore, as has been pointed out, (Terry, 1981; Aaker, 1984; Porter, 1985)the advantages of diversity become

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disadvantages. That is, both consumption and technological positive externalities may become negative externalities. For instance, the image of one division may harm another division (e.g. pharmaceutical products and food, subcompacts and luxury cars, low price items and high quality products), and the experience and know-how of one market may be pernicious when applied to another market. (1)

Third, since volume and diversity are now very large, their disadvantages prevail (x ineficiency, low motivation, decision making problems, complex information and control systems, coalition formation for political purposes, etc.).(Arrow, 1974; Williamson, 1975; Aldrich, 1980).

As a consequence of the experience, size and diversity advantages being low and their disadvantages being important, synergy can be expected to be negative (Scherer, 1986; Ansoff, 1984)
(1) In such a case the best option for an organization is to grant complete autonomy to its divisions and achieve zero (and not negative) synergy.

CONCLUSION

There has recently been a renewed interest in the concept of synergy - to predict success in mergers, and to advise which diversification strategies organizations should
follow. This requires advancements in the exploration of the concept of synergy. Such has been the purpose of this article.

The basic contributions of this article can be summarized as follows:

1 - There are not one, but three main causes of synergy: size, experience and diversity effects. All three contribute to the possibility that the performance of a diversified corporation will be diferent from the average performance of its divisions if they were independent bus nesses. That is, all three imply the possibility that a diversification move creates economic value.

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2 - Size and experience advantages can be culled by an organization either through specialization in a single product market or by related diversification. Diversity advantages are those which only diversity among markets can bring about.

3 - There are several types of size, experience and diversity effects. It is the level of their presence when an organization diversifies into a new market which will determine the amount of synergy that will be created. As a consequence, the synergistic potential of a diversification move must be evaluated on a case by case basis.

4 - It is possible however, to develop certain general rules regarding synergy. Based on the causes of synergy and its behavior as a function of size, experience and diversity, it can be expected that as an organization starts a diversification process, the amount of synergy will first increase, then decrease and finally be zero.

5 - Resource sharing and synergy are not synonymous. Resource sharing is only one of the causes of synergy, the others being:
    - risk decreasals (which diminishs personnal, capital and R&D costs.
    - an increase in the organization's possibilities (in terms of market power, access to retailers, etc).
    - input effects (lower price, lower transportation costs, etc).
    - higher productivity of the resources due to employees' specialization and learning, mechanization of activities and the geometric law.

6 - There can be three basic categories of resource sharing: Public resources (leases, patents, image and visibility of the organization as a whole) - half public resources (implying technological, consumption and monetary externalities) - and private resources (such as machinery, warehouses, sales force, trucks, etc.).

7 - Last, at high levels of diversity and volume, the disadvantages of size, experience and diversity will prevail over their advantages. Consequently, synergy will be negative.

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In such a case, the best option for an organization would be to give complete autonomy to its divisions, and by becoming a pure holding, achieve zero level of synergy.

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