ENTREPRENEURIAL ORGANIZATION AS A FACTOR
IN ECONOMIC DEVELOPMENT*

By Frederick Harbison

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I

Most economists would agree that any well-rounded analysis of economic development should include some appraisal of the role of entrepreneurship. On the other hand, they have differed in their concepts of the functions of entrepreneurship. In economic literature, consequently, there are many different answers to the question: Who is the entrepreneur and what functions is he supposed to perform?

In general economists have stressed three functions: (1) the bearing of risk and uncertainty, (2) innovation, and (3) the organization and management of a business enterprise. Frank H. Knight is perhaps the best-known proponent of the notion that entrepreneurs are a specialized group of people who bear risks and deal with uncertainty.¹ Schumpeter argued that innovation is the primary function of entrepreneurship and that one is an entrepreneur only when he carries out new combinations of factors of production and distribution.² Some of the classical economists, however, had broader concepts of entrepreneurship. To Adam Smith the entrepreneur was a proprietary capitalist — a supplier of capital and at the same time a manager who intervenes between the laborer and the consumer, while Alfred Marshall assigned to the entrepreneur all three functions: risk-bearing, innovation, and management. Writing in 1890 Marshall described the functions of entrepreneurs in this way:

"The task of directing production so that a given effort may be most effective in supplying wants is so difficult under the complex conditions of modern life, that it has to be broken up and given into the hands of a specialized body of employers, or to use a more general term, of businessmen; who 'adventure' or 'undertake' its

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1. Frank H. Knight, Risk, Uncertainty and Profit.

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risky; who bring together the capital and the labour required for the work; who
arrange or 'engineer' its general plan, and who superintend its minor details.\textsuperscript{3}

Marshall's concept because of its comprehensiveness is probably
the most realistic in explaining the activities of present-day complex
business enterprises. Its principal weakness is the implicit assump-
tion that the entrepreneur is an individual person, for, only in a very
small firm can a single individual perform all of Marshall's entre-
preneurial functions. In most enterprises, a hierarchy of individuals
is required to perform them. Thus, the entrepreneur is in essence
an organization which comprises all of the people required to perform
entrepreneurial functions.\textsuperscript{4} Entrepreneurship should be treated as
a resource which has both qualitative attributes and quantitative
dimensions. It should be possible to make empirical studies of such
entrepreneurial resources as they are related to other factors of pro-
duction. The objective of this paper is to suggest a framework for
research along these lines.

II

The functions of the modern entrepreneurial organization, whether it be privately or publicly owned and operated, may be
categorized as follows: (1) the undertaking or managing of risk and
the handling of economic uncertainty; (2) planning and innovation;
(3) co-ordination, administration and control; and (4) routine super-
vision. In the very small enterprise, of course, these functions may
all be performed by a single person — the proprietor. In larger
establishments, there may be a division of functions among a complex
hierarchy of individuals. Ownership may be separated from manage-
ment, and management itself may be subdivided into top, middle, and
first-line supervisory management, and into line and staff manage-
ment. Obviously, the large organization requires more managerial
functionaries — and perhaps different types and combinations of
people — than the small or medium-sized firm. Organizations can
be quite simple or very complex depending upon the nature of the
business activity, the size of the firm, and the technology employed.

In this paper, I shall use the term organization as a shorthand
expression for the integrated aggregation of those persons who are
primarily involved in managing risk and uncertainty-bearing, plan-
ning and innovation, co-ordination, administration and control, and

\textsuperscript{3} Marshall, \textit{Principles} (1st ed.; Macmillan and Co., London, 1890), I,
334–35. Essentially the same statement appears in the 8th ed., p. 293.

\textsuperscript{4} A concept somewhat related to the one which I am developing here is
that the entrepreneur is the firm. See, for example, James H. Strauss, "The
routine supervision of an enterprise. I shall refer to the persons who perform these functions as managerial resources. The other people employed in the enterprise, who do not perform these functions, will be referred to as labor resources.  

To illustrate the concept of organization, let us first examine the set-up of a large industrial enterprise. The principal shareholders together with the directors and some of the top managers share responsibility for managing risk and uncertainty. Planning and innovation is a function which the chief executive may share with working directors, vice-presidents, or persons specializing in research in engineering, new products, markets, methods, or systems of organization and personnel development. In a large corporation, innovation may be as much dependent on the organized work of technical planning and research staffs as it is on the inventive genius of a single top executive. Then, there are many specialists involved in administration and control such as division managers, the comptroller, staff experts in work-study, cost control, quality control, production planning and scheduling, personnel and industrial relations, and many other specialized activities. Finally, there are the supervisors or foremen who have responsibility for directing the work of the clerical and manual labor forces. All of these managerial resources comprise the hierarchy of the organization.

The small or medium-sized firm may be distinguished from the large enterprise not by differences in the functions of the organization but rather by differences in the amount and type of managerial resources required. In the smaller family enterprise, for example, ownership and top management may be restricted to one or two members of a family, and thus risk-bearing, planning, and even administration and control may be shouldered by one or two individuals. The

5. Persons who simply purchase or hold stock in a corporation, though risk-bearers in a sense, are not part of the entrepreneurial organization and are not here considered as managerial resources. The officers of the company, who represent the interests of the stockholders along with other interests, are part of the organization. They undertake to manage the bearing of risk and uncertainty and in many cases, of course, are themselves large stockholders.

Engineers, highly trained technicians, scientists, and staff experts, though they may not always manage or supervise the activities of others, are considered managerial resources because they are involved in research, planning, or control activities and are almost without exception on a par with other managerial personnel as far as pay and status in the organization are involved.

In supervision we include only those persons who spend their entire time supervising the work of others — usually clerical or manual labor resources. The so-called straw-boss or working foreman, who spends part of his time actually performing tasks and part in supervising others performing similar tasks, is not here included in managerial resources.
supervision of a small work force may be accomplished by making a trusted craftsman the foreman of the shop. As such a family enterprise grows, however, it may be necessary to hire professional managers, engineers, and experts to take over administrative and control functions. Or if money is needed for a large expansion program, the family may be forced to raise the necessary funds from outside, thus bringing in others to assume risk-bearing responsibility.

Organizations of similar size may vary quite widely in their efficiency. They may have good or poor managerial resources; they may be well integrated or improperly integrated. They can be dynamic or static, rigid or flexible, modern or archaic. It is true that the effectiveness of business organizations, especially as they grow larger, is dependent upon innovators in the Schumpeterian sense. A dynamic organization needs its idea men, its creative thinkers, its people who can plan and initiate changes. I would suggest, however, that organization-building ability is probably the most critical skill needed for industrial development on a large scale. The organization-builder must be able to harness the new ideas of different innovators to the rest of the organization. He must be able at the same time to select and develop persons who can properly manage and control a labor force. His task is to stimulate initiative and enthusiasm in the accomplishment of the objectives of the organization. He must be able to "multiply himself" by effectively delegating responsibility to others. Indeed, the ability to build an organization is perhaps the most precious of all entrepreneurial skills, and thus those who can achieve success in this very critical area may be the ones who most nearly fulfill the role of the true entrepreneur. Such persons, however, do not always have new ideas nor do they necessarily carry out new combinations. They may be simply good leaders and excellent administrators.

This concept of organization certainly does not minimize the role of individual innovators as factors in industrial development. It suggests, however, that organization is more than a summation of the particular abilities of certain individuals. It is more than the statistical aggregate of managerial personnel. Organization connotes a constellation of functions, the persons and the abilities necessary to perform these functions, plus the integration of persons and functions in a common undertaking.

Organization may be treated as any other resource such as capital, labor or natural resources. For example, one can conceive of "investment in organization" in the same terms as investment in
machinery or equipment, and he may think of "accumulation of managerial resources" as a concept parallel to capital formation and accumulation. Industries requiring large investments in machinery and processes — capital intensive industries — may also be industries requiring great "depth" in organization, and thus might be called "organization intensive industries."

III

This concept of organization is perhaps most useful in analyzing the prerequisites for economic growth in underdeveloped countries and the reasons for accelerated or retarded growth in more advanced countries. It provides a framework for tangible comparative studies of the role of entrepreneurship in industrial development. In this connection, let us now consider a few tentative propositions which may be of particular interest to those making empirical analyses of economic development.

These propositions are based upon some acquaintanceship over the past two years with approximately seventy-five business enterprises in the following countries: England, France, Germany, Italy, Belgium, Holland, Egypt, Saudi Arabia, Peru, and the United States. This acquaintanceship consists of a visit of a day or two in about three-fifths of the cases and more intensive studies of the managerial organization and labor policies, averaging about two weeks per enterprise, in the other two-fifths. Admittedly, the evidence at this stage of the research is more impressionistic than definitive. For this reason, the observations which follow are set forth as tentative propositions worthy of more exhaustive study rather than as final conclusions resulting from systematic research.

A. Organization and Capital

Industries requiring large capital investment appear to require a correspondingly heavy investment in organization. Or, put in a different way, large expenditures for equipment and machinery are likely

6. In using the term "underdeveloped countries," I refer exclusively to underdevelopment in the economic sense.

7. The contact with these business enterprises was made by the author in collaboration with other associates who have been engaged in studies of management and organization in connection with the "Inter-University Study on the Labor Problem in Economic Development." The associates on the management studies have been: Eugene W. Burgess, Franco Ferrarotti, Heinz Hartmann, Ibrahim A. Ibrahim, William Scott, Ernst Köchling, and René Montjoie.
to be quite unproductive unless there is a corresponding investment in organization.

This proposition can be argued on logical grounds. Large investments in machinery and processes are usually associated with relatively large enterprises. A large enterprise, being more complex than a small one, naturally requires more and better trained managerial resources. Also, if the machinery and processes themselves are complicated, engineers, chemists, or other technical staff specialists are required. To the extent that machinery may displace unskilled or skilled labor, it usually requires greater investment in personnel who specialize in planning, production scheduling, engineering, and "control" of all kinds. Thus an additional cost involved in investment in modern processes or labor-saving machinery is that of procuring and developing the managerial resources necessary to utilize and to control it. If a business organization must employ a battery of technicians to supervise and control more complicated processes, there is also need for more experienced and expensive top management to co-ordinate their activities and to plan for future development.

On empirical grounds, this relationship can be illustrated by a rough comparison which we have made of steel mills in Germany, the United Kingdom, and the United States. The first comparison was made between a German and an American company, each producing a roughly comparable range of products and employing approximately the same total personnel (between 17,000 and 18,000 men). In comparison with the American company, the German enterprise had quite old machinery and processes which were in most respects inferior to that in the American company. Largely for this reason, the total annual production of the German company was only half that of its American counterpart.

The contrast in investment in managerial resources between the two companies was quite evident. In comparable steel-making and rolling departments, the American company used three foremen to every one in the German mill, and the educational level of the American foremen was in practically all cases much superior to that of the German foremen. In the German plant a greater burden of supervision was placed upon the group leader, an experienced skilled workman, whereas in the American company the supervisory functions were performed by full-time salaried foremen who were members of management. Some of the American foremen had Master's degrees and 15 per cent had college degrees, but none of the German foremen had any equivalent higher education. In the States, moreover, fore-
men quite frequently advance into the upper ranks of management; in Germany, the position of foreman is generally the highest step in the ladder of promotion for workers; only on rare occasions do the German foremen become members of middle or upper management. An even more striking contrast existed with respect to the senior technical staff which comprises persons such as process engineers, chemists, specialists in industrial engineering, personnel, production control, and quality control. Here the American company employed 430 persons as compared with only 43 in the German enterprise. It was obvious that the top managers and the superintendents in the States had a great many highly trained assistants actually to perform technical work. In Germany, the members of top and middle management did most of the technical work themselves. For this reason, a much higher proportion of the managers and superintendents in the German company were themselves highly trained engineers, whereas many of their counterparts in the American company had either no formal technical training or perhaps merely a liberal arts college education.

The management spokesmen of the German company, who had visited the American mill and thus were familiar with its equipment and processes, pointed out that the "greater depth" in managerial organization in America was largely attributable to the greater investment in machinery and processes, and that as the German company embarked upon its program of modernization of equipment, it would be necessary to recruit and develop many more foremen and senior technical staff specialists. The German company also pointed out that its current investment in foremen and staff specialists was almost twice as large as twenty years ago when even older processes and more primitive machinery were used.

This American-German comparative study recently induced a British steel concern to send a team of experts to the States to make a similar comparison of its organization and manpower utilization with those of the same American company. In this case, the equipment and processes of the British company were fully as modern as those in the American company; indeed, much of its machinery had been supplied by the same American manufacturer. In comparable departments, the labor force of the British concern averaged about 25 per cent in excess of that in the American company, the number of

foremen was roughly equal, and the number of senior technical staff about half the number in the U.S. counterpart. The principal conclusion of the British company team was summarized in its report to the Board of Directors as follows:

"The most important single fact about managerial organization in America seemed to us to be the willingness of American companies to pay heavily for a large management staff, while at the same time being minutely strict about the number of operatives; the argument being that if a plant was managed well everything else would follow."

The top management of this company concluded that it must attain more "depth in management" necessitating much greater attention to recruitment and development of managerial personnel at many critical levels.

This steel mill comparison, though it is admittedly suggestive rather than conclusive, indicates that there may be a direct and positive relationship between investment in technology and investment in organization. It also shows that where technology is comparable, labor productivity may be related positively to investment in managerial resources. We have noticed the same general relationships in the other companies with which we are acquainted. A thin managerial organization is usually associated with relatively extensive utilization of nonmanagerial labor forces and relatively primitive production methods, whereas a relatively deep managerial organization is almost always found in enterprises which have the largest investment in technology, particularly in labor-saving machinery.

It would be very interesting, indeed, to test this relationship by further empirical studies within the United States of the numbers and types of managerial resources which are utilized at various stages of technological development in different types of industry. Such studies would be useful in the formulation of programs of education for business leadership as well as in charting in quantitative terms the various relationships which may exist between investment in technology and investment in organization.

B. Organization and Labor Resources

A second proposition is that organization is probably the principal factor determining the productivity of labor, assuming that capital and natural resources are constant. A labor force is recruited, trained, developed and managed by the organization, and the skills and qualities of manpower probably depend more on what the organization does than on any natural or innate characteristics of labor
itself. This proposition, like the previous one, seems to be plausible on both logical and empirical grounds.

An essential management function is the selection, training and development of the persons comprising the labor force. Most, though not all, skills of manual labor and even clerical employees are acquired on the job. Another management function is to provide the incentives for work. To these functions we can add many more which directly affect the productivity of labor: proper lay-out of machinery and processes, work study, breakdown of jobs in order to economize on use of critical skills, safety programs, systems for appraising performance and discovering talent, and many other related techniques. Such techniques of "scientific management," however, are expensive. They require the employment of specialized personnel and investment of time on the part of members of the line organization. Even more important, they require relatively high levels of education, experience and training among the members of the managerial organization. The development of such high-level talent in management would be too expensive, if not virtually impossible, in many present-day underdeveloped economies.

In some respects, of course, the efficiency of labor resources may be independent from organization. The more important factors here may be levels of education, conditions of health, nutrition, and general experience with and attitudes toward work. The organization, however, is able to influence these factors at least in part. Attitudes toward work can be molded by management; companies can provide medical services and adequate diets for employees; and some firms in underdeveloped countries even provide facilities for general education of members of the labor force. In the industrially advanced countries, of course, the laboring population may be generally more efficient because of long tradition and previous experience with industrial enterprises, and the development of high labor productivity in a primitive society may thus require a much higher investment in organization than in countries with a long industrial tradition. In short, I do not deny that some innate factors have influence on the quality of labor resources; my contention is simply that the organization which employs labor is probably the principal factor — the dominant force — in determining labor productivity with constant technology.

This contention has been fortified by observations of the utilization of labor resources in different enterprises. For example, in Egypt the productivity of labor is very low, even in factories which techno-
logically may be among the most modern in the world. In the best Egyptian factories four to six workers are usually employed for every one in comparable establishments in the United States. But, managerial resources are scarce and managerial methods are quite primitive. Although there is an impressive awakening to the need for improvement of management on the part of progressive Egyptian enterprises, systematic procedures of selection and training operatives are not yet used. Programs for training and development of supervisors or middle management in the skills of handling people are almost nonexistent. Time and motion study, job evaluation, and other techniques for the systematic combination of labor with processes are still quite rare. The explanation for this “thinness of management” is obvious. First, labor is plentiful and cheap, so that there is no pressure to make a large investment in organization in order to economize in the utilization of labor; second, specialists in techniques of scientific management are scarce if they exist at all; and finally, the general level of existing managerial resources is not yet sufficiently high to utilize effectively modern techniques of manpower utilization.

Another convincing bit of evidence showing the relationship of labor productivity to organization is the “spotty” work performance which is evident in most factories, and particularly in those in the less developed countries. One frequently observes a very slow pace of work in most departments of a factory, whereas in one or two departments the work pace may be very high. In this connection, I have observed some teams of Egyptian workers on packaging operations whose rhythm and speed of work was equal to that in the best American factories, this being all the more remarkable because they were employed in factories with unusually poor labor productivity as a whole. The explanation for these spotty examples of labor efficiency lies in the peculiar or rare skills of the individuals planning or supervising these particular departments. The same spottiness also is apparent when one compares different factories in the same labor market. Again in Egypt, I visited two petroleum refineries located less than one-half mile apart. The labor productivity in one had been nearly double that in the other for many years. But recently, under completely new management, the inefficient refinery was beginning to make quite spectacular improvements in efficiency with the same labor force. All of this evidence, of course, is suggestive rather than conclusive. Nevertheless, it leads to a strong presumption that the productivity of labor may be primarily a function of organization.
C. Organizational "Inefficiency"

Unlike land and capital, organization is a human resource. Business organizations are composed of animate human beings who are motivated by drives, hopes, desires, fears and frustrations. The actions of human beings and hence also the actions of organizations are not determined exclusively by economic forces. From the standpoint of economic analysis, organizational behavior as all other human behavior is not always "rational." Indeed, the economist who studies any form of management soon finds out that business organizations are surprisingly "inefficient." The decision-making processes in the modern enterprise are not so precise or so rational as the economic theorist might presume, and a great deal of energy within the organization is absorbed in clearly noneconomic activities. Thus the economist may have good grounds for assuming that all business organizations are inefficient in terms of economic theory, the distinction between them being only that some are more inefficient than others.

In some respects, a business organization is similar to the internal combustion motor or the steam engine. Even the most efficient internal combustion engine converts less than half of its input energy into motive power, and the steam engine is, of course, much less efficient in its effective utilization of energy. Energy is lost in many ways, such as in generating heat and in overcoming friction, so that only a fraction of the energy stored up in the coal or oil consumed is transformed into useable mechanical power. The business organization may have the same shortcomings. It never operates at its theoretical efficiency, because energy is inevitably wasted in nonlogical activities and in overcoming "organizational frictions." Some organizations, of course, are better than others, i.e., they are in theoretical terms less inefficient than those which waste the most energy. Let us illustrate this phenomenon by an analysis of the factors influencing the performance of the essential functions of the business organization.

First of all, there is no reason to believe that the heads of typical or representative business organizations are always or even primarily striving to maximize profits. As Reder has pointed out, an entrepreneur may at times strive to retain control over the organization rather than to maximize profits. He may be interested in prestige and power rather than sheer financial reward. Many French businessmen, for example, are as much interested in using the firm as a means of maintaining or building the family name as in amassing a

large fortune. Landes has said that to the French entrepreneur, "the business is not an end in itself, nor is its purpose to be found in any such independent ideal as production or service. It exists by and for the family, and the honor, the reputation and wealth of the one are the honor, wealth and reputation of the other." Thus, the risk-taker, the innovator or the administrator may be as much concerned with getting his friends or his relatives into a business as he is with maximizing profits. In managing the enterprise, he may seek to maximize his social position or even his political power. He may be much more concerned with preserving his security than in seeking new opportunity. To the extent that he is concerned with such "extraneous" or noneconomic goals, the firm may be "inefficient" from an economic standpoint.

Another factor explaining the inherent inefficiency of the firm is that of the imperfect knowledge upon which decisions must be made. The risk-takers, planners or administrators in any organization have at best imperfect facts concerning such things as the demand for their product, the marginal revenue productivities of capital or labor, the effects upon consumer demand of changes in either the price or the quality of articles produced, the future trend of costs of raw materials, and so forth. The business must operate on best guesses, hunches, and artificially constructed assumptions. Thus, the fact that business judgments must frequently be based upon imperfect knowledge makes completely logical and rational decision-making quite difficult.

An even more important factor explaining the economic inefficiency of business enterprise is organizational friction. This matter has received some recognition by economists. In most business organizations there are perhaps three different types of frictions — (1) those

2. R. H. Coase, for example, points out that as a firm gets larger there may be decreasing returns to the entrepreneurial factor because of the increased costs of organization. (R. H. Coase, "The Nature of the Firm," Economics, IV (1937), 392.) And, Austin Robinson states that the costs of greater division of labor are at some point offset by the greater cost of co-ordination, and then goes on to show that the scalar line of authority necessary for a business organization can be extended infinitely only if the necessary knowledge for decisions is very small, if the maximum amount of co-ordination is achieved at each level in the scale, and if the knowledge required for co-ordination at the next higher level need not descend into the lower levels of the scale. (Austin Robinson, "The Problem of Management and the Size of Firms," Economic Journal, XLIV (June 1934), 250.) However, a more extensive and factual description of some of these frictions is necessary to clarify this point.
resulting from "political" relations between persons, (2) those resulting from difficulties in communication, and (3) those resulting from imperfections in organizational structure. These are all related to the behavior of human beings as functionaries in an organization.

Within most organizations these are personal jealousies and rivalries, conflicts of personalities, cliques and factions, prejudices and idiosyncrasies, and favoritism and nepotism. The successful member of an organization must know its internal politics as well as its formally stated purpose if he hopes to be successful. Persons who have actually lived with business organizations and studied them carefully will agree that "jockeying for position" and playing politics consume a substantial portion of the energies of a good many members of the managerial hierarchy. In short, in making almost any decision, individuals in the hierarchy are likely to ask themselves "how it will affect me and my position in the organization" rather than how it will contribute to profit maximization or to the formally stated goals of the enterprise.

Another cause of organizational friction is defective communication. The fact that people work side by side in the same organization does not mean that they understand each other. But, understanding is necessary for agreement on goals, and agreement is a prerequisite of good team work. Communication is the cement which is supposed to hold the organization together.

Communication takes place through the written word, through speech, and also through behavior. It involves both giving and getting information, but information is always subject to varying interpretations. Authoritarian or "top-down" communication often breeds misunderstanding and determined resistance to authority in the lower levels of an organization, whereas lack of proper direction may lead to chaos. Another dilemma relates to the willingness of persons to communicate accurately. There is a very natural human reluctance to state facts which are known to be particularly unpleasant to the listener, especially when he is a superior. And the listener, when faced with bad news, is often reluctant to accept it objectively. Then, the same information may be construed quite differently by people in different strata of the organizational hierarchy. In all organizations, there are the official lines of communication and there is also the "grape-vine." Even the most skilled administrators are unable to use either or both systems with complete precision. Thus, the economist should understand that the communication processes in all business organizations probably have serious defects. Although con-
siderable progress can and will be made in improving these processes as the knowledge of organizational behavior is extended, a completely frictionless communication system in a business organization may be as impossible of practical realization as the perpetual motion machine.

The third major source of organizational friction lies in the structure of the business organization itself. Specialization and division of labor increase the problems of integration, co-ordination and control. This raises the very knotty question of the "span of control" — i.e., the number of persons who can be properly directed and supervised by each boss. The appropriate span of control varies, of course, with the nature of the business operations, but it is also dependent upon more intangible factors such as individual personalities, the communication process, authoritarian or democratic executive leadership, and the motivational patterns of working groups. Specialists in organizational planning are working vigorously on this thorny problem, and, as everyone familiar with business administration will agree, they have as yet arrived at no really definitive measures for eliminating the frictions generated by imperfections in this area. Another related problem is the proper integration of the functions of the specialist-expert and the general administrator — in administrative jargon the relationships between staff and line. Modern business organizations require the services of specialists such as engineers, lawyers, industrial relations experts, and designers. Yet ideas coming from such advisors, particularly if they call for substantial innovation, are quite often resented and resisted by those in charge of operations. Consequently, a tremendous amount of energy must be devoted to "selling" the line management on new ideas and getting acceptance of necessary changes throughout the organization. These and many other similar organizational frictions are large consumers of energy within most business organizations. The consumption of this energy may be lowered by improvements in design of the organization and also by the use of appropriate human relations lubricants, but it can never be completely eliminated.3

3. Economists have been inclined to assume that organizational frictions are a function of the size of the firm and that, as the scale of operations is increased, the diseconomies of size outweigh the economies of specialization. This, however, is a rather superficial assumption, and it also is in some respects completely false. Ingenious organizational experts have devised systems of decentralized administration to overcome some of the diseconomies of size. Indeed, in a large organization greater energy can be utilized to study individual and group behavior and thus to devise measures for overcoming some types of organizational friction. Furthermore, industrial sociologists are now beginning to find that specialization itself is not necessarily a source of difficulty and that the size of an organization
If the above analysis is correct, one cannot conceive of organization in purely quantitative terms. Thus it would be misleading to say that greater financial investment in managerial resources will automatically increase the efficiency of the firm. There is as yet no exact science or technology of organization-building. But in a rough way it may be possible to distinguish between a relatively good organization and a bad one, a complex one or a simple one, and an expensive one or a cheap one. The typical business organization in the United States is probably relatively more efficient and much more expensive than that, for example, in France, Italy, or Belgium. And, within the United States it is possible for informed observers to detect the difference between a reasonably progressive and efficient organization and one which is very poorly designed and obviously using organizational energy in an excessively wasteful manner.

IV

The argument presented can now be summarized. Organization may be looked upon as a resource, and in significant though not in all respects it is similar to other resources such as labor, capital, and natural resources. Organization is a broader concept than entrepreneurship. It connotes a constellation of functions including specifically the management of risk and uncertainty, planning and innovation, co-ordination, administration and control, and routine supervision of the enterprise; it connotes also the integrated hierarchy of the persons who are primarily concerned with exercise of these functions — the managerial resources.

In considering organization as related to other resources, three tentative propositions were advanced: (1) industries requiring large capital investment probably require a correspondingly large investment in organization; (2) organization is the principal factor determined by the productivity of working groups and is related to certain qualitative methods of supervision. In several studies, it has been shown that the "employee-centered" supervisor who provides only general direction tends to get more production from workers than the "production-centered" supervisor who closely directs the activities of his subordinates. For a short statement of some of the findings of the Michigan group, see: Rensis Likert, *Motivation: The Core of Management*, in American Management Association, Personnel Series, No. 155 (New York, 1953).

4. For an analysis of management in these countries as compared with the United States, see F. H. Harbison and Eugene W. Burgess, "Modern Management in Western Europe," *American Journal of Sociology*, LX (July 1955).
mining the productivity of labor, assuming capital and natural resources to be constant; and (3) because of noneconomic factors which determine in part the behavior of human beings as managerial resources, all organizations are probably "inefficient" in effecting the optimum combination of economic resources which is theoretically possible.

In analyzing problems of economic development, organization is a more precise and meaningful concept than entrepreneurship in its traditional sense. Organization denotes a concrete institution which describes realistic relationships between functions and functionaries, whereas entrepreneurship is often a rather vague abstraction which is subject to varying interpretations. To some extent at least, organization is subject to quantitative measurement, which permits one to set forth a series of possible relationships between quantities of capital or labor and quantities of managerial resources (depth of organization). For example, if it is possible to determine the quantity of capital investment necessary for a country to increase its production by a certain percentage, it may be possible also to estimate the extent and nature of investment required in managerial resources needed to make such capital investment effective. The idea of substitutability of labor and organization (as well as labor and capital) is also a useful concept in studying the processes of economic growth and development. The traditional notions about entrepreneurship were not designed for such kinds of analysis.

Yet, perhaps the most important advantage of the organization concept lies in the establishment of a logical connection between economic theory and the theory of business institutions. Recently sociologists, psychologists, and also some economists have made considerable progress in suggesting theories of organization as well as explanations of decision-making and institutional behavior. By using this concept of organization the more advanced and sophisticated models of business enterprise can be more conveniently related to the frameworks of economic theory.

Frederick Harbison.