CHAPTER 5. THE DESIGN OF THE BUSINESS

5.1 INTRODUCTION

There are two ways to understand the design of a business or, the internal organization of a firm. The first way, and the one that usually is studied in colleges of business administration, emphasizes the formal aspects of the organization that are necessary to its efficient and effective operation: its structure, strategy, and systems. However, in recent years, it has been realized that this view is incomplete. An organization is a complex social/economic institution that facilitates the interaction of people; and, accordingly, consideration also must be given to its informal or cultural aspects. It may be helpful to think of the conventional view as a rational (or hard) model of the firm, while the latter approach is a cultural (or soft) model and could be termed “organizational psychology or sociology”. Either model, if taken individually, is an incomplete or partial model of the firm; but when combined, they can yield a comprehensive understanding that captures the dynamic interactions of a firm’s internal organization.1

Generally, we will deal with the rational aspects of a firm: its management, marketing, financing, etc.; but it should be realized that the socio-cultural aspects may be important as individuals work to establish and achieve goals and perform the activities required of them. The soft model emphasizes interpersonal relationships within the organizational/institutional setting; considering the activities within the organization as the interaction of an array of roles rather than simply a collection of tasks assigned to people. The difference is not simply one of semantics; an individual in an organization is more than a “mechanical” component of a complex system. A person’s role in the whole “organism” tends to be defined ambiguously and is somewhat fluid in nature, changing as the individual and others in the organization respond to their environment and to each other. In this model, people are understood as social beings and not as “cogs on a wheel”; and the organization is viewed as a complex network of groups whose interactions are founded on trust and openness. Trust and openness are key factors in establishing a shared vision and common mission. The sense of common purpose that results, creates a framework for individual, group, and organizational objectives. Other aspects of the human condition are similarly important. Values, feelings, and emotions play an important role in determining how (and why) people work together. Attitudes towards achievement, recognition, and growth vary tremendously for design professionals, and are as important as monetary rewards for motivation and maintaining high levels of performance, implying a reward system that deals with objective issues as well as subjective concerns of an individual within the organization.

5.2 THE FUNCTIONAL FORM

The functional form or structure of the organization is concerned with how the firm is organized or designed to achieve its goals and objectives. The primary goal of management is to lead the firm in a way that enables it to achieve its objectives. Thus, the role of management is defined as assisting others to attain the defined goals of the firm and utilizing the resources in the most effective way. In order to do so, the primary functions of the firm’s managers are planning, organizing, scheduling, coordinating, controlling, and evaluating the activities of the employees and the resources consumed in productive enterprises. To accomplish these functions, the firm’s management must view itself as a system for the effective collection, analysis, and synthesis of information relevant to making decisions related to the firm’s goals. Decision-making also embodies lines or routes of communication, authority, and responsibility; that is, a structure must exist for the ordering (or organizing) of the organization so that the firm’s resources (people, customers, and other assets) can be brought together (integrated) into effective relationships.

These relationships should be formed so that the optimum use is obtained from the resources allocated to a given activity and the maximum benefit can be derived as a result. Although there is a tendency to consider profit (or profitability) as the benefit-of-interest and to structure the organization for maximum efficiency, it is important to realize that the primary goal of value maximization can be influenced by a wide range of other goals and objectives, some of which

may conflict directly with the “bottom line.” In addition, it is important to recognize that in some ways, a firm is a
dynamic organism as it responds to its environment by growing, developing, and changing over time. While each stage
in the firm's evolution is relatively predictable, it is subject to a set of issues (both potentials and constraints) that are
unique, making it impossible to assign or prescribe a particular organizational structure as an ideal solution to the prob-
lems inherent in any given stage of evolution.

In summary, management of the firm involves management of the resources (both human and material assets) of the
firm. Decisions about the effective application, control, and organization of those resources establish the organizational
structure or functional form of the firm.

5.3 THEORIES OF ORGANIZATIONAL DESIGN

At least four separate theories of organizational design have been proposed:

i. the classical theory
ii. the human-relations theory
iii. the decision-making theory
iv. the contingency theory

There is little supporting evidence to evaluate their individual strengths and weaknesses in practical applications, pri-
marily because organizational research has not developed sufficiently, but an understanding of the underlying similar-
ities and differences among them may be helpful to understanding why organizations are designed the way they are.

CLASSICAL THEORY

Despite the previously observed limitation, classical theory provides that there are “universal” principles that should
be followed to achieve a successful organizational structure. These principles were established as a result of the con-
tributions of Max Weber (1947), Henri Fayol (1949), and Frederick Taylor (1911).

Taylor: Scientific Management

Taylor's Principles of Scientific Management emphasized productivity as the basis of organizational effectiveness. A
“scientific” approach provided the foundation for the systematic analysis of jobs and the measurement of worker pro-
ductivity. The “principles” profoundly influenced American business by establishing a methodology for selecting,
training, and developing workers and, indirectly caused job specialization to become the focus of organization struc-
ture.

Weber\(^2\): Bureaucratic Model

Although scientific management was concerned primarily with the productivity of a firm's operations, it contributed
little to the development or understanding of effective organizational structures. Weber's Bureaucratic Model of orga-
nizational structure stressed logic, rationalism, and efficiency -- a considerable contrast to the modern interpretation of
bureaucracy, which usually is associated with excessive and inefficient administration, (red tape), rigidity, and lack of
initiative. The ideal bureaucracy had seven characteristics that were intended to assure ordered and predictable relations-
ships between individuals and positions in the organization. However, when taken to the extreme, these character-
stics yield an organization that is bureaucratic (in the modern sense).

i. **Rules and Procedures**: A well-defined and consistent set of rules and procedures that establish the
rights and duties of subordinates and their superiors and ensure that their actions are controlled and
predictable.

ii. **Division of Labor**: Tasks are subdivided and allocated to employees who have the ability and
authority to perform them. This structures the firm on the basis of functional specialties.

iii. **Hierarchy of Authority**: Each position in the organization reports directly to the (one) position that

is immediately higher, creating a chain of command and a clearly defined hierarchy of responsibility and authority for decision making.

iv. **Technical Competence**: Employees are selected and promoted based on technical ability, thereby ensuring that each person is capable of doing his/her job, enhancing the elements of predictability and control by eliminating other personality-based factors from the advancement process.

v. **Separation of Ownership**: Employees (especially managers) are eliminated from ownership of the organization in order to promote its best interests rather than the self-interests of employees.3

vi. **Rights and Properties of the Position**: The organization owns both the right to, and control of property associated with any position (rather than the individual in the office) to prevent the abuse of the position for personal ends. That is, business is conducted on an impersonal basis with social distance between a manager and his/her subordinates.

vii. **Documentation**: A written record of the organization’s decisions, rules, and actions is maintained to assure order.

**Fayol:**4 **Classic Principles of Organization**

The essential functions of management (planning, organization, coordination and control) were codified in Fayol’s 14 principles:

i. Division of work to facilitate high levels of specialization.

ii. Authority and responsibility unified for an individual manager.

iii. Discipline established by fairness and judicious enforcement.

iv. Unity of Command to provide that each person has only one boss.

v. Unity of Direction to require that activities having the same objective were managed by the same person.

vi. Subordination of individual interests to the common good of the organization.

vii. Remuneration (and rewards) based on fairness.

viii. Balance between centralization and decentralization.

ix. Scalar chain of command to provide a defined and graded scale of authority through the organization.

x. Order -- resources available at the right place and time.

xi. Equity of treatment by managers to ensure fairness to all employees.

xii. Stability to avoid the high costs of personnel turnover.

xiii. Initiative of employees stimulated.

xiv. Esprit de Corps -- employees should be a sense of belonging/attachment to the organization.

These principles have been a major influence on American business because they provide the very essence of organizing human activities to undertake complex tasks and, as a result, underlie the coordination of work and provide the framework for organizational structure.

**THE HUMAN RELATIONS THEORY**

Classical Theory, while providing the foundation for organizational structure, ignores important issues of individual motivation, the skill of leadership, and the interactions among informal groups in the organization. These concerns reflect the human element and establish a conflict with the mechanistic structure of the Classical Theory.

The Human Relations Theory emphasizes the human dimension in organizations and is based on the assumption that people work best in highly cohesive groups that are focused on accepted (organizational) goals. One of the primary contributions in this area was made by Rensis Likert.5 Likert stressed supportive relationships and participation of employees in overlapping work groups. A supportive relationship was established when an individual experienced

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3. This is contrary to modern economic theory that recognizes the high “agency cost” that can result when owners and managers are motivated by different forces.

feelings of self-worth and importance (self-esteem). These feelings were enhanced when the individual and the work group participated in making the decisions that affected them. As a result, people would be more supportive of each other and the organization. Overlapping work groups established links among groups as a manager becomes a member of the work group that he/she supervises and a management group that is comprised of the manager’s peers and their supervisor (see Figure 5.1).

**Figure 5.1 Overlapping work groups: Likert Model**

![Diagram of overlapping work groups]

The overlapping of work groups facilitates coordination and communication (upward, downward, and across the levels of the organization) because managers are able to share problems and information and affect decisions that indirectly affect them.

Likert also identified four categories or types of organizations that defined a continuum of possible styles:

a. Exploitative, Authoritative  
b. Benevolent, Authoritative  
c. Consultative  
d. Participative, Group

The characteristics of these organizational types are summarized in Table 5.1 using eight variables that are major components of organizational theory:

i. processes of leadership  
ii. motivation  
iii. communication  
iv. interaction-influence  
v. decision making  
vi. goal setting  
vii. control  
viii. performance and measuring.

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Although there is intuitive support and limited research evidence for the attitudinal advantages that can result in productive gains for Participative and Consultative organizations over authoritative-type organizations, the hypothesis that the human aspects of the differences between them necessarily “caused the positive results cannot be accepted or rejected at this time.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>EXPLOITIVE AUTHORITATIVE</th>
<th>BENEVOLENT AUTHORITATIVE</th>
<th>CONSULTATIVE</th>
<th>PARTICIPATIVE GROUP</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership</td>
<td>None</td>
<td>None</td>
<td>Substantial</td>
<td>Complete</td>
</tr>
<tr>
<td>Trust in subordinates</td>
<td>Seldom used</td>
<td>Sometimes used</td>
<td>Usually used</td>
<td>Always used</td>
</tr>
<tr>
<td>subordinate ideas</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Motivational forces</td>
<td>Security, status</td>
<td>Economic, ego</td>
<td>Economic, ego and other</td>
<td>All motives High satisfaction</td>
</tr>
<tr>
<td>Motives tapped</td>
<td>Overall dissatisfaction</td>
<td>Some moderate satisfaction</td>
<td>Moderate satisfaction</td>
<td></td>
</tr>
<tr>
<td>Level of satisfaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication</td>
<td>Very little</td>
<td>Little</td>
<td>Moderate</td>
<td>Much</td>
</tr>
<tr>
<td>Amount</td>
<td>Downward</td>
<td>Mostly downward</td>
<td>Down, up</td>
<td>Down, up, lateral</td>
</tr>
<tr>
<td>Direction</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interaction-influence</td>
<td>Very little</td>
<td>Little</td>
<td>Moderate</td>
<td>Much</td>
</tr>
<tr>
<td>Amount</td>
<td>None</td>
<td>Virtually none</td>
<td>Moderate</td>
<td>Substantial</td>
</tr>
<tr>
<td>Cooperative teamwork</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision making</td>
<td>Top</td>
<td>Policy decided at top</td>
<td>Broad policy at top</td>
<td>All levels Fully involved</td>
</tr>
<tr>
<td>Locus</td>
<td>Not at all</td>
<td>Sometimes consulted</td>
<td>Usually consulted</td>
<td></td>
</tr>
<tr>
<td>Subordinates involved</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal setting</td>
<td>Orders</td>
<td>Orders with comments</td>
<td>Set after discussion</td>
<td>Group participation Fully accepted</td>
</tr>
<tr>
<td>Manner</td>
<td>Covertly resisted</td>
<td>Frequently resisted</td>
<td>Sometimes resisted</td>
<td></td>
</tr>
<tr>
<td>Acceptance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Processes</td>
<td>Top</td>
<td>Some below top</td>
<td>All levels</td>
<td>All levels</td>
</tr>
<tr>
<td>Level Information</td>
<td>Incomplete, inaccurate</td>
<td>Often inaccurate, incom-</td>
<td>Moderately complete,</td>
<td>Complete, accurate</td>
</tr>
<tr>
<td></td>
<td></td>
<td>plete</td>
<td>accurate</td>
<td></td>
</tr>
<tr>
<td>Performance</td>
<td>Mediocre</td>
<td>fair to good</td>
<td>Good</td>
<td>Excellent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 5.2, the characteristics of the classical bureaucracy and the participative organization are compared.

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Classical Design</th>
<th>Participative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leadership Process</td>
<td>No perceived confidence and trust. Opinions and ideas of subordinates not sought. Subordinates do not feel free to discuss job problems with supervisors.</td>
<td>Perceived trust and confidence between supervisors and subordinates at all times. Supervisors seek input from subordinates who are free to discuss job problems with them.</td>
</tr>
<tr>
<td>Motivational Process</td>
<td>Motives relating to physical, security, and economic needs are tapped through the use of sanctions, fear and stress. Employees have unfavorable disposition to organization.</td>
<td>A full range of motives are tapped and employees have favorable attitudes towards the organization and its goals.</td>
</tr>
<tr>
<td>Communication Process</td>
<td>Information flows downwards and is viewed with suspicion by subordinates. Information tends to be distorted and inaccurate</td>
<td>Information flows freely through the organization (upward, downward and laterally). Information is accurate and undistorted.</td>
</tr>
<tr>
<td>Interaction Process</td>
<td>Closed and restricted such that subordinates have little impact on the goals, methods and activities of the organization.</td>
<td>Open and extensive so that all employees are able to influence the goals, methods and activities of the organization.</td>
</tr>
<tr>
<td>Decision Process</td>
<td>Occurs at the top of the hierarchy and is relatively centralized</td>
<td>Occurs at all levels of the organization by group processes. Tends to be decentralized.</td>
</tr>
<tr>
<td>Goal-setting Process</td>
<td>Located at the top and discourages participation</td>
<td>Encourages participation of all employees in setting high, though realistic goals. Achieved through group processes</td>
</tr>
<tr>
<td>Control Processes</td>
<td>Centralized and emphasizes responsibility as blame for mistakes</td>
<td>Dispersed through all levels and emphasizes self-control and problem solving.</td>
</tr>
<tr>
<td>Performance Goals</td>
<td>Low levels are established and are passively sought by managers. Little effort to develop the human resources.</td>
<td>High levels are set and are actively sought by managers who are fully committed to achieving them. Development and training of employees is stressed.</td>
</tr>
</tbody>
</table>


**THEORY OF DECISION MAKING IN ORGANIZATIONS: A BEHAVIORAL APPROACH**

Proponents of the application of the theory of decision making to organizations (and organizational structure) hypothesize that individual behavior must be considered in the context of the framework for decision making that is provided by an organization. The process, policies, and procedures of the organization (such as those that affect the division of labor, authority, communications, etc.) set limits and establish the individual’s decision-making environment. Accordingly, an organization is perceived as a system of individual decision makers who operate within a communication/information network. Thus, the theory emphasizes the decision-making process that actually occurs within an organization: the need for conflict resolution, problems of coordination, and the flow of information.

6. It should be noted that a behavioral model of decision making is only one model (of several) of how decision making occurs in an organization. Decision making can be analyzed using a rational model which requires a systematic process that includes a statement of situational goals, problem identification and development of criteria, generation of all possible alternatives, evaluation, and rational choice. The behavioral model assumes that decision makers operate with bounded rationality (rather than perfect rationality); that is, decisions are made without an exhaustive search and in a way that is not entirely rational because solutions are based on satisfying minimal requirements.
In some management models, decision making in the organization is recognized as a process that embodies four principles:

a. **Quasi Resolution of Conflict**: Because different groups within an organization may have different and conflicting goals, there may be a tendency to attempt to resolve conflict when it arises. However, complete resolution of conflict is unnecessary, and it is possible (even likely) that an organization can operate effectively with “considerable latent conflict of goals” and without reducing the areas of dispute to common dimensions.

b. **Uncertainty Avoidance Strategy**: Most firms operate in a very uncertain environment and deal with unknown factors by employing an uncertainty-avoidance strategy: by developing responsive and reactive strategies to deal with uncertainty, or by developing an environment that allows the organization to have additional control of unexpected situations.7

c. **Problemistic Search**: Organizations tend to direct their searches for solutions to very specific problems in such a way that simple models are used and the perspective of the decision environment is that of the organization.

d. **Organizational Learning**: Organizations learn and apply the lessons from decision making activities (adaptive behavior).

**CONTINGENCY THEORY**

Contingency theory proposes that the structure of an organization is contingent upon its environment, thereby integrating the preceding theories of organizational structure. Accordingly, there is no single “best” structure for an organization.

There are several approaches to explaining the design of an organization as a function of its environment:

**Socio-technical Systems Theory**

This approach combines both social and technical subsystems. The technical (or task) subsystem reflects the process by which inputs are transformed into outputs. The process of transformation is driven by the concerns of technology and economics. The social subsystem is a result of the social relationships among people in the organization. The integration of both social and technical systems can be achieved by using autonomous work groups -- where the task or work, authority and responsibility, and reporting relationships are structured around a work group by delegating many decisions that refer to the group. These decisions may include concerns of job assignments, motivation, training, and inspection/quality control.

The socio-technical approach defines four types of environments whose characteristics can affect the potential for the effective use of work groups (see Table 5.3):

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7. Information conditions can range from certain to uncertain. Certainty occurs when the outcomes of a decision are known in advance of taking a particular action. Risk occurs when the probability of a decision outcome can be estimated with some confidence (using either subjective or objective approaches). With uncertainty, decision outcomes are unknown and, therefore, probability cannot be assigned; or outcomes can be identified, but probabilities are unknown. While there is a tendency to use the terms “risk” and “uncertainty” interchangeably, the difference (defined above) is NOT semantic.
For example, an organization in a turbulent environment generally tends to rely less on management hierarchy and more on work groups than another firm whose environment is disturbed/reactive. However, other than this, there is no prescription as to the effectiveness of different individuals participating in work groups or the effect of the four types on environment on the characteristics of work groups.

**Structural Imperatives Approach**

This approach endeavors to determine the important factors that influence the effectiveness of an organization's structure. The structural imperatives are:8

a. **Size:**

Large organizations generally are assumed to be more complex than smaller ones; and as a result, large size is associated with more formalization, a greater division of labor, a large span of control, and more levels in the management hierarchy. The increased division of labor means that employees must become more specialized; and, accordingly, there is a greater level of differentiation among work units. There is less coordination required within the work group so that the span of control can be increased; but because of the differentiation among groups, a greater effort must be made to coordinate their activities. This often is achieved by formalized procedures and rules.

Economies of scale also come into play in large organizations, a condition that is reflected in the sharing

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8. Other important factors that affect the form of an organization include the degree of vertical integration, the extent of product/service differentiation, geographic dispersion of units, and the expansion/growth of the firm through increases in the volume of “production.”
of functions such as marketing, administration, and accounting (among others) as well as in the firm's investment in production equipment. In recent years, and in response to economic conditions, there has been increasing pressure to reduce the complexity of the organization by reducing its size and concentrating the firm's efforts on primary goals.

b. **Technology:**

There also is some evidence that the level of technology plays a role in organizational structure. For example, as the level of technology present in an organization increases, the levels of management (in the hierarchy) tend to increase as the supervisory span of control is reduced; and the structure becomes more "organic" or network-like and less hierarchical in nature. An important factor in the impact of technology on the organizational structure is the number of exceptions to routine procedures that are encountered in the work of the organization. For example, when the number of exceptions to routine is low and the solutions to the exceptions usually can be found by logical/rational analysis, the technology is routine and there is little need for interdependence among individual work groups, coordination among groups can be achieved by planning, and the structure of the firm can be centralized and highly formalized.

By contrast, when many exceptions to routine occur and there are few, if any established methods for problem solving, the technology is non-routine. Technology of this type tends to occur in high-technology firms and those whose operations involve considerable amounts of research and development. The extensive information and feedback requirements of these organizations means that work groups are very interdependent. Their structures must be flexible, and coordination among work groups is achieved by a continual process of feedback and mutual adjustment.

Technology also can be considered as long-linked, mediating, or intensive technology.

i. The basis for long-linked technology is serially linked operations that establish a sequential interdependence among work groups -- an "assembly line" approach where Operation A provides inputs to Operation B, whose output is an input to Operation C....

ii. Mediating technology establishes connections among independent functions/components of the organization and their respective customers/clients. The operations of the work units usually occur in a similar manner; and the technology of operations is expressed in standardized rules, processes, and control mechanisms.

iii. Intensive technologies involve custom technology, where skills are employed in problems/projects in unique ways. While there may be some standardization of process/procedures, each project is addressed by a unique combination of skills that addresses the specific characteristics of the problems. According to this view of technology, the structure of the organization is established in response to the dominant technology so as to minimize the costs of coordinating among work groups.

c. **Environment:**

According to systems theory which underlies the structural imperatives approach, the environment is defined as everything which lies beyond (outside) the organization's boundaries. This should not be interpreted to mean that the environment of the firm is outside the interest and/or control of management. There is considerable latitude in the degree to which elements of the environment are controllable or are able to influence an organization; and the importance of individual environmental elements varies according to a wide range of factors, including geographical location, type of business, etc. One firm might be affected significantly by interest rates and regional employment levels, while another is influenced by government regulation of the health care industry and developments in medical science. Because of the disparate nature of environmental conditions, there is a tendency to subdivide the environment into categories that affect an organization, and in such cases, the task or operational...

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9. Similar to the socio-technical approach, technology is defined using a systems approach: "the mechanical and intellectual processes that transform inputs into outputs."
environment is defined as the set of environmental conditions/forces that directly or indirectly influence an organization's operations.

The uncertainty of, or potential for change in the organization's environment has a dramatic effect on the organizational structure. A key factor in the uncertainty of the environment is the rate at which it is changing. Thus, an environmental factor which is changing rapidly will produce greater uncertainty for the organization. Of similar importance is the complexity of the environment; that is, the number of external/ environmental factors that must be considered in making a decision. Thus, the greater the complexity and rate of change of the environment, the greater is the uncertainty of the environment (see Figure 5.4) and the greater is the need to develop a flexible and responsive organizational structure.

### Table 5.4 Classification of Environmental Complexity and Uncertainty

<table>
<thead>
<tr>
<th>RATE OF ENVIRONMENTAL CHANGE</th>
<th>ENVIRONMENTAL COMPLEXITY: SIMPLE</th>
<th>ENVIRONMENTAL COMPLEXITY: COMPLEX</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low perceived uncertainty</td>
<td>Moderately low perceived uncertainty</td>
<td></td>
</tr>
<tr>
<td>Small number of factors and components in the environment</td>
<td>Large number of factors and components in the environment</td>
<td></td>
</tr>
<tr>
<td>Factors and components are somewhat similar to one another</td>
<td>Factors and components are not similar to one another</td>
<td></td>
</tr>
<tr>
<td>Factors and components remain basically the same</td>
<td>Factors and components remain basically the same</td>
<td></td>
</tr>
<tr>
<td>Moderately high perceived uncertainty</td>
<td>High perceived uncertainty</td>
<td></td>
</tr>
<tr>
<td>Small number of factors and components in the environment</td>
<td>Large number of factors and components in the environment</td>
<td></td>
</tr>
<tr>
<td>Factors and components are somewhat similar to one another</td>
<td>Factors and components are not similar to one another</td>
<td></td>
</tr>
<tr>
<td>Factors and components of the environment continually change</td>
<td>Factors and components of the environment continually change</td>
<td></td>
</tr>
</tbody>
</table>


An uncertain environment can have multiple effects on the structure of an organization. For example, tasks will tend to be subdivided and highly differentiated in order to facilitate the development of specializations that are required in complex environments. At the same time, there is a great need for integration of the efforts of separate departments to prevent conflict among specialist groups and achieve overall collaboration necessary to attain organizational goals. In some organizations, such integrative efforts may be provided by formal inter-group meetings, project coordinators, etc.

**Strategic Choice Approach:**

Figure 5.2 illustrates the Strategic Choice Model for a contingency approach to the design of an organization. This approach employs a “structure follows strategy” concept. That is, an organization's structure is developed in such a way as to allow it to achieve its strategies. In this sense, structure is part of the design of a formal game plan to achieve the goals/objectives of the organization.
The game plan, having been devised by the manager of the organization, is subject to the influence of personal factors, including the different experiences and abilities of managers, their value systems, interests, and personalities. This extends the structural imperatives approach to include a human relations component.

An Application.

One approach to applying contingency theory to organizations identifies mechanistic (corresponding to the bureaucracy of classical theory) and organic (corresponding to the informal-participative form of human relations theory) forms as being appropriate to a relatively stable environment and a turbulent environmental, respectively.\(^\text{10}\)

The characteristics of these two types of organizations are provided in Table 5.5.

<table>
<thead>
<tr>
<th>Characteristics of Structure</th>
<th>MECHANISTIC ORGANIZATIONS</th>
<th>ORGANIC ORGANIZATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Division of Labor</td>
<td>Functional specialization for departmentalizing by function</td>
<td>Job enlargement and job enrichment</td>
</tr>
<tr>
<td>2. Hierarchy of authority</td>
<td>Clearly defined and centralized</td>
<td>Decentralized and participative</td>
</tr>
<tr>
<td>3. Jobs and procedures</td>
<td>Formal and standardized</td>
<td>Flexible</td>
</tr>
<tr>
<td>4. Behavioral processes</td>
<td>Primarily economic</td>
<td>Both economic and non-economic</td>
</tr>
<tr>
<td>a. Motivation</td>
<td>Authoritarian</td>
<td>Democratic</td>
</tr>
<tr>
<td>b. Leadership style</td>
<td>Formal and impersonal</td>
<td>Informal and personal</td>
</tr>
<tr>
<td>c. Group relations</td>
<td>Vertical and directive</td>
<td>Vertical and lateral consultative</td>
</tr>
<tr>
<td>d. Communication</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\(^a\) Source: M.J. Gannon, Management: An Organizational Perspective, 1977, p. 89.

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5.4 ORGANIZATIONAL STRUCTURE

An organization's structure defines its form and activities and how they fit together. It is a system of “task, reporting, and authority relationships within which the work of the organization is done.” Accordingly, the structure of the organization orders and coordinates the actions of its employees so that they are able to achieve more as a group than they could achieve as individuals operating independently.\(^\text{11}\) This requires:

- A division of labor so that the specialized skills of individual employees can be brought to bear on appropriate tasks.
- The efforts of individual employees must be integrated to achieve the overall task of the organization.

The structure of an organization is designed to achieve these requirements. Structure can be analyzed in a number of ways: by configuration, by characteristics of operation, by control mechanisms, or by cultural conditions. While this section will be concerned primarily with configuration, characteristics of operations, and control mechanisms; the culture of the organization is also important. The organizational culture is defined as the “pattern of values, beliefs, and behavioral norms reinforced by rituals and symbolic actions that affect the functioning of the organization.” (p. 704, Griffin & Moorhead).

**Figure 5.1 Integration among Administrative Systems, Structure, and Culture.**

Source: Hax & Majluf, Strategic Management, Prentice Hall, 1984, page 74

The formal configuration of an organization's structure generally is illustrated by means of an organization chart that identifies people and their positions within the hierarchy, including lines of formal communication and reporting relationships. The configuration can be studied in four dimensions: the division of labor, the degree of departmentalization, the span of control, and the administrative component.

DIVISION OF LABOR

The division of labor reflects the extent of specialization—the degree to which the tasks are subdivided into specific job positions. The concept can be traced back to Adam Smith,\(^\text{12}\) an 18th Century economist, and has been associated with many of the benefits and ills of the industrial and post-industrial ages. For example, division of labor promotes an efficient utilization of labor by reducing training costs, increasing standardization, and developing higher levels of expertise because of the repetition of tasks. By contrast, the routine and repetitive tasks can result in reduced job satisfaction and commitment and decreased motivation of employees.

\(^\text{11}\) Griffin and Moorhead, p. 547.
\(^\text{12}\) Adam Smith used the example of pin making to illustrate the application of the concept of division of labor to increase production. An Inquiry into the Nature and Courses of the Wealth of Nations, Dent, London 1910.
DEPARTMENTALIZATION

Departmentalization is a natural consequence of the division of labor and describes how the divided tasks are combined into groups to facilitate coordination and achieve the level of integration necessary for overall (organizational) goals to be attained. The type of departmentalization can result from a focus on the internal operations of the firm:13 (by business function and by process) or by emphasizing external factors (by service/product; by geography; and by client/customer). Alternatively, the structure of an organization may be a hybrid of these types, often combining more than one type as the firm evolves through time.

**Figure 5.2  Department-based Organization - by business function**

![Diagram of a department-based organization with roles including President, Marketing, Accounting, Design, Personnel, Production, Operations, and Inventory.]

a. Business Function

This is the most traditional form of structure: the individual jobs in the organization are grouped by function; for example, marketing, personnel, finance and accounting, production, and design/engineering. The fact that employees within a group are of a common orientation facilitates communication and coordination within the group. In addition, there is the potential for a high level of specialization and efficiency as employees learn from each other. However, the strengths of departments organized by business function also may be weaknesses as inter-group communication and coordination is adversely affected by the specialized interests and narrow focus of departments.

b. Process

While similar to departmentalization that is based on business function, grouping jobs by process introduces an even higher level of specialization that is specifically related to the productive activities of the organization. For example, an architectural firm might have departments for preliminary design, design development, contract documents, and contract administration. Generally, the departments are formed on the basis of well-defined separations in the production process. Similar to departments based on business function, process grouping facilitates an increased level of specialization as workers focus on single, well-defined operations.

Managers of departments often are promoted from within the department, further increasing the expertise within the department; but the narrow focus can result in overall inefficiencies as group members lose sight of organizational goals.

c. Product/Service

Grouping jobs by product/service (regardless of the process or business function) increases the communication and interaction among individual employees who are associated with a given product/service. While there is (may be) less specialization in terms of process and business function, and the level of technical innovation may be less, there is the potential for enhancement of the product/service because employees become specialized in the product/service and are motivated by a common goal. For a design firm, departments might include urban design, landscape architecture, graphic design, etc.

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13. In this sense, departmentalization is related/interchangeable with divisionalization -- the former focuses on inputs to the firm's operations, while the latter emphasizes outputs/external relationships.
d. Client/Customer/Market

When the firm's markets are differentiated substantially along lines related to characteristics of the underlying market, or by client, there may be advantages to organizing the firm's structure accordingly. Such an approach tends to emphasize the needs of the firm's markets/clients and may result in a more effective service (and satisfied clients) if price is not the only important factor in determining value and a premium is placed on the coordination of work for a given client/market. Specialization by process usually is reduced considerably because of the need for employees to be flexible and adaptable to the client's needs, although there is the potential for specialization related to the particular needs of a client or market.

e. Geography

Organizing a firm by geographic location may be used when geographic differences are sufficient to allow substantial cost savings and better coverage of the firm's markets. These benefits must be large to counteract the adverse effects of isolating employees from common interests and activities and, correspondingly, increasing the problems of communication and coordination.

**SPAN OF CONTROL**

Span of control is defined as the number of people who report to a manager and is the primary factor in determining the size of work groups. The smaller the span of control, the fewer the number of employees over whom a manager has control but the greater is the degree of control. Close control is impossible when the span of control becomes large, but close control may not be necessary if the workers do not require extensive supervision.

The optimal span of control depends on a variety of factors including the requirements for coordination within the group, the degree of specialization of jobs, the similarity of different activities within the group, the information needs of group members, and individual needs for autonomy and feedback on performance.

The span of control is related to the number of levels in the organization's hierarchy. For example, for a given number of workers, the only way that the span of control can be reduced is to increase the number of hierarchical levels. Thus, a tightly controlled organization can be identified by its small span of control and the (relatively) large number of hierarchical levels (of management).
5.15 ADMINISTRATIVE COMPONENT

The administrative intensity (or ratio) measures the proportion of management to non-management people in the organization. As such, the administrative component is inversely related to the span of control and reflects the size of the organization, its complexity, and the need for coordination among work groups. For example, if a firm has 35 employees, three of whom are managers, the administrative ratio is 3/32 or 0.09. The problem is considerably complicated if the administrative component is redefined to include support staff (accounting, personnel, legal, marketing, etc.).

5.5 OPERATIONAL ASPECTS OF ORGANIZATIONAL STRUCTURE

The culture of an organization is defined partially by the operational aspects of its structure; the policies, rules, and guidelines that play a major role in establishing/shaping the behaviors of employees while in the performance of their organizational duties. The operational aspects of structure include the degree of specialization, formalization, and centralization, as well as the general concerns of authority and responsibility.

Specialization.

Specialization is the direct result of the division of labor into distinct jobs and is reflected in the number of job/occupational titles or activities. In this sense, specialization has a horizontal dimension (the horizontal dimension of the organization's structure is used as the basis of the division of labor); but jobs also can be specialized vertically. Vertical specialization occurs if the “execution and management of the task are separated,” freeing an employee to concentrate on either task execution or task management.14

While there are advantages to specialization (including greater knowledge of the job and improved skills in the job), there can be problems from jobs that are defined too narrowly and become routine and boring as a result. The potential benefit of efficiency arising from specialization may be counteracted by decreased levels of job satisfaction and motivation, and productivity may even decrease. One response to this problem is to redesign jobs to involve more skills (e.g., job enlargement and job enrichment, discussed in Chapter 11) within a worker’s area of operation. Because such redesign must occur within the structure of the organization, it may be necessary to modify the structure, combining related tasks either horizontally or vertically.

Formalization.

Formalization is defined as the degree to which rules and procedures are used to codify the behavior of employees in the performance of tasks within the organization. Formalization can occur directly (or explicitly, through the use of memoranda, job descriptions, training manuals, and policy statements) or indirectly (or implicitly, as workers “initiate” new employees over time by establishing the organization’s “way of doing things”).

The degree of formalization is important because it affects the organization's ability to change as well as reflecting attitudes and values about the organization and its employees. A highly formalized organization will have well-defined and clearly-communicated rules and procedures and a low tolerance for violation. Employees will be restricted in their activities and interactions and may be less likely to use initiative in the solution of problems.

The addition of rules and procedures generally occurs as an organization increases in size and needs to establish better control over its operations. Formalization is an important factor in efficiency; the standardization of activities and processes providing savings in time and materials because solutions to routine problems do not need to be reinvented constantly.

14. Task management includes such activities as organizing the supply of the materials and inflows/outflows of information, inspection/quality control, etc.
Centralization.

Centralization generally is defined as the degree to which decision-making authority is concentrated. For example, if decision-making authority is reserved for the top hierarchy of the firm's management, the organization is highly centralized. Conversely, if decision making can occur throughout the hierarchy, then the organization is decentralized.

More recently, the concept of participation of non-management employees in the decision-making process has affected centralization. The nature or type of decision to be made also is important. For example, some decisions are governed by preestablished rules (programmed decisions); and if there is little participation in the decision, the organizational structure is centralized. By contrast, if decisions are non-programmed and there is considerable participation in the decision-making process, then the structure of the organization truly is decentralized. Yet another alternative is formalized decentralization: employees are involved in decision making but do so amid rules and procedures that define processes and outcomes. In this case there is the “perception” of employee involvement while maintaining control and predictability.

Responsibility and Authority

Both responsibility and authority are related to the structure of an organization (in terms of its configuration and operational aspects). Responsibility is defined as the obligation to undertake a specific course of action and an expectation that the action will be performed. For example, a manager may expect a subordinate to prepare a written report. In this case, the employee is “responsible” for the report.

Responsibility is related to the ownership of the organization. For a corporation, the owners appoint a board of directors as their agents and assign to them the responsibility for operating the firm. The board of directors hires a president and “delegates” the responsibility for management, while remaining fully liable for his/her management decisions. The president hires additional managers, and a downward chain of command (and responsibility) is established. While the people in each stage pass on “responsibility,” they remain responsible for the actions/decisions of their subordinates.

Authority differs from responsibility: it is power whose use “has been legitimized within a specific social context.” For example, authority exists when an individual has the legitimate (within the context of the organization) right (as part of the role(s) associated with a particular position) to acquire and use resources.

Authority is linked closely to responsibility because a manager who is responsible for accomplishing specific objectives/activities also must possess the necessary level of authority that is required to use the resources. Parity between authority and responsibility is critical to enable an employee to attain the expectations of other members of the firm. However, there are important distinctions between authority and responsibility -- responsibility cannot be delegated (fully), while authority can be delegated to other people who are lower in the organizational structure.

An alternative view of authority stresses the acceptance of authority by subordinate members of the organization. Thus, authority exists only when people believe and accept that another person has authority/control over them (the acceptance theory of authority).

5.6 ARCHETYPES OF FUNCTIONAL STRUCTURE

Although the functional structure of a firm is seldom a pure version of one of the three archetypal forms (functional/departmental, divisional, and matrix), valuable insight can be gained into the myriad of hybrid forms of organizations by studying the archetypal forms. For example, each form tends to have a unique character and a set of advantages and disadvantages that differentiate it from the others.

15. Participative management involves people in the day-to-day operational management of the organization and can be beneficial to its effectiveness in the long run as employees become involved and committed to the success of the organization.
Functional/Departmental Organizations

The departmental structure is structured around the inputs that are necessary to achieve the objectives (and tasks) of the organization. Generally, inputs are defined as (and tasks are subdivided into) separate functions or specialties; for example, marketing, design, production, engineering, etc. The department-based organization tends to have a centralized management style. This occurs because to achieve the required specialization within the departments, emphasis often is placed on developing advanced technical skills and high levels of efficiency; such specialization tends to “push” the strategic and management decisions of the organization to a higher level because within the departments there is seldom enough exposure to all of the “facets” of the problem.

One of the strengths of a departmental organization is the alignment between authority and responsibility, a condition that is likely to be absent or less visible in divisional organizations. For example, the manager of the design department usually is fully responsible for the design activities within the department. By contrast, in a divisional organization, divisional managers often compete for the same resources; and if the resources are allocated from a common base, there may be ambiguity in authority and responsibility. Conflict resolution is different between the two organizational structures. For example, in the department-based organization, conflicts among department managers are handled at the top level of management (general manager); while conflicts within the department are handled by the department manager. The situation can be so aggravated that parochial associations form within the departments. In a divisional organization, middle managers usually are directly accountable for the performance of their divisions, providing incentives to minimize problems and resolve conflicts by negotiation. The accountability of a division for its own profitability creates an environment that has important ramifications for motivation. That is, for a division, the principal motivator is business success; while technical/professional excellence is the primary force behind departmental organizations. In situations where the organization’s environment is highly competitive, the latter attitude may become problematic unless upper management responds by developing reward strategies to deal with the motivation of people within the departments.

Divisional Organizations

The divisional structure is based on the outputs that are generated by the organization. Outputs generally are defined as the products or services delivered, but may include programs, individual projects, types of projects, markets, clients, and even geographical location as the basis for forming divisions. The divisional organization tends to be more decentralized than the functional/departmental organization. Functional specialization is subordinated to an end-product focus, bringing the firm’s operations closer to the customer/client and increasing the autonomy of the individual units. In addition, there is greater entrepreneurial spirit in divisional organizations, though technical skills may not be as advanced (as in departmental organizations).

Many decisions can be made within the division (at the “middle-management level”) because all of the aspects of a “problem” can be observed instead of the single speciality that is observed within the functional/departmental unit. Table 5.6 illustrates the differences between the management styles of functional/departmental and divisional organizations and provides some evidence of the potential for dislocation and disruption in management style when the functional structure of an organization changes from one form to another.16

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As an organization grows, it must undertake some process of decentralizing its management if it is to remain efficient and effective as an organization. The implication of this is that organizations evolve from departmental to divisional structures to accommodate their growing size and complexity. Some studies have shown this shift occurs in many organizations and may be explained by the following:

a. Functional/Departmental structures generally are found in organizations that have a single dominant project/service or a few major, though related products/services.

b. Divisional structures emerge as firms become more diversified by the addition of product/service lines (clients, project types, geographical locations, etc. With increased diversification, scale, and complexity, it becomes increasingly difficult for the general manager of a departmental organization to provide coordination of all of the activities with the firm and to understand all of the functions that affect the different businesses.

c. Divisional organizations may be able to establish a closer connection with the market for the organization's products/services and the movement to divisional structures may reflect the heightened importance of marketing in the organizational culture.

From the above, it should be realized that the question is NOT whether the structure of the organization should be departmental or divisional but what degree of decentralization is required for the organization to be effective. To guide this question, management should examine:

a. Whether divisions, if formed, would be sufficiently independent to be accountable. Independence should be considered in terms of the unit's need for such resources as design, production, and marketing.

b. Whether divisions, if formed, would be so independent that they are no longer integral parts of the organization. That is, there should be some interdependence.

c. No division should reduce the profit of the organization overall by seeking its own profits. This means

<table>
<thead>
<tr>
<th>TABLE 5.1 Dimensions of the Task for Divisional and Functional Managers.</th>
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<tbody>
<tr>
<td><strong>TASK</strong></td>
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<tr>
<td>---------------------</td>
</tr>
<tr>
<td>Strategic Orientation</td>
</tr>
<tr>
<td>Relevant environment</td>
</tr>
<tr>
<td>Objective of task</td>
</tr>
<tr>
<td>Operational Responsibility</td>
</tr>
<tr>
<td>Authority</td>
</tr>
<tr>
<td>Interdependence on others</td>
</tr>
<tr>
<td>Personal Style</td>
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<tr>
<td>Ambiguity of task</td>
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<tr>
<td>Performance Evaluation</td>
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<tr>
<td>Measurements</td>
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<tr>
<td>Quality of Feedback</td>
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<tr>
<td>Risks and Rewards</td>
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<tr>
<td>Risk of failure</td>
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<tr>
<td>Compensation potential</td>
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that plans, budgets, and control systems must be developed to both stimulate the initiative of the divisions while restricting actions that are counterproductive to the overall performance of the organization.

d. The general manager of the organization must retain his personal involvement in matters pertaining to division, delegating both authority and responsibility to divisional managers.

Matrix Organizations

While departmental and divisional organizations have one central design concept (either inputs or outputs) to provide the dimensions of organizational structure, a matrix organization has two (or more) central design concepts. Generally, the two “concepts” reflect inputs AND outputs. For example, an organization could be structured in two dimensions - by departments related to tasks or functions and by business units related to project type or client.

As a result of the multidimensional structure, a primary principle of classical organizational theory is violated: that of unity of command -- where a single person is responsible for managing the unit that performs a particular task. In the matrix-type organization, a person may be responsible to two (or more) superiors; for example, a designer may be responsible simultaneously to the head of the design department and the project manager for the ACME client group. In this situation, there is the potential for ambiguity and conflict which, if not managed effectively, could be counterproductive. To avoid such problems, the managers of the firm should:

a. Adopt a multidimensional profit-sharing system that reflects the matrix structure, facilitating measurement, control, and reward systems that are focused toward the organization's overall goals and objectives.
b. Develop career paths that operate within the multidimensional framework of the organization.
c. Establish intelligent, effective communication and management information systems throughout the matrix.
d. Work to build an environment of trust and confidence that is crucial to the two-(or more) boss system; for example, managerial support systems such as management by objectives (see Chapter 12).
e. Establish the role of the general manager as one which balances the views of conflicting parties, resolves conflicts, manages in a participative manner, sets priorities for the organization, etc.

The above suggests that a matrix-type structure is not a simple panacea to organizational problems of balancing input and output dimensions. There is ample evidence to suggest (and demonstrate) that as a result of the violation of the unity-of-command principle, the matrix structure often is frustrating and can result in lower productivity. In addition, high levels of complexity and ambiguity promote conflict of roles, confusion about authority and responsibility (including power inversion -- where the subordinate rejects the demand of the superior), and generate multiple (and conflicting) loyalties. To overcome these (and other) problems, an organization not only must adopt a matrix structure but also establish a matrix system, culture, and behavior.

There are several preconditions that should be met before a firm considers the matrix structure as a potential form for organizing itself:

a. External pressure for dual dimensions (focus). For example, demands from the firm’s clients to establish closer connections while maintaining high levels of technical skill.

b. Pressures for capacity to process large quantities of information at key managerial levels. This could arise as a result of environmental demands that are unpredictable and changing rapidly, high levels of interdependence among different tasks, and increasing complexity as a result of diversification of products/services and markets served.

c. Pressures for shared resources. Matrix organizations are capable of achieving high levels of efficiency for shared resources because they can be allocated to competing uses (such as clients, projects, etc.) while maintaining the centralized control of a department structure.

Hybrid Organizations

The three archetypal structures are abstractions and simplifications of the complex forms that organizations take on in response to internal and external forces. While most organizational structures can be traced to one of the three archetypal structures, it is likely that elements of others also can be found. For example, a divisional organization also will have some functional departments (such as personnel, accounting, etc.) that are centralized to provide support services to the divisions more efficiently.

Generally, it can be observed that the form of an organization becomes more divisional and decentralized as the organization becomes closer to the end consumer. The need to provide fast and efficient service to the customer results directly in an output focus. The observation also holds for components or tasks within the firm. For example, the functions of sales/marketing are more likely to be decentralized (and closer to the end consumer) than general administration and research and development. Production operations generally are between these “extremes,” and it is the structure of production activities that generally determines the overall structure of the organization. As a result, most organizations have a hybrid structure that is drawn from one or more of the archetypal forms and is contingent on the firm’s internal and external environment.

5.7 THE DEVELOPMENTAL STAGES OF A FIRM

The analogy of a firm as an “organic form” is appropriate because a firm also progresses through developmental stages in a manner similar to most complex organisms; but unlike organic life, there is no predetermined rate at which development occurs. The duration of each stage is usually a function of the growth rate of the firm: the faster a firm grows, the more it changes and the greater is the need to adapt to new conditions. Each developmental stage has specific and unique qualities reflecting both functional and social characteristics. These correspond to the internal and external environmental conditions that the firm faces. These conditions are a result of economic/operational, social, and cultural forces that affect the firm as it grows and responds to its market. Within each developmental stage, there is a degree of stability as the conditions that induce change are largely mediated by the adoption of an appropriate organizational form. With additional growth, the form of the organization is no longer able to satisfactorily accommodate the pressure for change and a transition is made to the next stage of development. Such transitions are relatively predictable but may
become critical as the familiar form of the firm is challenged, then substituted for another as the firm undergoes “meta-
morphosis.” The number of developmental stages varies: some researchers have identified three stages while others
have suggested that there are five stages (e.g., Churchill and Lewis, “The Five Stages of Small Business Growth,” Har-
vard Business Review, May-June 1983.) It is also possible to apply the four-stage product-life-cycle theory of Chapter
3 to the developmental life cycle of an organization.

The Evolution of the Structure of an Organization

Business enterprises typically follow a four-stage developmental process according to Alfred Chandler, a pioneer
researcher in the field of organizational structure. While Chandler's work applied primarily to American industrial
businesses in 1962, it traces the evolution of the firm from a simple, functional/departmental structure to a more com-
plex multi-divisional structure and is still relevant to organizations in the 1990's. Chandler observed the four stages as:
“.... the initial expansion and accumulation of resources; the rationalization of use of resources; the expansion
into new markets and lines to help assure the continuing full use of resources; and, finally, the development
of a new structure to make possible continuing effective mobilization of resources to meet both changing
short-term demands and long-term market trends...”

(Alfred Chandler, Strategy and Change: Chapters in the History of the American Industrial Enterprise,
1962, MIT Press, p0. 385)

While this suggests a well-defined process of transition from one form to the next, the fact is that there is no clear
sequence of movement from one form to the next, except that a firm tends to move from a simple, informal structure
to one which reflects the increasing importance of functional effectiveness to one which reflects a more complex orga-
nization or a close relationship with its customers. The evolution of a firm occurs as a result or (or is contingent upon)
changes in its environment that add diversity and/or complexity (as new or modified functions, markets, or products/
services) to the organization. That is, the structure of an organization follows strategic decisions that lead to growth
and development of the firm and, in turn, becomes a strategic decision itself to restructure the firm to continue to take
advantage of its position. A firm's structure must be closely related to its developmental strategies, though there is often
a time delay as managers may be reluctant or are unable to adjust their roles in the firm (for example, a department
manager may not have the knowledge or skills to adjust to managing a division).

5.8 THE SELECTION OF ORGANIZATIONAL STRUCTURE FOR PROFES-
SIONAL SERVICES FIRMS.

The organizational structure provides the “definition and order” necessary to understand the formal relationships that
exist between the individual members of a firm and the functions they are expected to perform. The structure of the
organization defines many of its important characteristics, including the degree of flexibility and hierarchy, the process
and location of decision making, and even the job descriptions of the firm's members. Because both individuals and
organizations are unique, there is no single, best structure; rather, the structure of an organization should match the
specific circumstances of the people and the firm's goals and objectives. For example, an inappropriate structure may
be perceived as being bureaucratic or so loosely defined as to be ineffective. Many design firms are reluctant to estab-
lish an organizational structure that has a formal hierarchy, closely specified relationships, and job responsibilities that
are clearly defined. One explanation for such reluctance may be that a structured organization is (mis)understood to be
synonymous with bureaucracy and is “anathema to most designers.”

For a firm to be successful, it must be structured to match the specific circumstances of the environment in which it
operates. Chapter 3 provides a foundation for understanding the basic types of economic environments (competitive,
monopolistic competition etc.) that apply to organizations, but most firms operate in environments that are more com-
plex when the particular characteristics of the market (or customers) are considered. For example, while the market
might combine factors of both competition and monopoly (monopolistic competition), it can span a wide range of
intermediate “positions” as particular attributes are emphasized.
Strong Idea, Strong Service; And Strong Delivery

Some researchers identify the technology (the knowledge, techniques, and processes) of the firm as the primary factor underlying a design firm's organizational structure. Thus, in a model proposed by Weld Coxe in 1987 (and others), firms are subdivided into the three categories: strong idea, strong service; and strong delivery. Optimum organizational structures are allocated and various characteristics (that tend to be generic) are assigned to firms on this basis. Clearly, there are problems with such an approach: the three categories are neither exhaustive nor exclusive; that is, a firm could “fall” into more than one category, and not all possible categories are included. In addition, there is only limited research available on the desirability of “falling” within one of the groups and whether there are any particular benefits to be derived.  

There are many other factors that can affect a firm’s organizational structure. These factors include the nature of and potential for change in the firm’s environment. A firm’s environment could be subject to the impact of federal/state legislation and litigation or be affected by rapidly changing technology. Another factor is the customer and his/her expectations for service and the nature of the product or service that is received. For example, a service may be relatively standardized or require a highly individualized approach. But despite these limitations, many organizational analysts tend to apply a simplified methodology to studying the structure of a design firm since such simplification is necessary to the formation of models for understanding.

Table 5.2 Coxe's Three Types of Practice

<table>
<thead>
<tr>
<th>STRONG DELIVERY</th>
<th>STRONG SERVICE</th>
<th>STRONG IDEA</th>
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<tbody>
<tr>
<td>Organized for efficiency</td>
<td>Organized for service to clients</td>
<td>Organized for innovation</td>
</tr>
<tr>
<td>Standard design</td>
<td>Services tailored to client needs</td>
<td>Innovative solutions to unique problems</td>
</tr>
<tr>
<td>Formal, centralized structure</td>
<td>Flexible structure</td>
<td>Flexible, informal structure</td>
</tr>
<tr>
<td>Relatively stable environment</td>
<td>Highly complex environment</td>
<td>Highly changeable environment</td>
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According to this model, some firms must organize to provide a relatively standard design service at a low price in a very competitive environment where the ability to control costs is a critical component of profitability. The firm must be organized for maximum efficiency, and the structure that meets this criterion usually is both very formal and centralized since the clearly defined responsibilities and paths of communication that result are necessary to achieve that level of efficiency. A further concern is the degree of involvement of the client in the design process. For a firm organized for the efficient delivery of services, the involvement of the client must be minimal to avoid interrupting the standardized service.

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17. Despite these problems, Coxe and others have identified a number of strategies for these three categories that address such issues as decision making and project process and the approach is being applied to a number of design organizations. It is one of the most successful models for design firms.

18. The danger of formulating a simplified model of complex relationships is that the model may be so incomplete that it fails to capture the central characteristics of the problem and is of little use in building our understanding.

19. The nature of the service offered and the volatility of the market are factors that influence the degree to which the firm allocates its costs between fixed and variable categories.
As the client's needs become more specialized, the service offered by the firm must become less standardized and more capable of being adapted to the client's particular needs. Clients, being more aware of their individualized and specialized needs, are less sensitive to issues of price and more concerned with quality and solutions that are tailored to the particular problem(s) at hand. The design firm must employ people with higher levels of skill (specialization) and who are capable of working closely with the client because of his/her greater involvement with the project. Depending on the nature of the client's needs, the design firm may operate more like a monopolistic competitor. The firm's organizational structure must be more flexible so that it can respond quickly and effectively to its clients' needs by providing a wide range of services. If the environment is changing rapidly and the client's needs (and projects) are changing quickly, it is difficult to establish a standardized approach. Alternatively, business/economic conditions can induce a similar degree of instability that can best be addressed by a flexible/adaptable organizational structure.

Services that are unique or non-specialized require a creative approach which is facilitated by an organizational structure that is loosely defined and capable of establishing groups to focus on specific projects. In addition, there is a tendency in such groups for the relationships to be informal and non-hierarchical; that is, the members of the group have similar power and status although their abilities may be very different. However, a firm that is organized in this way probably will be less efficient than another that is centrally organized. In some situations, it may be necessary to establish separate sections (or divisions) of the firm to address the conflicting needs of creativity in some areas and efficiency in others. In some large organizations, it is not unusual to see the management of a firm adjust the organizational structure differently for the manufacturing operations and the design department.

Advocates of the Weld Coxe model (for example, David Maister) also identify the values of firms' managers as major factors in determining the structure of the business since values shape management styles. Values are divided between orientation to “business” and “practice”; that is, business-centered practice and a practice-centered business. A business-centered practice focuses on running the firm as a business, and the primary benefit that is derived are tangible rewards that can be measured quantitatively and usually in economic terms. By contrast, the practice-centered business is a “way of life” and focuses on the intangible benefits of satisfaction from the clients and producing quality work. “It
must be emphasized that there is nothing more noble about either choice of values. The choice is an entirely personal, large self-serving one, derived from how individual architects view their missions in life....” (“Changing Your Course,” Coxe et.al., Architectural Technology, May-June 1986, p. 54.)

The value of the firm's managers can affect the degree of openness among the members of the firm; attitudes towards the autonomy of professions, authority, and responsibility; the firms concerns with client service and satisfaction; and the relevance of excellence in design.

The final factor that can affect the structure of an organization is its complexity (as size and scope) of the firm. For example:

i. The size of the firm.
ii. The extent and type of specialization (practice mix)
iii. The geographic locations of the different divisions of the firm.
iv. The need for control of subordinates and the effective span of control of a supervisor over subordinates.
v. The use of consultants to provide services not within the firm's abilities.

Thus, when the firm is small (fewer than eight to ten people, and usually fewer than five) and in one location, and the projects are relatively simple in nature, the structure of the firm can be centralized and one person can be assigned the responsibility for integrating the efforts of others because he/she is able to comprehend the situation and make the necessary decisions. However, as the firm becomes more complex, an individual is increasingly less able to manage the firm's resources and formulate solutions to problems as they arise. That is, a single manager is not able to collect and analyze the information necessary for effective decision making, and management specialization is required. With still higher levels of complexity, management must become decentralized in order to address the needs of the organization.

What is required for the effective management of a firm is a consistent match between the firm's organizational structure and the factors which influence it. Compatibility with structure (as lines of communication, authority, and responsibility) is essential for a firm to respond quickly and appropriately to the demands placed upon it. Thus, a firm that is organized to achieve creative or unique results for clients who want innovative solutions will be at a disadvantage when competing with firms for projects that require maximum efficiency and low-cost production.

Organizational structure can be studied in two dimensions: the functional structure and the attitudinal structure. Functional structure is defined as the set of formal or systematic relationships between individuals (the components) and groups of people (the subsystems of the firm). For example, a firm may be organized by departments, by project/client group, or by a matrix structure which endeavors to integrate departments with a project or client orientation.

The functional structure can be depicted as a chart that indicates the relative positions and responsibilities of people within the firm. The attitudinal structure may be related to the functional structure and is defined as the set of relationships among people that exist as a result of attitudes about the organization and the values held by the firm's managers. There are four categories of configurations of organizations used for professional services firms:

**Entrepreneurial Organizations**

When a firm is first initiated, the character of the organization is largely entrepreneurial as it seeks to obtain design commissions and maintain its existence, the primary goal. Such firms are identified easily by the pressures affecting the principal as he/she largely is responsible for design decisions, quality control of production, product management, marketing, accounting, and the firm's human resources. The primary efforts of the principal generally are given to the operations of the firm.

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20. This approach is the author's and is used to integrate the organizational analysis methods of Coxe and others with other methods for investigating the structure of business.
The entrepreneurial structure is often found as the dominant form of small businesses simply because small businesses are owned and managed by an entrepreneurial (and individual) principal who is generally the person who initiated the enterprise. For several reasons, including the limited number of staff and the informal allocation of their time to projects on the basis of need more often than on the basis of specialization (if it exists), there is little management and lines of communication, authority, and responsibility seldom are required since the other people involved in the firm are usually only a few feet away and the employees report directly to the principal. The operation of the business requires little formal or systematic planning, and most firms of this type respond to changes in an intuitive manner. Because of the lack of formal procedures and the highly centralized structure (the individual owner/manager), the organization is inherently flexible and usually deal effectively with changes that occur in its environment. The organization typically is dominated by the principal, whose values and vision can limit or extend the firm’s horizons. In most firms, the principal is also the head designer and is responsible for ensuring the quality of projects that leave the office. He/she also is responsible for marketing, personnel management, financial management, etc. The fact is, however, that an individual person is limited in his/her ability to manage the resources of the firm effectively and to provide the information for good design. It is not unusual to see problems when the principal is unable to attend to all of the activities required of him/her or becomes overwhelmed as the firm grows and/or becomes more complex. At such times, the leadership must undergo a transition from that single-focus/entrepreneur by delegating responsibilities to associates or by adding partners who can take responsibility for some functions (that is, specialization of management). In addition, the firm must provide for the needs of its employees for responsibility and recognition. Such needs are related to an individual’s self-interest and include the psychological needs of self-esteem and self-actualization that occur when an individual desires to participate in the firm beyond an elementary level. Such needs are particularly important for professionals who have an innate need for personal (and professional) growth. A key component of a successful entrepreneurial firm is a principal who is unable to relinquish control and provide for the transition of the firm from an individual-entrepreneurial structure to one that is more participatory in character and that has the potential for sharing the wealth through profit sharing or partnership. Not all firms are able to make the necessary adjustments to evolve from an entrepreneurial structure. The success of such firms depends upon the vision of the manager/owner and the degree to which it is communicated to and accepted by the other members of the firm.

**Bureaucracies**

A bureaucratic structure is a highly rational and well-defined structure which is based on the concept that the organization is analogous to a machine and should be designed to operate as efficiently as possible. The word “organization” is derived from the Greek: organon -- meaning tool or instrument -- and implies an efficient structure as a means to accomplish a particular task (as a tool). Early organizational theory endeavored to establish the structure of a firm in two components -- management and operations/production -- and applied production/assembly-line philosophy to both. Such ideas persist in modern interpretations of organizational structure: bureaucratic firms are identified as having a rigid and highly defined separation of functions that enables operations to occur routinely and in a well-ordered manner.

Some organizational analysts argue that “bureaucratic firms have a departmental (functional) structure.” For a professional-services firm, this means that the firm’s operations are subdivided according to different stages or by the type of project. For example, an architectural firm might be divided into design, documentation, and contract-administration departments; or into housing, office buildings, and hospitals. In addition, there is a distinct separation between the firm’s operations and management groups. The structure of the firm is based on a strict hierarchy and is tightly controlled; management occupies the upper levels and usually is dominated by an individual. Ideally, this top manager has a generalist perspective with the ability to understand and integrate all of the functions within the firm.

A bureaucratic firm is well-suited to a stable environment because inherent within the rigid control structure is a degree of standardization that provides a high level of efficiency when dealing with repetitive projects (or projects that have considerable similarities) and the work associated with them is relatively straightforward and routine. Employees can develop and refine specialized skills that enable projects to be completed at minimum cost (that is, strong delivery firms) but often are unable to deal effectively with unique/unusual problems. Employees who have creative skills generally are not attracted to bureaucratic firms because of the emphasis on efficiency and standardization.
The Professional Organization

The professional organizational structure often is found in small- to medium-sized partnerships where each principal functions independently of the other. The firm provides a pool of employees who can be allocated to projects according to need and specialization. The firm also provides basic support services, including secretarial and accounting services, etc. Principals usually are responsible for their own projects and work closely with clients. In firms with a professional organizational structures, management is diversified and divided among the principals (that is, not centralized); but major decisions about the firm are made collectively as a result of negotiation, shared values, and the formation of common goals. Such decision making requires consensus building and can take considerable time and effort; but it can produce a management structure that is relatively flexible and capable of adapting to changes in the environment. The important role of negotiation and consensus building cannot be overstated. If the principals do not share common values/interests, it is impossible to generate consensus, and negotiation fails. In such situations, political factors take control and the principals divide into factions. Depending upon the relative strength of the different factions, the result can be a stalemate, fragmentation, or an unsatisfactory compromise, all of which can affect adversely the firm's effectiveness and its ability to respond to environmental changes.

In some situations, the firm may appoint one principal to the role of manager with the authority to make operational or tactical decisions (day-to-day management), at which point the organizational structure will become more centralized though preserving many of the benefits of flexibility and adaptability. Associated with the benefits of a decentralized organizational/management structure are problems of agency costs. The decentralization of management that is important to such firms also can produce problems of consistency, competence, and conscientiousness. Each principal must monitor the contribution of every other partner.

Innovative Organizations

The structure of an innovative organization is extremely flexible (fluid) and is characterized by informal relationships that are devoid of routine. As a result, there is little if any standardization of procedures, processes, techniques, or projects. Structures of this type are not uncommon in those firms that are dominated by signature designers. The firm is loosely organized around the principal designer as the focus and is non-hierarchical, with the occasional exception of an office manager who operates “in name only since management occurs not through titles and authority but by virtue of an individual’s knowledge and expertise.” However, it is important to note that the ability of a person to control and exert power in such organizations depends on more than his/her knowledge and expertise -- the ability to deal effectively with other people within and beyond the firm is critical. Successful managers must not only be very talented and possess strong personalities but must also be able to employ ”persuasion, negotiation, reputation, and rapport to fuse individual members into a function team.”

In firms with an innovative organizational structure, there seldom is any formal planning; and strategies are established by merging thinking and acting into a single action (rather than by a deliberate and intentional balancing of well-analyzed factors). Further, these firms, while well-endowed with abilities to deal with unique projects requiring creative solutions, generally are unable to engage in ordinary activities requiring routine, efficient, and repetitive operations.

5.9 SUMMARY

An organization is formed when a task calls for the combined efforts of two or more people; that is, a complex task (or set of tasks) can be subdivided into components that are simpler and, by the division of labor, be performed more efficiently and effectively. The design of an organization is the result of the goals (and values) of the organization and two primary concerns:

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21. In such firms, the role of the principal designer is not as general manager but as design critic whose vision and personal interests provide any real leadership that the firm enjoys. For example, the principals in signature architectural firms spend approximately seventy to seventy-five percent of their time in design critiques.
22. Designing the Practice, p. 63.
i. How to divide the labor resources of the organization to perform tasks most effectively.

ii. How to coordinate and integrate the separate tasks that result to achieve the organization’s objectives.

The underlying premise of organizational design is founded in the contingency theory of organizational design: “that there is no single set of principles to shape the structure of an organization.” Accordingly, an organization formulates its structure as a function of its particular internal characteristics and in response to the external environment. Contingency theory establishes a unitary design concept which is realized by the segmentation of the organization into differentiated units (that are adapted to their unique environments and tasks) and the integration of these units into a coordinated whole.

The structure of the organization establishes the arrangement of the components (work units) of the firm: it is the “relatively enduring allocation of work roles and administrative mechanisms that creates a pattern of interrelated work activities and allows the organization to conduct, coordinate, and control its work activities.”

While there is a tendency to think of the organizational (functional) structure as the hierarchy of authority and responsibility in the firm, the preceding definition extends the structure of the firm to include all of the processes of management that are required to achieve the goals and objectives.

This chapter has focused on the design of the structure of an organization. Like any design problem, the structure of an organization is neither more nor less than a means of organizing the components of a firm into a recognizable and effective order. It is part of a system for achieving the goals of the organization. While there is a tendency to emphasize the issues of authority and responsibility (chain of command), the organizational structure also is an integral part of the other subsystems of the firm, including decision making, communication, motivation, performance appraisal, etc. All of these components must be integrated into the organizational structure in a way that enables the organization to respond successfully to its environment while articulating the organization’s goals, objectives, and plans for the future.

A successful organization treats its employees as its most valuable resource -- nurturing and developing them and integrating their contributions into the organization. The primary vehicle to achieve this is the structure of the organization and the management processes that are implicitly and explicitly contained within it. Increasingly, the issues of motivation and coordination of employees are being recognized as among the most important, if not the most important, problems confronting organizations.

“The structure must provide people with jobs that are coordinated with others, appropriate for their skills, consistent with the purchase of the organization, and capable of providing a sense of belongingness and contribution to the organization.”

Finally, for an organization to be successful, it must be focused on its customer, client, or constituent. This external orientation is critical in a highly competitive world when firms must address market conditions quickly and effectively.

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23. Hax and Majluf, Strategic Management, p. 382