

Optimal Growth Strategy in a Research Organization

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Abstract- For a balanced growth of research organization, an interdependence of size, structure, functions and supporting facilities is an imperative need. This balance is often threatened during the process of growth with the result that the quantity of work suffers. The paper presents a theoretical outline of a model that can be used for the study of growth process in research organizations and thus help research planners and laboratory directors in arriving at decision relating to the development of specialized support facilities for research and integrating these facilities into a single, viable unit through proper structural changes in the organizational set-up.

Keywords: Growth Strategy, Research and Development, Strategic Planning, Market Analysis

1. INTRODUCTION

During the last two decades, India has observed rapid growth of many large-scale scientific research institutions where a large number of scientists work on a variety of problems under a single roof. In the wake of this rapid growth, research directors have often expressed the view that in some cases the process of growth in the institutions has created many imbalances which are wasteful. Since modern scientific research is a highly coordinated activity, its success depends upon a proper balance of other subordinate activities, such a laboratory and workshop facilities, library and documentation service, etc., as well as upon some other structural-functional requirements that help in the coordination and control of organized research [1]. This balance is often threatened under the process of growth and research organizations face the problem of developing specialized support facilities for research and integrating these facilities into a single, viable unit through proper structural changes in the organizational setup [2]. In small-scale organizations. For example, the arrangement is such that all the research and supporting activities are under the direct supervision of one person, As the basic functions of research grow, the supporting facilities also expand, ultimately reaching a point where it becomes necessary to reorganize them for the sake of efficiency into separate units of aggregates with their own hierarchies of command. At this stage, greater coordination and control is required than was necessary when the organization was small and more easily manageable [3]. These requirements are often met is some of the following ways : (1) through increased communication that cuts down uncertainty resulting out of information differential; (2) dividing the chain of command and delegating authority to unit head; (3) introducing operating rules for the employees, etc. It is common knowledge among research scientists that even the most able

research supervisor can effectively guide only a limited number of researchers: once that limit is exceeded, insufficient guidance and lack of coordination may not only hamper the progress of work but also cause deterioration in quality [4]. It not may be necessary for the number of supervisors to always grow with the number of subordinate research staff; but the supervisor-supervised ratio must change—the research supervisor who previously had a staff of four under him may now have a team of fourteen without any loss of coordination. This proportion, however, has a saturation point beyond which growth is no longer efficient unless some kind of structural changes are introduced to accommodate the growth; either the supervisory duties are shared with someone else, or the team is divided into two groups under a different supervisor, or separate units are created with independent unit heads. The unbalanced nature of growth may be indicated in a number of ways. In some cases organizations grow too big too fast in all directions without involving an efficient mode of functioning; while in many others the growth is only one-sided without subsequent growth in all other aspects. In some organizations the research staff is far too large for the amount of research undertaken. There is also the reserve phenomenon, where a rapid growth in research functions is neither accompanied by a subsequent increase in professional manpower and supporting facilities for research nor necessary structural changes are introduced to accommodate functional requirements. Under any of these unbalanced growth condition, the research organization is likely to undergo various types of stresses which may threaten its very existence [5]. It, therefore, seems appropriate to assume that for a balanced growth of research organizations an inter-dependence of size, functions, structure and supporting facilities is an imperative need. It

follows from this assumption that as long as the interdependence among these four variables is maintained at every successive stage of growth, the process can continue indefinitely without jeopardizing either organizational efficiency or research productivity.

A number of case studies covering specific periods of time will reveal how different organizations have fared under different conditions of the growth. Assuming that during this period of growth all or some of the above four variable have undergone certain changes, the investigation will focus attention on the type of changes that each variable has undergone and the adaptive mechanisms employed to bring about these changes in order to adjust to the stresses created during the process of growth. Observation of this nature are likely to yield certain rough standers through which research planners and directors of laboratories may find it easier to decide : (1) whether size, structure, functions and supporting facilities in certain research organizations have grown in proportion to each other; (2) if the growth have been proportionate, what adaptive mechanisms were employed to maintain the balance; (3) what are the causes and consequences of a disproportionate growth; (4) when does it become necessary in the life of a research organization, for instance, to have more research scientist or technicians in a particular branch, provide additional laboratory and workshop facilities and/or to divide the chain of command for the sake of discipline and coordination [6].

Basically then, there are four variables in the system : size, structure, functions and supporting facilities, the interdependence of which is to be studies in the context of a research organization's growth over a specified period of time. Size in this context refers to the staff strength (research scientist, technicians, other supporting staff) and the number of specialized subdivision, unit or departments within the organization. Structure denotes the organizational arrangements : the chain of command, the structure of research team and supporting services, etc. through which persons and unit in the organization are linked together to form an integrated whole involved in a common endeavor. Functions mean, firstly, the research worked allied activities (for example, the type and number of projects undertaken, development of proto-types and pilot plants, consultancy services) and secondly the related functions of co-ordination communication and control which are vital to the basic functions. Auxiliary services and facilities, such as library, documentation, laboratory, workshop, building, etc. are called supporting facilities [7]. In a country where organized scientific research is rapidly expanding, it should not be hard find research is rapidly expanding, it should not be hard

to find research laboratories and institutions which offer excellent examples of both balanced and unbalanced patterns of growth. But in order to identify those balanced and balanced patterns and their cause and to evolve measures through which a balanced growth could be sustained, it is essential that appropriate models are evolved and tested with special reference to the problem of growth in research organizations. Modern organization theory is replete with models which may offer useful guidelines. Though the application of operations research techniques it may not be difficult to test these models in research organizations and suggest optimal strategies for their growth. The theoretical outline of the model presented here simply offers a base for empirical research on the problem of growth in research organizations. A beginning can be made in India by studying the growth in two research laboratories which started functioning at more or less the same time with about similar size and initial capital outlay [8]. The growth pattern can be studied through official records and interviews with persons long associated with the organization in order to test the basic hypothesis that structure, functions and supporting facilities in a research organization grow in proportion to its size.

2. RISE OF BUSINESS

A company's business plan affects how competitively they are and how well they compete in their industry [9]. Therefore, when it comes to businesses to be successful in growing markets, growth is crucial. Businesses must be engaged with a continuous process of growth and development if they are to advance. Growth in business refers to both tangible and intangible progress. Increases in current output, sales income, product variety, the extent of available assets Investments, (number of people, capital quantity, etc.), and growth rates are all examples. The most important component of qualitative expansion is raising the standard of living of a company's internal components. As a result, it might be challenging to measure qualitative expansion.

However, since a company experiencing qualitative improvement also demonstrates quantitative growth, we may infer that one can lead to the other [10]. Growth is a means to determine what a company wants to accomplish in order to achieve its aims and goals [11]. Growth includes administrative and technical advancements made in order to accomplish the objectives. To put it another way, it justifies a rise in the size and quantity of company components including make, property, technology, and people, among others [12].

3. STRATEGIC GROWTH

Researching and using methods of growing a company is a fairly vast issue. Businesses strive to reach their intended sales and profit levels through growth strategies [13]. Organizations can grow by obtaining new ones or joining forces with those already in existence. It is possible to study independently the two primary categories of developmental strategies—organic and artificial. Aggressive growth methods, variety, and progress strategies are examples of organic gets closer. Acquisitions and collaborative efforts are examples of disruptive approaches.

Organic growth often occurs when companies improve their production ability and collaborate with elsewhere companies. Organic growth is accountable for rising the amount of capital equity, a raw material, energy input, staffing levels, and the corporate framework.

Additionally, a rise in a company's standing and perceived worth among the general public is also seen as growth that occurs naturally [14]. Diversification tactics for natural development are used to increase a company's sales, recommendations, and equity while also expanding its ability to scale. Companies can penetrate additional industrial districts and carry out organic expansion with the marketplace, service, item, and manufacturing sizes by utilizing diversifying techniques. Growth that is organic, often known as internal growth, describes a business's internal, non-interactive economic, physical, social, and organizational development [15]. It occurs when current company operations grow through either a spike in sales or the release of novel offerings. To put it differently, a company's growth organically frequently depends on its resources. Internal funding, borrowing, and locating new financial sources are investments in the process of organic growth [16]. Organic growth includes the development of a company's assets, effective relationship with customers management, the use of technology, leadership in innovation, and concentrating on product-related activities [17]. Based on brand and customer demands, Ansoff categorizes intense growth tactics into four groups. According to [18], these include market saturation, market growth, development of products, and diversification strategies. A viable method for organizations that haven't yet been able to take advantage of market prospects with their current goods is an intensive expansion plan. (Erkoç, 2006, p. 38). Consequently, it is a suitable strategy for companies with a limited share of the market [19].

By acquiring new enterprises, the approach to diversification seeks to enter new markets and thereby new industries. Businesses are able to take advantage of new

market possibilities and produce above-average output thanks to it [20]. It is frequently used when companies see undiscovered market potential. There are two fundamental methods for using variation strategies: conglomerated diversification and focused diversification. The modernization plan suggests substituting new, technologically advanced equipment and technologies for old, out-of-date versions in order to enhance output and the standard of stuff while reducing operating expenses and flaws. There are two ways to choose investments for organizing the manufacturing of new items in a market that is competitive. Companies in this situation may make fresh investments or invest by using methods of modernization on new goods in the already-existing facility. Businesses favor inorganic development for a number of reasons, including increasing profit margins, cutting costs, adding value, using scale economies, and transferring technology. Authors in [21] firms can expand independently by employing existing equity, similarly to the way they can do so by utilizing the national or worldwide resources of other firms that are already in operation. As a result, inorganic growth describes a growth that occurs on both domestic and global markets [22]. A cooperation between two or more firms is necessary for inorganic growth. Accordingly, strategic partnerships are seen as organic, or outside, corporate development. Agreements for collaborative efforts are created to accomplish shared objectives. It happens when two or more companies band together to pursue a certain strategic objective. When two or more companies band together to combine their resources in order to accomplish particular objectives, it is also referred to as a cooperation. [23]. Strategic partnerships, then, are groups of workers that arise when two or more separate companies desire to advance their expertise, competencies, and equity together. These partnerships enable companies to operate more effectively in global marketplaces and minimize challenges from rivals [24].

4. CONCLUSION

The approach used by today's companies to grow is crucial if they are to succeed. This choice has an impact on the company's business divisions. In this work, an academic exposition of multiple points of view was undertaken along with a full description of creation procedures. firms currently have a strong competition with one another due to the growing number of stands and perpetual changes in how consumers perceive them. Since competitiveness promotes growth, organic evolution becomes a long-term strategic choice by companies with scarce assets. A company has to carefully assess external factors, consumer expectations, and rivals in order to develop and select a plan of action that

allows it to succeed. Businesses must thus be equipped to adapt to their repeatedly dynamic surroundings if they are to grow. For these reasons, a corporation's present goals include maximizing its revenue. Therefore, businesses need to select a long-term successful approach. In the long run, mergers are quite advantageous for firms since they merge forces and support one another in the marketplace. Organizations must be ready to adapt to regional and foreign innovations in technology.

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